Thermophysical Properties of Fluids. II. Methane, Ethane, Propane, Isobutane, and Normal Butane

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Received October 9, 1986; revised manuscript received June 11, 1987

Tables of methane, ethane, propane, isobutane, and normal butane thermodynamic and transport properties are presented. The mathematical relations from which these thermophysical properties are obtained are described. The tables list pressure, density, temperature, internal energy, enthalpy, entropy, specific heat at constant pressure and at constant volume, sound speed, viscosity, thermal conductivity, and dielectric constant.

Key words: density; equation of state; ethane; isobutane; methane: normal butane; propane; thermodynamic properties; thermophysical properties; transport properties.

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1. Introduction

The thermophysical properties of methane, ethane, propane, isobutane, and normal butane are presented in this report in tabular form in SI units. The properties are computed from a set of equations which are the same for each of the fluids, such that only the coefficients need be changed

from one fluid to another. A previous publication[1,2] for argon, ethylene, parahydrogen, nitrogen, nitrogen trifluoride, and oxygen followed the same guidelines.

A 32-term modified Benedict–Webb–Rubin (MBWR) equation of state was used to represent the pressure–volume–temperature (PVT) surface of these fluids. This equation has been widely used for this purpose, since it possesses the advantage of high computational speed, as well as that of high accuracy. This equation is particularly useful when minimizing the deviations in fitting to experimental data, especially in multiproperty regression optimization which includes specific heat or sound speed data as input.

The MBWR form allows the computation of pressure as a function of density and temperature and is also used to compute internal energy, enthalpy, entropy, heat capacity, and sound speed. Other relations used in conjunction with the MBWR are those for vapor pressure, melting pressure, densities of the saturated liquid and vapor, viscosity, thermal conductivity, and dielectric constant. These equations have the same form for each of the fluids and only the coefficients need to be changed when going from one fluid to another. The equations are described in the text below and in NBS Technical Note 1079 by R. D. McCarty,[3] which describes the computer software system MIPROPS, an interactive program for the computation of thermophysical properties for these fluids. The tables presented here contain properties for the liquid–vapor boundary, the properties of the liquid on the melting line, and the thermophysical properties on isobars at temperatures that span the pressure–temperature–density surface. The temperature spacing along each isobar was chosen so as to allow accurate linear interpolation for these properties.

2. Thermodynamic and Related Properties

2.1. The Equation of State

The modified Benedict–Webb–Rubin equation for computing pressure as a function of density and temperature has a well-established reputation for versatility. It is a frequent choice when fitting data of high accuracy which cover wide ranges of temperature and pressure and when correlating several sets of data from different sources. Its advantage of adaptability to efficient computer programming is even more appreciated in multiproperty fitting, in which different types of data such as PVT and heat capacity are fit simultaneously.

The mathematical form of the MBWR equation is

$$\begin{aligned}P=\rho RT&+\rho^2[G(1)T+G(2)T^{1/2}+G(3)+G(4)/T+G(5)/T^2]+\rho^3[G(6)T+G(7)+G(8)/T+G(9)/T^2]\\&+\rho^4[G(10)T+G(11)+G(12)/T]+\rho^5[G(13)]+\rho^6[G(14)/T+G(15)/T^2]+\rho^7[G(16)/T]\\&+\rho^8[G(17)/T+G(18)/T^2]+\rho^9[G(19)/T^2]+\rho^3[G(20)/T^2+G(21)/T^3]\exp(\gamma\rho^2)\\&+\rho^5[G(22)/T^2+G(23)/T^4]\exp(\gamma\rho^2)+\rho^7[G(24)/T^2+G(25)/T^3]\exp(\gamma\rho^2)\\&+\rho^9[G(26)/T^2+G(27)/T^4]\exp(\gamma\rho^2)+\rho^{11}[G(28)/T^2+G(29)/T^3]\exp(\gamma\rho^2)\\&+\rho^{13}[G(30)/T^2+G(31)/T^3+G(32)/T^4]\exp(\gamma\rho^2)\,. \qquad (1)\end{aligned}$$

The nonlinear parameter, gamma, is defined as $-1/\rho_c^2$ and is not an adjustable parameter of the fit. The variables are defined in Appendix A.

The PVT surfaces for methane, ethane, propane, isobutane, and normal butane, are from the work of J. F. Ely.[4] Coefficients for each of the fluids are given in Appendix J. The maximum temperatures and pressures for which these surfaces are valid are given in Appendix C. Extrapolation beyond these limits will result in large uncertainties and is not advised.

2.2. Two-Phase Boundaries

2.2.1. Vapor pressure

The vapor pressures given in the tables for the liquid–vapor coexistence boundary and the temperature of the liquid–vapor boundary for each isobar are computed from the vapor pressure equation,

$$\ln P=\ln P_t+V_p(1)x+V_p(2)x^2+V_p(3)x^3+V_p(4)x^4+V_p(5)x(1-x)^{V_p(6)}\,, \qquad (2)$$

where

$$x=(1-T_c/T)/(1-T_t/T_c)\,. \qquad (3)$$

As in the case with the MBWR equation, the coefficients for this equation and all those following are found in Appendix J.

2.2.2. Vapor Density at Coexistence

Values of the vapor density for the liquid–vapor coexistence boundary are generated from

$$\ln\rho_v=\ln\rho_c-\ln(\rho_c/\rho_{tv})f(T)\,, \qquad (4)$$

where

$$f(T)=A(1)T_c\frac{x}{T}+A(2)x^{E_g}+\sum_{n=3}^{6}A(n)x^{n/3}\,, \qquad (5)$$

and

$$x=(T_c-T)/(T_c-T_t)\,. \qquad (6)$$

2.2.3. Liquid Density at Coexistence

The liquid density at the liquid–vapor coexistence boundary is calculated from

$$\rho_l=\rho_c+(\rho_{tl}-\rho_c)\exp[h(t)], \qquad (7)$$

where

$$h(t) = A(7)\ln x + \sum_{n=8}^{10} A(n)(1 - x^{(n-11)/3}) + \sum_{n=11}^{13} A(n)(1 - x^{(n-10)/3}), \quad (8)$$

and x is defined in Eq. (6).

2.2.4. The Melting Line

The pressures at the solid–liquid coexistence boundary are given by

$$P = A + BT^C. \quad (9)$$

2.3. Derived Thermodynamic Properties

The properties derived form the equation of state and ideal gas heat capacity are entropy, enthalpy, internal energy, specific heat at constant volume and at constant pressure, and sound speed.

2.3.1. Entropy

The entropy is computed from

$$S(\rho,T) = S^0(T^0) + \int_{T^0}^{T} \frac{C_p^0}{T}\,dT - R\ln\left(\frac{RT\rho}{P^0}\right) + \int_0^{\rho}\left[\frac{R}{\rho} - \left(\frac{\partial P}{\partial T}\right)_\rho \frac{1}{\rho^2}\right]d\rho, \quad (10)$$

where P^0, T^0, C_p^0, and S^0 are the reference state values, defined below.

2.3.2. Ideal Gas Specific Heat

The ideal gas specific heat, C_p^0, is computed from the following:

$$\frac{C_p^0}{R} = \sum_{n=1}^{7} G_i(n)T^{(n-4)} + \frac{G_i(8)u^2e^u}{(e^u-1)^2}, \quad (11)$$

where,

$$u = G_i(9)/T. \quad (12)$$

2.3.3. Reference State

Values of S^0 and H^0 are at the reference state of $T^0 = 298.15$ K, and $P^0 = 0.101\,325$ MPa (25 °C and 1 atm) (see Table 1). The value for methane is from McDowell and Kruse.[5] The values for ethane and propane are from Chao *et al.*,[6] and the values for isobutane and normal butane are from Chen *et al.*[7]

2.3.4. Enthalpy

The enthalpy is computed from

$$H(T,\rho) = H^0(T^0) + (P - \rho RT)/\rho + \int_0^{\rho}\left[\frac{P}{\rho} - \frac{T}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho\right]d\rho + \int_{T^0}^{T} C_p^0\,dT. \quad (13)$$

2.3.5. Internal Energy

The internal energy is

$$E(T,\rho) = H(T,\rho) - P/\rho. \quad (14)$$

TABLE 1. Values of entropy and enthalpy at the reference state. The reference state temperature and pressure are 298.15 K and 0.101 325 MPa for all fluids.

	S^0 J/mol K	H^0 J/mol
Methane	186.266	10 018
Ethane	229.116	11 874.2
Propane	270.203	14 740.2
Isobutane	295.390	17 932.6
Normal butane	309.909	19 275.7

2.3.6. Specific Heat at Constant Volume and at Constant Pressure

The specific heat at constant volume is

$$C_v(\rho,T) = C_p^0 - R\int_0^{\rho}\left[\frac{T}{\rho^2}\left(\frac{\partial^2 P}{\partial T^2}\right)_\rho\right]d\rho, \quad (15)$$

and at constant pressure is

$$C_p(\rho,T) = C_v(\rho,T) + \frac{T}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho^2 \Big/ \left(\frac{\partial P}{\partial \rho}\right)_T. \quad (16)$$

2.3.7. Sound Speed

From the relations for specific heat and the PVT equations, the sound speed is computed from,

$$W(T,\rho) = \left[\frac{C_p}{C_v}\left(\frac{\partial P}{\partial \rho}\right)_T \frac{10^6}{M_r}\right]^{0.5}. \quad (17)$$

3. Transport Properties

3.1. Viscosity

Representation for the viscosity of methane, ethane, isobutane, and normal butane have been generated by Younglove.[8] The representation for the viscosity of propane was developed by Ely.[9]

The functional form for the viscosity is

$$\eta = \eta_0(T) + \eta_1(T)\rho + \eta_2(\rho,T). \quad (18)$$

The first term of the expansion is the dilute gas term which is

$$\eta_0 = (5/16)(k/1000\pi N_a)^{1/2}(M_r T)^{1/2}/(\Omega\sigma^2). \quad (19)$$

The distance at which the potential energy function is zero has been interpreted as σ; however it is used as an adjustable parameter for fitting experimental data as is ϵ, the potential energy minimum. The value of the collision integral, Ω, has been evaluated by Ely[9] as

$$\Omega(T) = \left[\sum_{n=1}^{9} C(n)\left(\frac{\epsilon}{kT}\right)^{(n+2)/3}\right]^{-1}. \quad (20)$$

Values of C are given in Table 2. The second term of Eq. (18) represents the contribution of the moderately dense fluid,

$$\eta_1(T) = F_v(1) + F_v(2)\{F_v(3) - \ln[T/F_v(4)]\}^2; \quad (21)$$

The third term in the viscosity equation is the contribution of the dense gas,

$$\eta_2(\rho,T) = \exp[F(\rho,T)] - \exp[G(T)], \quad (22)$$

$$G(T) = E_v(1) + E_v(2)/T, \quad (23)$$

TABLE 2. Coefficients for the collision integral Ω

$C(1) =$	− 3.032 813 828 1	$C(2) =$	16.918 880 086	$C(3) =$	− 37.189 364 917
$C(4) =$	41.288 861 858	$C(5) =$	− 24.615 921 14	$C(6) =$	8.948 843 096
$C(7) =$	− 1.873 924 504 2	$C(8) =$	− 0.209 661 014	$C(9) =$	− 0.009 657 044

TABLE 3. Typical uncertainties in calculated properties

Property	Liquid below T_c	Gas below T_c	Fluid above T_c	Critical region
			Methane	
Pressure %	2	0.3	0.3	0.3
Density %	0.2	0.3	0.1	5.0
Temperature %	0.1	0.1	0.1	1
Enthalpy (J/mol)	2	1	1	10
Entropy (J/mol)	1	1	1	2
Specific heat, C_p %	5	5	2	10
Specific heat, C_v %	5	5	2	10
Speed of sound %	2	0.5	0.5	2
Thermal conductivity %	5	4	3	8
Viscosity %	2	2	2	5
Dielectric constant %	0.05	0.05	0.05	0.3
			Ethane	
Pressure %	2	0.2	0.7	0.2
Density %	0.5	0.2	0.2	5
Temperature %	0.1	0.1	0.1	0.2
Enthalpy (J/mol)	3	1	5	1
Entropy (J/mol)	1.5	1	1	5
Specific heat, C_p %	2	2	2	10
Specific heat, C_v %	1	1	1	10
Speed of sound %	0.6	0.6	0.6	10
Thermal conductivity %	2	2	2	10
Viscosity %	2	2	2	5
Dielectric constant %	0.05	0.05	0.05	0.2
			Propane	
Pressure %	2	0.5	0.5	0.2
Density %	0.1	0.04	1.5	1.5
Temperature %	0.1	0.1	0.1	0.5
Enthalpy (J/mol)	2	1	2	5
Entropy (J/mol)	2	1	1	5
Specific heat, C_p %	2	2	2	5
Specific heat, C_v %	2	2	2	10
Speed of sound %	0.5	1	1	10
Thermal conductivity %	2	2	2	10
Viscosity %	2	2	2	5
Dielectric constant %	0.05	0.05	0.05	0.2
			Isobutane	
Pressure %	2	0.4	0.1	0.2
Density %	0.007	0.007	0.1	2
Temperature %	0.1	0.1	0.1	0.2
Enthalpy (J/mol)	0.1	0.1	0.1	0.2
Entropy (J/mol)	2	1	1	5
Specific heat, C_p %	2	2	2	10
Specific heat, C_v %	2	2	2	10
Speed of sound %	0.5	1	1	5
Thermal conductivity %	2	2	2	10
Viscosity %	2	2	2	10
Dielectric constant %	0.05	0.05	0.05	0.2
			Normal butane	
Pressure %	2	1.5	0.05	0.3
Density %	0.05	0.4	0.06	3
Temperature %	0.1	0.1	0.1	0.2
Enthalpy (J/mol)	1	3	3	5
Entropy (J/mol)	2	1	1	5
Specific heat, C_p %	2	2	2	10
Specific heat, C_v %	2	2	2	10
Speed of sound %	1	2	2	5
Thermal conductivity %	2	2	2	10
Viscosity %	2	2	2	5
Dielectric constant %	0.05	0.05	0.05	0.3

$$F(\rho,T) = G(T) + [E_v(3) + E_v(4)T^{-3/2}]\rho^{0.1} + \left(\sum_{n=5}^{7} E_v(n)T^{(-n+5)}\right)H(\rho)\,, \quad (24)$$

where

$$H(\rho) = \rho^{0.5}(\rho - \rho_c)/\rho_c\,. \quad (25)$$

3.2. Thermal Conductivity

Representations for the thermal conductivity, λ, of methane, isobutane, and normal butane were generated by Younglove.[10] The ethane fit was developed by Ingham[11] and that for propane by Ely.[12]

The functional form of the thermal conductivity representation is

$$\lambda = \lambda_0 + (F_0 + F_1\rho)\rho/(1 - F_2\rho) + \lambda_c\,, \quad (26)$$

where the dilute gas thermal conductivity is given by

$$\lambda_0 = 1000\eta_0(C_p^0 - 5R/2)[G_t(1) + G_t(2)\epsilon/kT]\,. \quad (27)$$

Here, η_0 is defined in Eq. (20) and C_p^0 is defined above. The terms F_0, F_1, and F_2 are

$$F_0 = \sum_{n=1}^{3} E_t(n)T^{(1-n)}\,, \quad (28)$$

$$F_1 = \sum_{n=4}^{6} E_t(n)T^{(1-n)}\,, \quad (29)$$

$$F_2 = \sum_{n=7}^{8} E_t(n)T^{(1-n)}\,. \quad (30)$$

The λ_c term is the critical enhancement term and is described in Appendix D.

4. Dielectric Constant

The equations used to represent the dielectric constant, ϵ, are

$$C_m = A + B\rho + C\rho^2 + D\ln(1 + T_c/T) + EP \quad (31)$$

and

$$C_m = \frac{\epsilon - 1}{\epsilon + 2}\frac{1}{\rho}\,. \quad (32)$$

Equation (32) is the Clausius–Mossotti relation. Source documentation for methane is Straty and Goodwin,[13] and for ethane is Weber.[14] Haynes and Goodwin were the sources of dielectric constant for propane,[15] isobutane,[16] and normal butane.[17] In certain cases the forms reported by the authors were modified to conform to Eq. (31).

5. Summary of Uncertainties

The uncertainties for the thermophysical quantities described in this work, Table 3, are based on an evaluation of deviation plots of the various data sources from the fitting functions. Consideration is also given for the claimed accuracies of the underlying data used in fitting, and on the weighting of the data. Uncertainties in the derived quantities are estimated from the accuracies of the properties from which they are computed.

6. Acknowledgments

We are indebted to the office of Standard Reference Data of the National Bureau of Standards for their generous support of this work, and in particular to Dr. H. J. White, Jr., who originally conceived the idea for this volume.

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Appendix A. List of Symbols and Units

Primary Thermophysical Quantities

P,P_c,P_t	pressure, P at critical point, P at triple point, MPa
ρ,ρ_c	density, ρ at critical point, mol/dm^3
ρ_{tl},ρ_{tv}	ρ of liquid at triple point, ρ of vapor at triple point
T,T_c,T_t	temperature, T at critical point, T at triple point, K
C_p,C_p^0	specific heat at constant pressure, C_p for ideal gas, J/mol K
C_v,C_v^0	specific heat at constant volume, C_v for ideal gas, J/mol K
E	internal energy, J/mol
H,H^0	enthalpy, reference value of H, J/mol
S,S^0	entropy, reference value of S, J/mol K
W	sound velocity, m/s

η	viscosity, μPa s
λ	thermal conductivity, W/m K
ϵ	dielectric constant

Other Variables and Constants

R	the gas constant, 8.314 34 J/mol K
k	Boltzmann's constant, 1.380 54 $\times 10^{-23}$ J/mol K
K_t	isothermal bulk modulus, $(\mathrm{MPa})^{-1}$
M_r	molecular weight
N_a	Avagadro's number, mol^{-1}
C_m	Clausius–Mossotti function
T^0	reference state temperature, 298.15 K

Appendix B. Conversion Factors

	From	To	Multiplied by
Pressure	MPa	psia	145.037 74
Temperature	K	R	1.8
Density	$\mathrm{mol/dm^3}$	$\mathrm{lb/ft^3}$	$0.062\,480/M_r$
Internal energy	J/mol	BTU/lb	$0.430\,210\,35/M_r$
Enthalpy	J/mol	BTU/lb	$0.430\,210\,35/M_r$
Entropy	J/mol K	BTU/lb R	$0.239\,005\,75/M_r$
Specific heat	J/mol K	BTU/lb R	$0.239\,005\,75/M_r$
Thermal conductivity	W/m K	BTU/ft h R	0.578 176 02
Viscosity	Pa s	lb/ft s	0.671 969 0
Velocity of sound	m/s	ft/s	3.280 84

M_r for	Methane	16.043
	Ethane	30.070
	Propane	44.098
	Isobutane	58.125
	Normal butane	58.125

M_r is molecular weight (Ref. 18).
lb is pound mass.

Appendix C. Triple Point, Critical Point, Maximum Pressures and Temperatures

Triple Point

Fluid	P_t (MPa)	ρ_{tl} ($\mathrm{mol/dm^3}$)	ρ_{tv} ($\mathrm{mol/dm^3}$)	T_t (K)
Methane	1.1744×10^{-2}	28.147	1.5679×10^{-2}	90.68
Ethane	1.1308×10^{-6}	21.680	$1.5154\ 10^{-6}$	90.348
Propane	1.6850×10^{-10}	16.636	2.3775×10^{-10}	85.47
Isobutane	1.9481×10^{-8}	12.755	2.0634×10^{-8}	113.55
Normal butane	6.7358×10^{-7}	12.650	6.0072×10^{-7}	134.86

Critical Point

Fluid	P_c (MPa)	ρ_c ($\mathrm{mol/dm^3}$)	T_c (K)
Methane	4.597 97	10.150	190.53
Ethane	4.871 43	6.875	305.34
Propane	4.247 66	5.000	369.85
Isobutane	3.640	3.860	407.85
Normal butane	3.796	3.920	425.16

Maximum Pressures and Temperatures[a]

Fluid	P_{max} (MPa)	T_{max} (K)
Methane	200	600
Ethane	70	600
Propane	100	600
Isobutane	35	600
Normal butane	70	500

[a] The extrapolation of the MBWR and associated equations beyond these values is not advised.

Appendix D. Critical Point Enhancement to Thermal Conductivity

The last term of Eq. (27) is the contribution from critical point effects.

$$\lambda_c = \Delta\lambda' \exp[-X_1(\Delta T)^4 - X_2(\Delta\rho)^4], \tag{D1}$$

where

$$\Delta\lambda' = X_4 k P_c \left(\frac{T^*}{\rho^*}\frac{\partial\rho^*}{\partial T^*}\right)^2 \xi, \tag{D2}$$

where

$$\xi = (\xi^*)^{X_5},$$

and

$$\xi^* = \rho^* \frac{\partial\rho^*}{\partial P^*}. \tag{D3}$$

The starred quantities are the reduced quantities,

$$P^* = P/P_c, \quad T^* = T/T_c, \quad \rho^* = \rho/\rho_c,$$
$$\Delta T = |T - T_c|/T_c,$$

and

$$\Delta\rho = |\rho - \rho_c|/\rho_c. \tag{D4}$$

And the X_1, X_2, X_3, and X_4 are adjustable parameters used to represent data in the critical region. These quantities and other parameters used in this Appendix are given in Table D1.

The derivatives are computed from the MBWR surface unless the density is within 25% of the critical density and the temperature is within 3% of the critical temperature, in which case the compressibility is computed from a special scaled equation of state as indicated in the following:

$$\xi^* = g/h, \tag{D5}$$

where

$$g = (\Delta\rho)^{-\gamma/\beta}[(1+E)/(1+Ey^{2\beta})]^{(\gamma-1)/2\beta}, \tag{D6}$$

and

$$h = \Lambda[\delta + (y-1)(\delta - 1/\beta + Ey^{2\beta})/(1+Ey^{2\beta})], \tag{D7}$$

with

$$y = [(\Delta T)(\Delta\rho)^{(-1/\beta)} + x_0]/x_0. \tag{D8}$$

TABLE D1. Critical enhancement parameters for equations D1–D8

	Methane	Ethane	Propane	Isobutane	Normal butane
X_1	37.423 68	0.225 388	3.98	0.003 4718	0.000 769 608
X_2	3.167 14	10.510 88	5.450	10.120 7	13.253 3
X_3	0.780 35	0.450 00	0.468 067	0.466 392	0.485 554
X_4	0.601 03	1.000 0	1.08	1.003 44	1.010 21
Z	$6.512\,707\times10^{-10}$	$7.423\,99\times10^{-10}$	8.117×10^{-10}	$9.102\,18\times10^{-10}$	$9.102\,18\times10^{-10}$
x_0	0.164	0.168	0.137	0.140	0.140
β	0.355	0.355	0.355	0.355	0.355
δ	4.352	4.352	4.352	4.352	4.352
E	0.287	0.287	0.287	0.287	0.287
γ	1.190	1.190	1.190	1.190	1.190
Λ	2.17	2.32	1.960	2.07	2.07

Appendix E: Thermophysical Properties of Methane

Thermophysical properties of coexisting gaseous and liquid methane

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
90.680[a]	0.01174	451.6	28.15	-5728.0	-5728.0	67.94	34.02	53.46	1534.0	205.0	0.224	1.67701
90.680[a]	0.01174	0.2533	0.01579	2235.0	2978.0	164.0	25.19	33.79	249.1	3.64	0.00923	1.00031
92.0	0.01388	449.8	28.04	-5658.0	-5658.0	68.70	33.89	53.50	1523.0	197.0	0.222	1.67398
92.0	0.01388	0.2944	0.01835	2266.0	3022.0	163.1	25.21	33.84	250.8	3.69	0.00939	1.00036
94.0	0.01770	447.2	27.88	-5553.0	-5552.0	69.84	33.74	53.60	1506.0	185.0	0.218	1.66936
94.0	0.01770	0.3667	0.02286	2313.0	3087.0	161.7	25.25	33.94	253.2	3.76	0.00963	1.00045
96.0	0.02234	444.6	27.71	-5446.0	-5446.0	70.96	33.61	53.74	1489.0	175.0	0.215	1.66469
96.0	0.02234	0.4523	0.02819	2360.0	3152.0	160.5	25.29	34.05	255.6	3.84	0.00988	1.00055
98.0	0.02790	441.9	27.55	-5340.0	-5339.0	72.06	33.50	53.91	1470.0	165.0	0.212	1.65998
98.0	0.02790	0.5530	0.03447	2406.0	3215.0	159.3	25.33	34.17	257.9	3.92	0.0101	1.00067
100.0	0.03451	439.2	27.38	-5232.0	-5231.0	73.14	33.41	54.11	1452.0	157.0	0.208	1.65523
100.0	0.03451	0.6705	0.04180	2451.0	3277.0	158.2	25.38	34.30	260.2	4.00	0.0104	1.00082
102.0	0.04232	436.5	27.21	-5125.0	-5123.0	74.21	33.33	54.32	1433.0	149.0	0.205	1.65042
102.0	0.04232	0.8067	0.05029	2496.0	3338.0	157.2	25.43	34.45	262.3	4.08	0.0106	1.00098
104.0	0.05146	433.7	27.03	-5016.0	-5014.0	75.26	33.25	54.54	1413.0	141.0	0.201	1.64557
104.0	0.05146	0.9634	0.06005	2541.0	3397.0	156.1	25.49	34.61	264.4	4.16	0.0109	1.00118
106.0	0.06208	430.9	26.86	-4907.0	-4905.0	76.30	33.17	54.78	1394.0	134.0	0.198	1.64066
106.0	0.06208	1.143	0.07123	2584.0	3456.0	155.2	25.55	34.78	266.4	4.23	0.0112	1.00139
108.0	0.07434	428.1	26.68	-4798.0	-4795.0	77.32	33.09	55.03	1374.0	128.0	0.195	1.63571
108.0	0.07434	1.347	0.08394	2627.0	3513.0	154.3	25.62	34.98	268.3	4.31	0.0114	1.00164
110.0	0.08840	425.2	26.50	-4688.0	-4684.0	78.34	33.01	55.29	1353.0	122.0	0.192	1.63070
110.0	0.08840	1.577	0.09833	2670.0	3569.0	153.4	25.69	35.19	270.2	4.40	0.0117	1.00192
112.0	0.1044	422.3	26.32	-4577.0	-4573.0	79.33	32.92	55.56	1333.0	117.0	0.188	1.62563
112.0	0.1044	1.837	0.1145	2711.0	3623.0	152.5	25.76	35.41	271.9	4.48	0.0120	1.00224
114.0	0.1226	419.3	26.14	-4466.0	-4461.0	80.32	32.84	55.84	1312.0	111.0	0.185	1.62051
114.0	0.1226	2.129	0.1327	2752.0	3676.0	151.7	25.84	35.66	273.6	4.56	0.0123	1.00260
116.0	0.1431	416.4	25.95	-4354.0	-4348.0	81.30	32.75	56.14	1292.0	107.0	0.182	1.61532
116.0	0.1431	2.454	0.1529	2792.0	3728.0	150.9	25.93	35.93	275.2	4.64	0.0126	1.00300
118.0	0.1662	413.3	25.76	-4241.0	-4235.0	82.26	32.66	56.45	1271.0	102.0	0.178	1.61008
118.0	0.1662	2.815	0.1755	2831.0	3779.0	150.2	26.01	36.22	276.6	4.73	0.0129	1.00344
120.0	0.1919	410.3	25.57	-4128.0	-4120.0	83.21	32.57	56.77	1249.0	97.9	0.175	1.60477
120.0	0.1919	3.216	0.2004	2870.0	3827.0	149.4	26.11	36.53	278.0	4.81	0.0132	1.00393
122.0	0.2205	407.2	25.38	-4014.0	-4005.0	84.16	32.47	57.11	1228.0	93.9	0.172	1.59939
122.0	0.2205	3.658	0.2280	2907.0	3874.0	148.7	26.20	36.86	279.3	4.90	0.0135	1.00447
124.0	0.2523	404.0	25.18	-3899.0	-3889.0	85.09	32.37	57.47	1206.0	90.1	0.169	1.59395
124.0	0.2523	4.144	0.2583	2943.0	3920.0	148.1	26.30	37.23	280.5	4.98	0.0138	1.00506
126.0	0.2873	400.8	24.98	-3784.0	-3772.0	86.01	32.27	57.85	1185.0	86.6	0.166	1.58843
126.0	0.2873	4.678	0.2916	2978.0	3963.0	147.4	26.41	37.62	281.6	5.07	0.0141	1.00572
128.0	0.3258	397.6	24.78	-3668.0	-3655.0	86.93	32.17	58.26	1163.0	83.2	0.163	1.58284
128.0	0.3258	5.263	0.3281	3012.0	4005.0	146.8	26.52	38.04	282.6	5.16	0.0144	1.00644
130.0	0.3681	394.2	24.57	-3551.0	-3536.0	87.83	32.07	58.69	1140.0	80.1	0.160	1.57717
130.0	0.3681	5.902	0.3679	3045.0	4046.0	146.2	26.63	38.50	283.5	5.25	0.0148	1.00722
132.0	0.4142	390.9	24.37	-3433.0	-3416.0	88.73	31.96	59.15	1118.0	77.0	0.156	1.57141
132.0	0.4142	6.598	0.4113	3077.0	4084.0	145.5	26.75	38.99	284.3	5.34	0.0151	1.00807

Thermophysical properties of coexisting gaseous and liquid methane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	const.
134.0	0.4645	387.5	24.15	-3315.0	-3296.0	89.62	31.86	59.65	1096.0	74.2	0.153	1.56557
134.0	0.4645	7.355	0.4585	3107.0	4120.0	145.0	26.87	39.52	284.9	5.43	0.0155	1.00900
136.0	0.5191	384.0	23.93	-3196.0	-3174.0	90.50	31.75	60.18	1073.0	71.4	0.150	1.55964
136.0	0.5191	8.177	0.5097	3136.0	4154.0	144.4	27.00	40.09	285.5	5.53	0.0158	1.01001
138.0	0.5783	380.4	23.71	-3076.0	-3052.0	91.38	31.65	60.75	1050.0	68.8	0.147	1.55361
138.0	0.5783	9.069	0.5653	3163.0	4186.0	143.8	27.13	40.72	286.0	5.62	0.0162	1.01111
140.0	0.6422	376.8	23.49	-2955.0	-2928.0	92.25	31.55	61.37	1027.0	66.3	0.144	1.54749
140.0	0.6422	10.03	0.6255	3189.0	4216.0	143.3	27.27	41.40	286.3	5.72	0.0166	1.01230
142.0	0.7112	373.1	23.26	-2833.0	-2803.0	93.12	31.45	62.05	1004.0	63.9	0.141	1.54125
142.0	0.7112	11.08	0.6906	3213.0	4243.0	142.7	27.42	42.14	286.6	5.82	0.0170	1.01359
144.0	0.7853	369.4	23.02	-2711.0	-2676.0	93.98	31.35	62.78	980.8	61.6	0.138	1.53490
144.0	0.7853	12.21	0.7610	3236.0	4268.0	142.2	27.57	42.94	286.7	5.93	0.0174	1.01498
146.0	0.8649	365.5	22.78	-2587.0	-2549.0	94.83	31.26	63.58	957.2	59.4	0.135	1.52843
146.0	0.8649	13.43	0.8370	3257.0	4290.0	141.7	27.72	43.83	286.7	6.03	0.0179	1.01649
148.0	0.9502	361.6	22.54	-2462.0	-2420.0	95.68	31.17	64.45	933.5	57.3	0.133	1.52183
148.0	0.9502	14.74	0.9190	3275.0	4309.0	141.2	27.89	44.80	286.6	6.14	0.0183	1.01812
150.0	1.041	357.6	22.29	-2336.0	-2289.0	96.53	31.08	65.41	909.6	55.3	0.130	1.51509
150.0	1.041	16.16	1.008	3292.0	4325.0	140.6	28.06	45.88	286.4	6.25	0.0188	1.01988
152.0	1.139	353.4	22.03	-2208.0	-2157.0	97.38	31.00	66.46	885.4	53.3	0.127	1.50821
152.0	1.139	17.70	1.103	3307.0	4339.0	140.1	28.24	47.07	286.1	6.36	0.0193	1.02178
154.0	1.242	349.2	21.77	-2079.0	-2022.0	98.23	30.92	67.63	861.0	51.4	0.124	1.50116
154.0	1.242	19.35	1.206	3319.0	4348.0	139.6	28.42	48.39	285.6	6.48	0.0199	1.02383
156.0	1.353	344.8	21.49	-1949.0	-1886.0	99.07	30.84	68.93	836.3	49.6	0.121	1.49394
156.0	1.353	21.14	1.318	3328.0	4355.0	139.1	28.62	49.87	285.1	6.60	0.0205	1.02606
158.0	1.470	340.3	21.21	-1817.0	-1748.0	99.91	30.78	70.38	811.3	47.8	0.118	1.48653
158.0	1.470	23.07	1.438	3335.0	4357.0	138.6	28.82	51.54	284.4	6.73	0.0211	1.02847
160.0	1.594	335.7	20.93	-1684.0	-1607.0	100.8	30.72	72.01	786.1	46.0	0.115	1.47892
160.0	1.594	25.16	1.569	3339.0	4355.0	138.0	29.04	53.43	283.6	6.86	0.0218	1.03108
162.0	1.726	330.9	20.63	-1548.0	-1464.0	101.6	30.67	73.85	760.5	44.3	0.113	1.47107
162.0	1.726	27.43	1.710	3340.0	4349.0	137.5	29.27	55.60	282.6	7.00	0.0225	1.03391
164.0	1.865	326.0	20.32	-1410.0	-1318.0	102.5	30.63	75.96	734.5	42.7	0.110	1.46297
164.0	1.865	29.89	1.863	3337.0	4338.0	136.9	29.51	58.09	281.5	7.15	0.0234	1.03700
166.0	2.012	320.8	20.00	-1270.0	-1169.0	103.3	30.60	78.39	708.1	41.1	0.107	1.45458
166.0	2.012	32.57	2.030	3330.0	4321.0	136.4	29.77	60.99	280.4	7.30	0.0243	1.04036
168.0	2.167	315.4	19.66	-1127.0	-1017.0	104.2	30.58	81.22	681.2	39.5	0.104	1.44587
168.0	2.167	35.49	2.212	3318.0	4298.0	135.8	30.04	64.41	279.0	7.47	0.0254	1.04405
170.0	2.331	309.8	19.31	-980.6	-859.9	105.1	30.58	84.57	653.8	37.9	0.102	1.43679
170.0	2.331	38.69	2.412	3301.0	4268.0	135.2	30.33	68.50	277.6	7.64	0.0266	1.04810
172.0	2.503	303.9	18.94	-830.7	-698.5	106.0	30.60	88.59	625.7	36.4	0.0995	1.42728
172.0	2.503	42.22	2.632	3279.0	4230.0	134.6	30.65	73.48	276.0	7.83	0.0281	1.05257
174.0	2.685	297.6	18.55	-676.4	-531.7	106.9	30.63	93.55	596.8	34.8	0.0974	1.41725
174.0	2.685	46.12	2.875	3250.0	4183.0	134.0	30.99	79.65	274.3	8.04	0.0299	1.05753
176.0	2.876	290.9	18.13	-516.8	-358.2	107.8	30.69	99.80	567.0	33.3	0.0955	1.40660
176.0	2.876	50.49	3.147	3212.0	4126.0	133.3	31.35	87.53	272.4	8.27	0.0321	1.06311
178.0	3.077	283.7	17.68	-350.7	-176.7	108.8	30.79	108.0	536.1	31.7	0.0941	1.39519
178.0	3.077	55.41	3.454	3165.0	4056.0	132.5	31.75	97.92	270.4	8.52	0.0350	1.06942

Thermophysical properties of coexisting gaseous and liquid methane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	const.
180.0	3.288	275.8	17.19	-176.1	15.3	109.8	30.93	119.2	503.8	30.1	0.0932	1.38277
180.0	3.288	61.05	3.805	3105.0	3969.0	131.7	32.20	112.3	268.3	8.81	0.0368	1.07669
182.0	3.510	266.9	16.64	10.1	221.1	110.8	31.12	135.7	469.6	28.4	0.0934	1.36901
182.0	3.510	67.65	4.217	3029.0	3861.0	130.8	32.69	133.4	266.0	9.15	0.0443	1.08524
184.0	3.744	256.8	16.00	212.9	446.8	112.0	31.40	162.4	433.1	26.7	0.0954	1.35330
184.0	3.744	75.62	4.713	2929.0	3723.0	129.8	33.25	167.9	263.5	9.57	0.0526	1.09564
186.0	3.989	244.4	15.24	442.9	704.7	113.3	31.81	213.9	393.1	24.7	0.101	1.33443
186.0	3.989	85.78	5.347	2793.0	3539.0	128.5	33.90	234.0	260.8	10.1	0.0670	1.10901
188.0	4.247	227.8	14.20	726.9	1026.0	114.9	32.49	356.2	347.6	22.3	0.119	1.30931
188.0	4.247	100.2	6.245	2588.0	3268.0	126.8	34.68	413.1	258.0	10.9	0.0997	1.12819
190.53[b]	4.598	162.8	10.15	1670.0	2123.0	120.5						1.21451

[a]Triple point
[b]Critical point

Thermophysical properties of methane on the melting line

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
90.68[a]	0.01174	451.6	28.15	-5728.0	-5728.0	67.94	34.02	53.46	1534.0	205.0	0.224	1.67701
91.0	1.260	452.1	28.18	-5726.0	-5681.0	67.97	34.05	53.35	1541.0	207.0	0.225	1.67793
92.0	5.185	453.4	28.26	-5709.0	-5526.0	68.14	34.11	53.09	1558.0	210.0	0.226	1.67973
93.0	9.147	454.6	28.34	-5692.0	-5369.0	68.32	34.16	52.86	1576.0	213.0	0.228	1.68150
94.0	13.15	455.8	28.41	-5675.0	-5212.0	68.50	34.21	52.66	1594.0	216.0	0.229	1.68324
95.0	17.18	457.0	28.49	-5657.0	-5054.0	68.67	34.25	52.47	1612.0	218.0	0.231	1.68493
96.0	21.25	458.2	28.56	-5638.0	-4894.0	68.85	34.30	52.31	1630.0	221.0	0.233	1.68660
97.0	25.36	459.3	28.63	-5620.0	-4734.0	69.02	34.34	52.16	1648.0	223.0	0.234	1.68822
98.0	29.50	460.4	28.70	-5600.0	-4573.0	69.19	34.39	52.03	1666.0	226.0	0.236	1.68982
99.0	33.68	461.6	28.77	-5581.0	-4410.0	69.36	34.44	51.92	1683.0	228.0	0.238	1.69138
100.0	37.89	462.7	28.84	-5561.0	-4247.0	69.53	34.49	51.81	1701.0	230.0	0.240	1.69290
101.0	42.15	463.8	28.91	-5540.0	-4083.0	69.70	34.54	51.71	1719.0	232.0	0.242	1.69440
102.0	46.43	464.9	28.98	-5520.0	-3917.0	69.87	34.59	51.63	1736.0	234.0	0.244	1.69587
103.0	50.76	465.9	29.04	-5499.0	-3751.0	70.04	34.65	51.55	1753.0	236.0	0.246	1.69731
104.0	55.12	467.0	29.11	-5477.0	-3584.0	70.21	34.72	51.48	1770.0	237.0	0.249	1.69872
105.0	59.51	468.0	29.17	-5455.0	-3415.0	70.38	34.78	51.42	1786.0	239.0	0.251	1.70010
106.0	63.94	469.1	29.24	-5433.0	-3246.0	70.54	34.85	51.36	1803.0	240.0	0.253	1.70146
107.0	68.41	470.1	29.30	-5411.0	-3076.0	70.71	34.92	51.31	1819.0	242.0	0.256	1.70280
108.0	72.91	471.1	29.37	-5388.0	-2905.0	70.87	34.99	51.26	1834.0	243.0	0.258	1.70411
109.0	77.44	472.1	29.43	-5365.0	-2733.0	71.03	35.07	51.22	1850.0	244.0	0.261	1.70540
110.0	82.02	473.1	29.49	-5341.0	-2560.0	71.20	35.14	51.18	1865.0	245.0	0.264	1.70667
111.0	86.63	474.1	29.55	-5317.0	-2386.0	71.36	35.22	51.15	1880.0	246.0	0.266	1.70792
112.0	91.27	475.1	29.62	-5293.0	-2211.0	71.52	35.30	51.11	1895.0	247.0	0.269	1.70915
113.0	95.95	476.1	29.68	-5269.0	-2036.0	71.68	35.39	51.08	1909.0	248.0	0.272	1.71036
114.0	100.7	477.1	29.74	-5244.0	-1859.0	71.84	35.47	51.06	1924.0	249.0	0.275	1.71155
115.0	105.4	478.0	29.80	-5219.0	-1681.0	71.99	35.56	51.03	1938.0	250.0	0.278	1.71272
116.0	110.2	479.0	29.86	-5194.0	-1503.0	72.15	35.64	51.01	1951.0	251.0	0.281	1.71388
117.0	115.0	480.0	29.92	-5168.0	-1323.0	72.31	35.73	50.98	1965.0	252.0	0.285	1.71502
118.0	119.9	480.9	29.98	-5142.0	-1143.0	72.46	35.82	50.96	1978.0	252.0	0.288	1.71614
119.0	124.8	481.9	30.04	-5115.0	-961.8	72.61	35.90	50.94	1992.0	253.0	0.291	1.71725
120.0	129.7	482.8	30.09	-5089.0	-779.6	72.77	35.99	50.92	2005.0	254.0	0.295	1.71835
121.0	134.6	483.8	30.15	-5062.0	-596.6	72.92	36.08	50.91	2017.0	254.0	0.298	1.71943
122.0	139.6	484.7	30.21	-5035.0	-412.6	73.07	36.17	50.89	2030.0	255.0	0.302	1.72049
123.0	144.7	485.6	30.27	-5007.0	-227.8	73.22	36.26	50.87	2042.0	255.0	0.306	1.72154
124.0	149.7	486.6	30.33	-4979.0	-42.1	73.37	36.34	50.86	2055.0	256.0	0.310	1.72258
125.0	154.8	487.5	30.39	-4951.0	144.4	73.52	36.43	50.84	2067.0	256.0	0.314	1.72361
126.0	160.0	488.4	30.44	-4923.0	331.9	73.67	36.52	50.83	2079.0	256.0	0.318	1.72462
127.0	165.1	489.3	30.50	-4894.0	520.2	73.82	36.60	50.81	2091.0	257.0	0.322	1.72562
128.0	170.3	490.2	30.56	-4865.0	709.3	73.96	36.69	50.80	2103.0	257.0	0.326	1.72661
129.0	175.6	491.2	30.61	-4836.0	899.3	74.11	36.77	50.78	2114.0	257.0	0.330	1.72758
130.0	180.9	492.1	30.67	-4806.0	1090.0	74.26	36.86	50.77	2126.0	257.0	0.335	1.72854
131.0	186.2	493.0	30.73	-4777.0	1282.0	74.40	36.94	50.76	2137.0	258.0	0.340	1.72950
132.0	191.5	493.9	30.79	-4746.0	1474.0	74.54	37.02	50.74	2148.0	258.0	0.344	1.73044
133.0	196.9	494.8	30.84	-4716.0	1668.0	74.69	37.11	50.73	2160.0	258.0	0.349	1.73137

[a]Triple point

Thermophysical properties of methane

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.01 MPa isobar						
90.7	0.2142	0.01335	2237.0	2986.0	165.4	25.15	33.71	249.3	3.64	0.00922	1.00026
95.0	0.2043	0.01273	2346.0	3131.0	166.9	25.12	33.63	255.3	3.80	0.00971	1.00025
100.0	0.1939	0.01209	2472.0	3299.0	168.6	25.08	33.56	262.1	3.99	0.0103	1.00024
105.0	0.1845	0.01150	2597.0	3467.0	170.3	25.05	33.51	268.7	4.18	0.0108	1.00023
110.0	0.1761	0.01097	2723.0	3634.0	171.8	25.04	33.47	275.1	4.37	0.0114	1.00022
120.0	0.1612	0.01005	2974.0	3969.0	174.8	25.01	33.42	287.4	4.75	0.0126	1.00020
130.0	0.1488	0.009273	3224.0	4303.0	177.4	25.01	33.39	299.3	5.14	0.0138	1.00018
140.0	0.1381	0.008607	3475.0	4637.0	179.9	25.01	33.38	310.6	5.53	0.0149	1.00017
150.0	0.1288	0.008031	3725.0	4970.0	182.2	25.01	33.37	321.6	5.91	0.0161	1.00016
160.0	0.1207	0.007527	3975.0	5304.0	184.4	25.03	33.38	332.2	6.29	0.0173	1.00015
170.0	0.1136	0.007083	4226.0	5638.0	186.4	25.05	33.40	342.4	6.67	0.0186	1.00014
180.0	0.1073	0.006689	4477.0	5972.0	188.3	25.08	33.43	352.3	7.05	0.0199	1.00013
190.0	0.1016	0.006336	4728.0	6307.0	190.1	25.13	33.47	361.9	7.42	0.0278	1.00013
200.0	0.09654	0.006018	4980.0	6642.0	191.8	25.21	33.54	371.1	7.79	0.0223	1.00012
210.0	0.09193	0.005731	5232.0	6977.0	193.5	25.30	33.63	380.2	8.16	0.0232	1.00011
220.0	0.08775	0.005471	5486.0	7314.0	195.0	25.42	33.75	388.9	8.52	0.0243	1.00011
230.0	0.08393	0.005232	5741.0	7652.0	196.5	25.57	33.90	397.4	8.87	0.0254	1.00010
240.0	0.08043	0.005014	5998.0	7992.0	198.0	25.75	34.07	405.6	9.22	0.0266	1.00010
250.0	0.07721	0.004813	6256.0	8334.0	199.4	25.95	34.28	413.5	9.57	0.0278	1.00010
260.0	0.07424	0.004628	6517.0	8678.0	200.7	26.20	34.52	421.3	9.91	0.0290	1.00009
270.0	0.07148	0.004457	6780.0	9025.0	202.0	26.47	34.79	428.8	10.2	0.0302	1.00009
280.0	0.06893	0.004297	7046.0	9374.0	203.3	26.77	35.09	436.1	10.6	0.0314	1.00009
290.0	0.06655	0.004149	7316.0	9727.0	204.5	27.10	35.43	443.1	10.9	0.0327	1.00008
300.0	0.06433	0.004011	7589.0	10080.0	205.7	27.46	35.79	450.0	11.2	0.0341	1.00008
310.0	0.06225	0.003881	7865.0	10440.0	206.9	27.85	36.17	456.7	11.6	0.0354	1.00008
320.0	0.06031	0.003760	8146.0	10810.0	208.1	28.27	36.59	463.2	11.9	0.0368	1.00007
330.0	0.05848	0.003646	8431.0	11170.0	209.2	28.71	37.03	469.6	12.2	0.0382	1.00007
340.0	0.05676	0.003539	8720.0	11550.0	210.3	29.17	37.49	475.8	12.5	0.0397	1.00007
350.0	0.05514	0.003438	9014.0	11920.0	211.4	29.65	37.97	481.9	12.8	0.0412	1.00007
360.0	0.05360	0.003342	9313.0	12310.0	212.5	30.15	38.47	487.9	13.1	0.0427	1.00007
370.0	0.05215	0.003252	9617.0	12690.0	213.5	30.67	38.99	493.7	13.4	0.0442	1.00006
380.0	0.05078	0.003166	9927.0	13090.0	214.6	31.20	39.52	499.4	13.7	0.0458	1.00006
390.0	0.04948	0.003085	10240.0	13480.0	215.6	31.74	40.06	505.0	14.0	0.0474	1.00006
400.0	0.04824	0.003008	10560.0	13890.0	216.6	32.30	40.61	510.6	14.3	0.0491	1.00006
420.0	0.04594	0.002865	11220.0	14710.0	218.7	33.43	41.75	521.4	14.8	0.0524	1.00006
440.0	0.04386	0.002735	11900.0	15560.0	220.6	34.59	42.90	531.8	15.4	0.0558	1.00005
460.0	0.04195	0.002616	12600.0	16430.0	222.6	35.75	44.07	542.1	15.9	0.0593	1.00005
480.0	0.04020	0.002507	13330.0	17320.0	224.5	36.91	45.22	552.1	16.5	0.0629	1.00005
500.0	0.03859	0.002406	14080.0	18240.0	226.3	38.04	46.36	561.9	17.0	0.0665	1.00005
520.0	0.03711	0.002314	14850.0	19170.0	228.2	39.15	47.46	571.6	17.5	0.0701	1.00005
540.0	0.03573	0.002228	15640.0	20130.0	230.0	40.20	48.52	581.2	18.0	0.0737	1.00004
560.0	0.03446	0.002149	16460.0	21110.0	231.8	41.19	49.51	590.6	18.5	0.0772	1.00004
580.0	0.03327	0.002075	17290.0	22110.0	233.5	42.11	50.42	600.0	19.0	0.0807	1.00004
600.0	0.03216	0.002006	18140.0	23130.0	235.2	42.93	51.24	609.3	19.4	0.0841	1.00004
					0.05 MPa isobar						
90.69[a]	451.8	28.16	-5731.0	-5729.0	67.91	34.03	53.44	1536.0	206.0	0.224	1.67736
100.0	439.1	27.37	-5230.0	-5229.0	73.16	33.40	54.13	1450.0	156.0	0.208	1.65498
103.701[b]	434.1	27.06	-5033.0	-5031.0	75.11	33.26	54.51	1416.0	142.0	0.202	1.64630
103.701[b]	0.9386	0.05851	2534.0	3389.0	156.3	25.48	34.58	264.1	4.14	0.0109	1.00114
105.0	0.9388	0.05852	2567.0	3421.0	156.6	25.46	34.54	265.8	4.19	0.0110	1.00115
110.0	0.8935	0.05570	2696.0	3594.0	158.2	25.37	34.32	272.6	4.38	0.0116	1.00109
120.0	0.8155	0.05083	2952.0	3935.0	161.2	25.24	34.03	285.4	4.77	0.0127	1.00100
130.0	0.7505	0.04678	3206.0	4275.0	163.9	25.17	33.84	297.6	5.15	0.0139	1.00092
140.0	0.6953	0.04334	3459.0	4612.0	166.4	25.12	33.73	309.3	5.54	0.0150	1.00085
150.0	0.6479	0.04039	3711.0	4949.0	168.7	25.10	33.65	320.5	5.92	0.0162	1.00079
160.0	0.6067	0.03782	3963.0	5285.0	170.9	25.09	33.60	331.2	6.30	0.0174	1.00074
170.0	0.5704	0.03556	4215.0	5621.0	172.9	25.10	33.58	341.6	6.68	0.0186	1.00070
180.0	0.5383	0.03356	4467.0	5957.0	174.9	25.12	33.58	351.6	7.06	0.0200	1.00066

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
190.0	0.5096	0.03177	4719.0	6293.0	176.7	25.17	33.60	361.2	7.43	0.0281	1.00062
200.0	0.4839	0.03016	4971.0	6629.0	178.4	25.23	33.65	370.6	7.80	0.0224	1.00059
210.0	0.4607	0.02872	5225.0	6966.0	180.0	25.32	33.73	379.7	8.16	0.0233	1.00056
220.0	0.4396	0.02740	5479.0	7304.0	181.6	25.44	33.83	388.5	8.52	0.0243	1.00054
230.0	0.4203	0.02620	5734.0	7643.0	183.1	25.58	33.97	397.0	8.88	0.0255	1.00051
240.0	0.4027	0.02510	5991.0	7983.0	184.6	25.76	34.14	405.3	9.23	0.0266	1.00049
250.0	0.3865	0.02409	6250.0	8326.0	186.0	25.97	34.34	413.3	9.57	0.0278	1.00047
260.0	0.3716	0.02316	6511.0	8670.0	187.3	26.20	34.57	421.0	9.92	0.0290	1.00046
270.0	0.3578	0.02230	6775.0	9017.0	188.6	26.48	34.84	428.6	10.3	0.0302	1.00044
280.0	0.3449	0.02150	7041.0	9367.0	189.9	26.78	35.14	435.9	10.6	0.0315	1.00042
290.0	0.3330	0.02076	7311.0	9720.0	191.1	27.11	35.46	443.0	10.9	0.0328	1.00041
300.0	0.3219	0.02006	7584.0	10080.0	192.3	27.47	35.82	449.9	11.2	0.0341	1.00039
310.0	0.3115	0.01941	7861.0	10440.0	193.5	27.86	36.21	456.6	11.6	0.0355	1.00038
320.0	0.3017	0.01881	8142.0	10800.0	194.7	28.27	36.62	463.2	11.9	0.0368	1.00037
330.0	0.2925	0.01824	8427.0	11170.0	195.8	28.71	37.06	469.5	12.2	0.0383	1.00036
340.0	0.2839	0.01770	8716.0	11540.0	196.9	29.17	37.51	475.8	12.5	0.0397	1.00035
350.0	0.2758	0.01719	9011.0	11920.0	198.0	29.65	37.99	481.9	12.8	0.0412	1.00034
360.0	0.2681	0.01671	9310.0	12300.0	199.1	30.15	38.49	487.8	13.1	0.0427	1.00033
370.0	0.2608	0.01626	9614.0	12690.0	200.2	30.67	39.01	493.7	13.4	0.0443	1.00032
380.0	0.2540	0.01583	9923.0	13080.0	201.2	31.20	39.54	499.4	13.7	0.0458	1.00031
400.0	0.2413	0.01504	10560.0	13880.0	203.3	32.30	40.63	510.6	14.3	0.0491	1.00030
420.0	0.2297	0.01432	11220.0	14710.0	205.3	33.43	41.76	521.4	14.8	0.0524	1.00028
440.0	0.2193	0.01367	11900.0	15550.0	207.2	34.59	42.92	531.9	15.4	0.0558	1.00027
460.0	0.2098	0.01308	12600.0	16420.0	209.2	35.75	44.08	542.1	15.9	0.0593	1.00026
480.0	0.2010	0.01253	13330.0	17320.0	211.1	36.91	45.23	552.1	16.5	0.0629	1.00025
500.0	0.1930	0.01203	14080.0	18230.0	212.9	38.04	46.37	562.0	17.0	0.0665	1.00024
520.0	0.1855	0.01157	14850.0	19170.0	214.8	39.15	47.47	571.7	17.5	0.0701	1.00023
540.0	0.1787	0.01114	15640.0	20130.0	216.6	40.20	48.53	581.2	18.0	0.0737	1.00022
560.0	0.1723	0.01074	16460.0	21110.0	218.4	41.20	49.52	590.7	18.5	0.0772	1.00021
580.0	0.1663	0.01037	17290.0	22110.0	220.1	42.11	50.43	600.0	19.0	0.0807	1.00020
600.0	0.1608	0.01002	18140.0	23130.0	221.9	42.93	51.25	609.3	19.4	0.0841	1.00020
					0.10 MPa isobar						
90.70[a]	451.8	28.16	-5730.0	-5727.0	67.92	34.03	53.43	1536.0	206.0	0.224	1.67739
100.0	439.1	27.37	-5231.0	-5227.0	73.16	33.41	54.12	1451.0	156.0	0.208	1.65504
110.0	425.0	26.49	-4684.0	-4680.0	78.37	33.00	55.33	1351.0	122.0	0.191	1.63027
111.472[b]	423.1	26.37	-4606.0	-4603.0	79.07	32.95	55.49	1338.0	118.0	0.189	1.62697
111.472[b]	1.766	0.1101	2701.0	3609.0	152.7	25.74	35.35	271.5	4.46	0.0119	1.00215
115.0	1.735	0.1081	2792.0	3717.0	153.7	25.65	35.14	276.2	4.59	0.0123	1.00212
120.0	1.655	0.1032	2923.0	3892.0	155.2	25.54	34.85	282.9	4.78	0.0129	1.00202
130.0	1.518	0.09465	3182.0	4239.0	158.0	25.37	34.45	295.6	5.17	0.0140	1.00185
140.0	1.404	0.08749	3439.0	4582.0	160.5	25.27	34.18	307.6	5.55	0.0151	1.00171
150.0	1.306	0.08138	3694.0	4922.0	162.8	25.21	34.00	319.0	5.94	0.0163	1.00160
160.0	1.221	0.07610	3948.0	5262.0	165.0	25.18	33.88	330.0	6.32	0.0175	1.00149
170.0	1.147	0.07148	4201.0	5600.0	167.1	25.16	33.81	340.5	6.70	0.0187	1.00140
180.0	1.081	0.06740	4454.0	5938.0	169.0	25.17	33.77	350.7	7.07	0.0201	1.00132
190.0	1.023	0.06377	4708.0	6276.0	170.8	25.21	33.76	360.5	7.44	0.0285	1.00125
200.0	0.9709	0.06052	4961.0	6613.0	172.6	25.26	33.79	370.0	7.81	0.0225	1.00119
210.0	0.9239	0.05759	5215.0	6952.0	174.2	25.35	33.85	379.1	8.17	0.0233	1.00113
220.0	0.8812	0.05493	5470.0	7290.0	175.8	25.46	33.94	388.0	8.53	0.0244	1.00108
230.0	0.8424	0.05251	5726.0	7630.0	177.3	25.60	34.06	396.6	8.89	0.0255	1.00103
240.0	0.8069	0.05030	5984.0	7972.0	178.8	25.77	34.22	404.9	9.24	0.0267	1.00099
250.0	0.7743	0.04826	6243.0	8315.0	180.2	25.98	34.41	413.0	9.58	0.0278	1.00095
260.0	0.7442	0.04639	6504.0	8660.0	181.5	26.22	34.64	420.8	9.92	0.0290	1.00091
270.0	0.7164	0.04466	6768.0	9008.0	182.8	26.49	34.90	428.3	10.3	0.0303	1.00088
280.0	0.6906	0.04305	7035.0	9358.0	184.1	26.79	35.19	435.7	10.6	0.0315	1.00085
290.0	0.6666	0.04155	7305.0	9712.0	185.3	27.12	35.51	442.8	10.9	0.0328	1.00082
300.0	0.6443	0.04016	7579.0	10070.0	186.6	27.48	35.87	449.7	11.2	0.0341	1.00079
310.0	0.6234	0.03886	7856.0	10430.0	187.7	27.87	36.25	456.5	11.6	0.0355	1.00076
320.0	0.6038	0.03764	8137.0	10790.0	188.9	28.28	36.66	463.0	11.9	0.0369	1.00074
330.0	0.5854	0.03649	8422.0	11160.0	190.0	28.72	37.09	469.4	12.2	0.0383	1.00072
340.0	0.5681	0.03541	8712.0	11540.0	191.1	29.18	37.55	475.7	12.5	0.0398	1.00070

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
350.0	0.5518	0.03440	9006.0	11910.0	192.2	29.66	38.03	481.8	12.8	0.0412	1.00068
360.0	0.5364	0.03344	9305.0	12300.0	193.3	30.16	38.52	487.8	13.1	0.0428	1.00066
370.0	0.5219	0.03253	9610.0	12680.0	194.4	30.67	39.03	493.6	13.4	0.0443	1.00064
380.0	0.5081	0.03167	9919.0	13080.0	195.4	31.20	39.56	499.4	13.7	0.0459	1.00062
390.0	0.4950	0.03086	10230.0	13480.0	196.5	31.75	40.10	505.0	14.0	0.0475	1.00061
400.0	0.4826	0.03008	10550.0	13880.0	197.5	32.30	40.65	510.5	14.3	0.0491	1.00059
420.0	0.4596	0.02865	11210.0	14700.0	199.5	33.44	41.78	521.4	14.8	0.0524	1.00056
440.0	0.4386	0.02734	11890.0	15550.0	201.5	34.59	42.93	531.9	15.4	0.0559	1.00054
460.0	0.4195	0.02615	12600.0	16420.0	203.4	35.75	44.09	542.2	15.9	0.0594	1.00052
480.0	0.4020	0.02506	13320.0	17310.0	205.3	36.91	45.25	552.2	16.5	0.0629	1.00049
500.0	0.3859	0.02406	14070.0	18230.0	207.2	38.05	46.38	562.0	17.0	0.0665	1.00047
520.0	0.3711	0.02313	14850.0	19170.0	209.0	39.15	47.49	571.7	17.5	0.0701	1.00046
540.0	0.3573	0.02227	15640.0	20130.0	210.8	40.21	48.54	581.3	18.0	0.0737	1.00044
560.0	0.3445	0.02148	16450.0	21110.0	212.6	41.20	49.53	590.8	18.5	0.0772	1.00042
580.0	0.3326	0.02074	17290.0	22110.0	214.4	42.11	50.44	600.1	19.0	0.0807	1.00041
600.0	0.3215	0.02004	18140.0	23130.0	216.1	42.93	51.26	609.4	19.4	0.0841	1.00040
					0.101325 MPa isobar						
90.70[a]	451.8	28.16	-5730.0	-5727.0	67.92	34.03	53.43	1536.0	206.0	0.224	1.67739
100.0	439.1	27.37	-5231.0	-5227.0	73.16	33.41	54.12	1451.0	156.0	0.208	1.65505
110.0	425.0	26.49	-4684.0	-4680.0	78.37	33.00	55.33	1351.0	122.0	0.191	1.63027
111.632[b]	422.8	26.36	-4598.0	-4594.0	79.15	32.94	55.51	1337.0	118.0	0.189	1.62657
111.632[b]	1.787	0.1114	2704.0	3613.0	152.7	25.75	35.37	271.6	4.46	0.0119	1.00218
115.0	1.758	0.1096	2791.0	3716.0	153.6	25.66	35.17	276.1	4.59	0.0123	1.00215
120.0	1.678	0.1046	2922.0	3891.0	155.1	25.54	34.88	282.8	4.78	0.0129	1.00205
130.0	1.539	0.09593	3181.0	4238.0	157.8	25.38	34.46	295.5	5.17	0.0140	1.00188
140.0	1.423	0.08867	3438.0	4581.0	160.4	25.28	34.19	307.5	5.55	0.0152	1.00174
150.0	1.323	0.08248	3693.0	4922.0	162.7	25.21	34.01	319.0	5.94	0.0163	1.00162
160.0	1.237	0.07712	3947.0	5261.0	164.9	25.18	33.89	329.9	6.32	0.0175	1.00151
170.0	1.162	0.07244	4201.0	5600.0	167.0	25.17	33.81	340.5	6.70	0.0187	1.00142
180.0	1.096	0.06830	4454.0	5938.0	168.9	25.17	33.77	350.7	7.07	0.0201	1.00134
190.0	1.037	0.06462	4707.0	6275.0	170.7	25.21	33.77	360.5	7.44	0.0285	1.00127
200.0	0.9839	0.06133	4961.0	6613.0	172.5	25.26	33.79	369.9	7.81	0.0225	1.00120
210.0	0.9362	0.05836	5215.0	6951.0	174.1	25.35	33.85	379.1	8.17	0.0233	1.00115
220.0	0.8930	0.05566	5470.0	7290.0	175.7	25.46	33.94	388.0	8.53	0.0244	1.00109
230.0	0.8536	0.05321	5726.0	7630.0	177.2	25.60	34.06	396.6	8.89	0.0255	1.00105
240.0	0.8176	0.05097	5983.0	7972.0	178.7	25.77	34.22	404.9	9.24	0.0267	1.00100
250.0	0.7846	0.04891	6243.0	8315.0	180.1	25.98	34.41	412.9	9.58	0.0278	1.00096
260.0	0.7541	0.04701	6504.0	8660.0	181.4	26.22	34.64	420.8	9.92	0.0290	1.00092
270.0	0.7259	0.04525	6768.0	9008.0	182.7	26.49	34.90	428.3	10.3	0.0303	1.00089
280.0	0.6998	0.04362	7035.0	9358.0	184.0	26.79	35.19	435.7	10.6	0.0315	1.00086
290.0	0.6755	0.04211	7305.0	9711.0	185.2	27.12	35.52	442.8	10.9	0.0328	1.00083
300.0	0.6528	0.04069	7578.0	10070.0	186.4	27.48	35.87	449.7	11.2	0.0341	1.00080
310.0	0.6316	0.03937	7855.0	10430.0	187.6	27.87	36.25	456.5	11.6	0.0355	1.00077
320.0	0.6118	0.03814	8136.0	10790.0	188.8	28.28	36.66	463.0	11.9	0.0369	1.00075
330.0	0.5932	0.03697	8422.0	11160.0	189.9	28.72	37.09	469.4	12.2	0.0383	1.00073
340.0	0.5756	0.03588	8712.0	11540.0	191.0	29.18	37.55	475.7	12.5	0.0398	1.00071
350.0	0.5591	0.03485	9006.0	11910.0	192.1	29.66	38.03	481.8	12.8	0.0412	1.00069
360.0	0.5435	0.03388	9305.0	12300.0	193.2	30.16	38.52	487.8	13.1	0.0428	1.00067
370.0	0.5288	0.03296	9610.0	12680.0	194.3	30.67	39.03	493.6	13.4	0.0443	1.00065
380.0	0.5148	0.03209	9919.0	13080.0	195.3	31.20	39.56	499.4	13.7	0.0459	1.00063
390.0	0.5016	0.03127	10230.0	13480.0	196.4	31.75	40.10	505.0	14.0	0.0475	1.00062
400.0	0.4890	0.03048	10550.0	13880.0	197.4	32.30	40.65	510.5	14.3	0.0491	1.00060
420.0	0.4657	0.02903	11210.0	14700.0	199.4	33.44	41.78	521.4	14.8	0.0524	1.00057
440.0	0.4445	0.02770	11890.0	15550.0	201.4	34.59	42.94	531.9	15.4	0.0559	1.00055
460.0	0.4251	0.02650	12600.0	16420.0	203.3	35.75	44.10	542.2	15.9	0.0594	1.00052
480.0	0.4074	0.02539	13320.0	17310.0	205.2	36.91	45.25	552.2	16.5	0.0629	1.00050
500.0	0.3910	0.02438	14070.0	18230.0	207.1	38.05	46.38	562.0	17.0	0.0665	1.00048
520.0	0.3760	0.02344	14850.0	19170.0	208.9	39.15	47.49	571.7	17.5	0.0701	1.00046

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	0.3620	0.02257	15640.0	20130.0	210.7	40.21	48.54	581.3	18.0	0.0737	1.00044
560.0	0.3491	0.02176	16450.0	21110.0	212.5	41.20	49.53	590.8	18.5	0.0772	1.00043
580.0	0.3370	0.02101	17290.0	22110.0	214.3	42.11	50.44	600.1	19.0	0.0807	1.00041
600.0	0.3258	0.02031	18140.0	23130.0	216.0	42.93	51.26	609.4	19.4	0.0841	1.00040
					0.20 MPa isobar						
90.73[a]	451.8	28.16	-5730.0	-5723.0	67.92	34.03	53.42	1537.0	206.0	0.224	1.67743
100.0	439.2	27.38	-5232.0	-5225.0	73.15	33.41	54.11	1452.0	157.0	0.208	1.65517
120.0	410.1	25.56	-4125.0	-4118.0	83.23	32.56	56.80	1248.0	97.7	0.175	1.60452
120.588[b]	409.4	25.52	-4094.0	-4086.0	83.49	32.54	56.87	1243.0	96.7	0.174	1.60320
120.588[b]	3.341	0.2083	2881.0	3841.0	149.2	26.13	36.62	278.4	4.84	0.0132	1.00408
125.0	3.257	0.2030	2998.0	3981.0	150.4	25.98	36.22	284.4	5.01	0.0137	1.00398
130.0	3.112	0.1940	3133.0	4164.0	151.8	25.81	35.79	291.2	5.20	0.0143	1.00380
140.0	2.862	0.1784	3397.0	4518.0	154.4	25.59	35.17	304.0	5.58	0.0154	1.00350
150.0	2.652	0.1653	3658.0	4868.0	156.8	25.44	34.76	316.1	5.96	0.0165	1.00324
160.0	2.473	0.1541	3916.0	5214.0	159.1	25.35	34.48	327.5	6.34	0.0177	1.00302
170.0	2.318	0.1445	4173.0	5558.0	161.2	25.29	34.29	338.4	6.72	0.0189	1.00283
180.0	2.182	0.1360	4429.0	5900.0	163.1	25.28	34.17	348.9	7.09	0.0203	1.00267
190.0	2.062	0.1285	4685.0	6241.0	165.0	25.29	34.09	358.9	7.46	0.0293	1.00252
200.0	1.954	0.1218	4940.0	6582.0	166.7	25.33	34.07	368.6	7.83	0.0226	1.00239
210.0	1.858	0.1158	5196.0	6923.0	168.4	25.40	34.09	378.0	8.19	0.0235	1.00227
220.0	1.771	0.1104	5452.0	7264.0	170.0	25.50	34.15	387.0	8.55	0.0245	1.00217
230.0	1.692	0.1055	5709.0	7606.0	171.5	25.64	34.25	395.7	8.90	0.0256	1.00207
240.0	1.620	0.1010	5968.0	7949.0	172.9	25.81	34.38	404.1	9.25	0.0268	1.00198
250.0	1.554	0.09684	6228.0	8294.0	174.3	26.01	34.56	412.3	9.60	0.0279	1.00190
260.0	1.493	0.09304	6491.0	8640.0	175.7	26.24	34.77	420.2	9.94	0.0291	1.00183
270.0	1.436	0.08953	6755.0	8989.0	177.0	26.51	35.02	427.8	10.3	0.0304	1.00176
280.0	1.384	0.08629	7023.0	9341.0	178.3	26.80	35.30	435.2	10.6	0.0316	1.00170
290.0	1.336	0.08327	7293.0	9695.0	179.5	27.13	35.61	442.4	10.9	0.0329	1.00164
300.0	1.291	0.08046	7567.0	10050.0	180.8	27.49	35.96	449.4	11.3	0.0342	1.00158
310.0	1.249	0.07783	7845.0	10410.0	181.9	27.88	36.33	456.2	11.6	0.0356	1.00153
320.0	1.209	0.07537	8126.0	10780.0	183.1	28.29	36.74	462.8	11.9	0.0370	1.00148
330.0	1.172	0.07307	8412.0	11150.0	184.2	28.73	37.16	469.3	12.2	0.0384	1.00144
340.0	1.137	0.07090	8702.0	11520.0	185.4	29.19	37.61	475.5	12.5	0.0398	1.0013[c]
350.0	1.105	0.06886	8997.0	11900.0	186.5	29.67	38.09	481.7	12.8	0.0413	1.001
360.0	1.074	0.06693	9297.0	12280.0	187.5	30.17	38.58	487.7	13.1	0.0428	1.0[illegible]
380.0	1.017	0.06338	9911.0	13070.0	189.6	31.21	39.61	499.3	13.7	0.0459	[illegible]25
400.0	0.9657	0.06019	10550.0	13870.0	191.7	32.31	40.70	510.5	14.3	0.0492	[illegible]0118
420.0	0.9195	0.05731	11210.0	14690.0	193.7	33.44	41.82	521.4	14.8	0.0525	[illegible]00113
440.0	0.8775	0.05470	11890.0	15540.0	195.7	34.60	42.97	531.9	15.4	0.055[illegible]	[illegible].00108
460.0	0.8392	0.05231	12590.0	16410.0	197.6	35.76	44.13	542.2	15.9	0.0[illegible]	1.00103
480.0	0.8041	0.05012	13320.0	17310.0	199.5	36.92	45.28	552.3	16.5	0.[illegible]	1.00099
500.0	0.7719	0.04811	14070.0	18220.0	201.4	38.05	46.41	562.2	17.0	[illegible]5	1.00095
520.0	0.7421	0.04626	14840.0	19160.0	203.2	39.15	47.51	571.9	17.5	[illegible].01	1.00091
540.0	0.7146	0.04454	15630.0	20120.0	205.1	40.21	48.56	581.4	18.0	[illegible]0737	1.00088
560.0	0.6890	0.04295	16450.0	21110.0	206.8	41.20	49.55	590.9	18.[illegible]	[illegible].0773	1.00085
580.0	0.6652	0.04146	17280.0	22110.0	208.6	42.11	50.46	600.3	1[illegible]	0.0808	1.00082
600.0	0.6430	0.04008	18130.0	23120.0	210.3	42.93	51.28	609.6	[illegible]	0.0841	1.00079
					0.30 MPa isobar						
90.75[a]	451.8	28.16	-5730.0	-5719.0	67.92	34.03	53.42	1537.[illegible]	206.0	0.224	1.67748
100.0	439.3	27.38	-5233.0	-5222.0	73.13	33.41	54.10	1452.[illegible]	157.0	0.208	1.65530
120.0	410.2	25.57	-4127.0	-4116.0	83.22	32.56	56.78	1249.[illegible]	97.8	0.175	1.60470
126.681[b]	399.7	24.91	-3744.0	-3732.0	86.32	32.24	57.99	1177.[illegible]	85.4	0.165	1.58654
126.681[b]	4.872	0.3037	2990.0	3978.0	147.2	26.44	37.76	281.[illegible]	5.10	0.0142	1.00596
130.0	4.793	0.2988	3080.0	4084.0	148.0	26.30	37.36	286.[illegible]	5.23	0.0146	1.00586
135.0	4.576	0.2852	3218.0	4269.0	149.4	26.09	36.77	293.	5.42	0.0151	1.00559
140.0	4.381	0.2731	3353.0	4452.0	150.7	25.92	36.29	300.	5.61	0.0156	1.00536
150.0	4.043	0.2520	3621.0	4811.0	153.2	25.68	35.60	313.	5.99	0.0168	1.00494
160.0	3.758	0.2343	3884.0	5165.0	155.5	25.53	35.13	325.	6.37	0.0179	1.00460

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
170.0	3.515	0.2191	4145.0	5514.0	157.6	25.43	34.80	336.3	6.74	0.0191	1.00430
180.0	3.303	0.2059	4404.0	5861.0	159.6	25.38	34.58	347.1	7.12	0.0205	1.00404
190.0	3.116	0.1942	4662.0	6206.0	161.5	25.37	34.44	357.4	7.48	0.0303	1.00381
200.0	2.951	0.1839	4919.0	6550.0	163.2	25.40	34.36	367.3	7.85	0.0228	1.00361
210.0	2.803	0.1747	5176.0	6894.0	164.9	25.45	34.34	376.8	8.21	0.0236	1.00343
220.0	2.669	0.1664	5434.0	7237.0	166.5	25.55	34.37	386.0	8.57	0.0247	1.00327
230.0	2.549	0.1589	5692.0	7581.0	168.0	25.68	34.44	394.9	8.92	0.0258	1.00312
240.0	2.438	0.1520	5952.0	7926.0	169.5	25.84	34.55	403.4	9.27	0.0269	1.00299
250.0	2.338	0.1457	6213.0	8272.0	170.9	26.03	34.71	411.6	9.61	0.0281	1.00286
260.0	2.245	0.1400	6477.0	8620.0	172.3	26.26	34.90	419.6	9.95	0.0292	1.00275
270.0	2.160	0.1346	6742.0	8970.0	173.6	26.53	35.14	427.3	10.3	0.0304	1.00265
280.0	2.081	0.1297	7010.0	9323.0	174.9	26.82	35.41	434.8	10.6	0.0317	1.00255
290.0	2.008	0.1251	7281.0	9679.0	176.1	27.15	35.71	442.1	10.9	0.0330	1.00246
300.0	1.939	0.1209	7556.0	10040.0	177.3	27.51	36.05	449.1	11.3	0.0343	1.00238
310.0	1.876	0.1169	7834.0	10400.0	178.5	27.89	36.42	455.9	11.6	0.0356	1.00230
320.0	1.816	0.1132	8116.0	10770.0	179.7	28.30	36.81	462.6	11.9	0.0370	1.00223
330.0	1.760	0.1097	8402.0	11140.0	180.8	28.74	37.24	469.1	12.2	0.0384	1.00216
340.0	1.708	0.1065	8693.0	11510.0	182.0	29.20	37.68	475.4	12.5	0.0399	1.00209
350.0	1.658	0.1034	8988.0	11890.0	183.1	29.68	38.15	481.6	12.8	0.0414	1.00203
360.0	1.612	0.1005	9288.0	12270.0	184.1	30.18	38.64	487.6	13.1	0.0429	1.00198
370.0	1.568	0.09773	9593.0	12660.0	185.2	30.69	39.14	493.5	13.4	0.0444	1.00192
380.0	1.526	0.09513	9903.0	13060.0	186.3	31.22	39.66	499.3	13.7	0.0460	1.00187
400.0	1.449	0.09033	10540.0	13860.0	188.3	32.32	40.74	510.5	14.3	0.0492	1.00178
420.0	1.380	0.08600	11200.0	14690.0	190.3	33.45	41.86	521.4	14.9	0.0526	1.00169
440.0	1.317	0.08206	11880.0	15540.0	192.3	34.60	43.01	532.0	15.4	0.0560	1.00161
460.0	1.259	0.07848	12580.0	16410.0	194.2	35.76	44.16	542.3	15.9	0.0595	1.00154
480.0	1.206	0.07519	13310.0	17300.0	196.1	36.92	45.31	552.4	16.5	0.0630	1.00148
500.0	1.158	0.07217	14060.0	18220.0	198.0	38.06	46.44	562.3	17.0	0.0666	1.00142
520.0	1.113	0.06938	14840.0	19160.0	199.9	39.16	47.53	572.0	17.5	0.0702	1.00137
540.0	1.072	0.06681	15630.0	20120.0	201.7	40.21	48.58	581.6	18.0	0.0738	1.00132
560.0	1.033	0.06441	16440.0	21100.0	203.5	41.21	49.57	591.1	18.5	0.0773	1.00127
580.0	0.9976	0.06219	17280.0	22100.0	205.2	42.12	50.48	600.5	19.0	0.0808	1.00122
600.0	0.9643	0.06011	18130.0	23120.0	206.9	42.94	51.29	609.8	19.4	0.0842	1.00118
					0.40 MPa isobar						
90.78[a]	451.9	28.17	-5729.0	-5715.0	67.93	34.04	53.41	1538.0	206.0	0.225	1.67753
100.0	439.3	27.38	-5234.0	-5220.0	73.12	33.42	54.09	1453.0	157.0	0.208	1.65542
120.0	410.4	25.58	-4129.0	-4113.0	83.20	32.57	56.75	1250.0	98.0	0.175	1.60489
131.403[b]	391.9	24.43	-3469.0	-3452.0	88.46	31.99	59.01	1125.0	77.9	0.157	1.57314
131.403[b]	6.384	0.3979	3067.0	4072.0	145.7	26.71	38.84	284.0	5.31	0.0150	1.00781
135.0	6.255	0.3899	3167.0	4193.0	146.6	26.53	38.29	289.2	5.45	0.0154	1.00765
140.0	5.970	0.3721	3307.0	4382.0	148.0	26.29	37.56	296.4	5.64	0.0159	1.00730
150.0	5.483	0.3418	3582.0	4752.0	150.6	25.94	36.52	309.9	6.02	0.0170	1.00671
160.0	5.080	0.3167	3851.0	5114.0	152.9	25.71	35.83	322.4	6.39	0.0181	1.00622
170.0	4.739	0.2954	4115.0	5470.0	155.1	25.57	35.35	334.1	6.77	0.0193	1.00580
180.0	4.445	0.2770	4378.0	5821.0	157.1	25.49	35.03	345.2	7.14	0.0207	1.00544
190.0	4.188	0.2610	4638.0	6170.0	159.0	25.46	34.81	355.8	7.51	0.0313	1.00513
200.0	3.961	0.2469	4897.0	6518.0	160.7	25.46	34.67	366.0	7.87	0.0230	1.00485
210.0	3.758	0.2343	5157.0	6864.0	162.4	25.51	34.60	375.7	8.23	0.0238	1.00460
220.0	3.577	0.2229	5416.0	7210.0	164.0	25.59	34.59	385.0	8.59	0.0248	1.00438
230.0	3.412	0.2127	5676.0	7556.0	165.6	25.71	34.63	394.0	8.94	0.0259	1.00418
240.0	3.263	0.2034	5936.0	7903.0	167.0	25.87	34.72	402.6	9.29	0.0270	1.00400
250.0	3.127	0.1949	6199.0	8251.0	168.5	26.06	34.86	411.0	9.63	0.0282	1.00383
260.0	3.002	0.1871	6463.0	8600.0	169.8	26.29	35.04	419.1	9.97	0.0293	1.00368
270.0	2.887	0.1800	6729.0	8952.0	171.2	26.55	35.26	426.9	10.3	0.0305	1.00354
280.0	2.781	0.1733	6998.0	9305.0	172.4	26.84	35.52	434.4	10.6	0.0318	1.00341
290.0	2.682	0.1672	7269.0	9662.0	173.7	27.17	35.81	441.7	11.0	0.0331	1.00329
300.0	2.590	0.1615	7544.0	10020.0	174.9	27.52	36.14	448.8	11.3	0.0344	1.00317
310.0	2.505	0.1561	7823.0	10390.0	176.1	27.91	36.50	455.7	11.6	0.0357	1.00307
320.0	2.425	0.1511	8106.0	10750.0	177.3	28.32	36.89	462.4	11.9	0.0371	1.00297
330.0	2.350	0.1465	8392.0	11120.0	178.4	28.75	37.31	468.9	12.2	0.0385	1.00288
340.0	2.280	0.1421	8683.0	11500.0	179.5	29.21	37.75	475.2	12.5	0.0400	1.00279

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
350.0	2.213	0.1380	8979.0	11880.0	180.6	29.69	38.21	481.4	12.8	0.0414	1.00271
360.0	2.151	0.1341	9279.0	12260.0	181.7	30.18	38.70	487.5	13.1	0.0430	1.00264
370.0	2.092	0.1304	9584.0	12650.0	182.8	30.70	39.20	493.4	13.4	0.0445	1.00256
380.0	2.036	0.1269	9895.0	13050.0	183.8	31.23	39.71	499.2	13.7	0.0461	1.00250
400.0	1.933	0.1205	10530.0	13850.0	185.9	32.32	40.79	510.5	14.3	0.0493	1.00237
420.0	1.840	0.1147	11190.0	14680.0	187.9	33.45	41.90	521.5	14.9	0.0526	1.00226
440.0	1.756	0.1094	11870.0	15530.0	189.9	34.61	43.04	532.1	15.4	0.0560	1.00215
460.0	1.679	0.1047	12580.0	16400.0	191.8	35.77	44.19	542.4	15.9	0.0595	1.00206
480.0	1.608	0.1003	13310.0	17300.0	193.7	36.92	45.34	552.5	16.5	0.0631	1.00197
500.0	1.544	0.09623	14060.0	18210.0	195.6	38.06	46.46	562.4	17.0	0.0666	1.00189
520.0	1.484	0.09251	14830.0	19150.0	197.5	39.16	47.56	572.1	17.5	0.0702	1.00182
540.0	1.429	0.08907	15620.0	20120.0	199.3	40.22	48.61	581.7	18.0	0.0738	1.00175
560.0	1.378	0.08587	16440.0	21100.0	201.1	41.21	49.59	591.2	18.5	0.0774	1.00169
580.0	1.330	0.08290	17270.0	22100.0	202.8	42.12	50.50	600.6	19.0	0.0809	1.00163
600.0	1.286	0.08013	18130.0	23120.0	204.5	42.94	51.31	610.0	19.4	0.0842	1.00158
					0.50 MPa isobar						
90.81[a]	451.9	28.17	-5729.0	-5711.0	67.93	34.04	53.40	1538.0	206.0	0.225	1.67757
100.0	439.4	27.39	-5236.0	-5217.0	73.11	33.42	54.08	1454.0	157.0	0.208	1.65555
120.0	410.5	25.59	-4131.0	-4111.0	83.19	32.57	56.73	1251.0	98.1	0.175	1.60507
130.0	394.5	24.59	-3555.0	-3535.0	87.80	32.07	58.61	1143.0	80.3	0.160	1.57762
135.319[b]	385.2	24.01	-3237.0	-3216.0	90.20	31.79	59.99	1081.0	72.3	0.151	1.56167
135.319[b]	7.890	0.4918	3126.0	4143.0	144.6	26.96	39.89	285.3	5.50	0.0157	1.00966
140.0	7.638	0.4761	3259.0	4309.0	145.8	26.68	39.03	292.3	5.67	0.0162	1.00935
145.0	7.289	0.4544	3402.0	4502.0	147.1	26.42	38.20	299.6	5.86	0.0167	1.00893
150.0	6.977	0.4349	3542.0	4691.0	148.4	26.21	37.54	306.6	6.05	0.0172	1.00854
160.0	6.441	0.4015	3816.0	5062.0	150.8	25.91	36.58	319.7	6.42	0.0183	1.00789
170.0	5.992	0.3735	4085.0	5424.0	153.0	25.72	35.94	331.9	6.79	0.0195	1.00734
180.0	5.609	0.3496	4351.0	5781.0	155.1	25.60	35.49	343.4	7.16	0.0209	1.00687
190.0	5.276	0.3289	4614.0	6134.0	157.0	25.54	35.18	354.2	7.53	0.0324	1.00646
200.0	4.984	0.3107	4876.0	6485.0	158.8	25.53	34.98	364.6	7.89	0.0232	1.00611
205.0	4.851	0.3024	5006.0	6660.0	159.6	25.54	34.92	369.6	8.07	0.0235	1.00594
210.0	4.725	0.2945	5137.0	6834.0	160.5	25.57	34.87	374.5	8.25	0.0239	1.00579
220.0	4.493	0.2801	5397.0	7183.0	162.1	25.64	34.82	384.0	8.61	0.0249	1.00550
230.0	4.284	0.2670	5658.0	7531.0	163.6	25.75	34.83	393.1	8.96	0.0260	1.00525
240.0	4.094	0.2552	5920.0	7879.0	165.1	25.90	34.90	401.9	9.30	0.0271	1.00502
250.0	3.922	0.2444	6184.0	8229.0	166.5	26.09	35.02	410.3	9.65	0.0283	1.00481
260.0	3.763	0.2346	6448.0	8580.0	167.9	26.31	35.18	418.5	9.98	0.0294	1.00461
270.0	3.618	0.2255	6716.0	8933.0	169.3	26.57	35.38	426.4	10.3	0.0306	1.00443
280.0	3.483	0.2171	6985.0	9288.0	170.5	26.86	35.63	434.0	10.6	0.0319	1.00427
290.0	3.359	0.2094	7257.0	9645.0	171.8	27.18	35.92	441.4	11.0	0.0331	1.00412
300.0	3.243	0.2022	7533.0	10010.0	173.0	27.54	36.24	448.5	11.3	0.0345	1.00398
310.0	3.136	0.1955	7812.0	10370.0	174.2	27.92	36.59	455.4	11.6	0.0358	1.00384
320.0	3.035	0.1892	8095.0	10740.0	175.4	28.33	36.97	462.2	11.9	0.0372	1.00372
330.0	2.941	0.1833	8382.0	11110.0	176.5	28.76	37.38	468.7	12.2	0.0386	1.00361
340.0	2.852	0.1778	8674.0	11490.0	177.7	29.22	37.82	475.1	12.5	0.0400	1.00350
350.0	2.769	0.1726	8969.0	11870.0	178.8	29.70	38.27	481.3	12.8	0.0415	1.00340
360.0	2.691	0.1677	9270.0	12250.0	179.8	30.19	38.75	487.4	13.1	0.0430	1.00330
370.0	2.617	0.1631	9576.0	12640.0	180.9	30.71	39.25	493.4	13.4	0.0446	1.00321
380.0	2.547	0.1587	9887.0	13040.0	182.0	31.24	39.77	499.2	13.7	0.0461	1.00312
400.0	2.418	0.1507	10520.0	13840.0	184.0	32.33	40.84	510.5	14.3	0.0493	1.00296
420.0	2.301	0.1434	11180.0	14670.0	186.0	33.46	41.94	521.5	14.9	0.0527	1.00282
440.0	2.195	0.1368	11870.0	15520.0	188.0	34.61	43.08	532.1	15.4	0.0561	1.00269
460.0	2.099	0.1308	12570.0	16390.0	190.0	35.77	44.23	542.5	16.0	0.0596	1.00257
480.0	2.011	0.1253	13300.0	17290.0	191.9	36.93	45.37	552.6	16.5	0.0631	1.00247
500.0	1.930	0.1203	14050.0	18210.0	193.7	38.07	46.49	562.5	17.0	0.0667	1.00237
520.0	1.855	0.1156	14820.0	19150.0	195.6	39.17	47.58	572.3	17.5	0.0703	1.00228

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	1.786	0.1113	15620.0	20110.0	197.4	40.22	48.63	581.9	18.0	0.0739	1.00219
560.0	1.722	0.1073	16430.0	21090.0	199.2	41.21	49.61	591.4	18.5	0.0774	1.00211
580.0	1.662	0.1036	17270.0	22090.0	201.0	42.13	50.52	600.8	19.0	0.0809	1.00204
600.0	1.607	0.1001	18120.0	23110.0	202.7	42.94	51.33	610.2	19.5	0.0843	1.00197
				0.60 MPa isobar							
90.83[a]	451.9	28.17	-5728.0	-5707.0	67.94	34.04	53.40	1538.0	206.0	0.225	1.67762
100.0	439.5	27.39	-5237.0	-5215.0	73.10	33.43	54.06	1455.0	157.0	0.209	1.65567
120.0	410.6	25.59	-4132.0	-4109.0	83.17	32.58	56.70	1252.0	98.3	0.176	1.60526
130.0	394.7	24.60	-3558.0	-3533.0	87.78	32.08	58.57	1144.0	80.4	0.160	1.57786
138.697[b]	379.2	23.64	-3034.0	-3009.0	91.68	31.62	60.96	1042.0	67.9	0.146	1.55149
138.697[b]	9.397	0.5857	3172.0	4197.0	143.6	27.18	40.95	286.1	5.66	0.0164	1.01151
140.0	9.399	0.5859	3208.0	4232.0	143.9	27.11	40.73	287.9	5.71	0.0165	1.01152
145.0	8.939	0.5572	3355.0	4432.0	145.3	26.78	39.58	295.8	5.90	0.0170	1.01095
150.0	8.533	0.5319	3500.0	4628.0	146.6	26.51	38.69	303.2	6.08	0.0175	1.01046
160.0	7.844	0.4889	3781.0	5008.0	149.1	26.12	37.41	316.9	6.45	0.0186	1.00961
170.0	7.276	0.4536	4055.0	5378.0	151.3	25.87	36.56	329.6	6.82	0.0197	1.00892
180.0	6.796	0.4236	4324.0	5740.0	153.4	25.72	35.98	341.5	7.19	0.0211	1.00833
190.0	6.383	0.3979	4590.0	6098.0	155.3	25.63	35.58	352.6	7.55	0.0335	1.00782
200.0	6.022	0.3754	4854.0	6452.0	157.1	25.60	35.31	363.2	7.92	0.0234	1.00738
205.0	5.858	0.3651	4985.0	6628.0	158.0	25.61	35.21	368.3	8.09	0.0237	1.00718
210.0	5.703	0.3555	5116.0	6804.0	158.9	25.62	35.14	373.3	8.27	0.0241	1.00699
220.0	5.419	0.3378	5379.0	7155.0	160.5	25.69	35.05	383.0	8.63	0.0251	1.00664
230.0	5.163	0.3218	5641.0	7506.0	162.0	25.79	35.03	392.3	8.98	0.0261	1.00633
240.0	4.932	0.3074	5904.0	7856.0	163.5	25.93	35.08	401.1	9.32	0.0272	1.00604
250.0	4.721	0.2943	6168.0	8207.0	165.0	26.12	35.17	409.7	9.66	0.0284	1.00579
260.0	4.529	0.2823	6434.0	8560.0	166.4	26.34	35.32	417.9	10.0	0.0295	1.00555
270.0	4.352	0.2713	6702.0	8914.0	167.7	26.59	35.51	425.9	10.3	0.0307	1.00534
280.0	4.189	0.2611	6972.0	9270.0	169.0	26.88	35.74	433.6	10.7	0.0319	1.00514
290.0	4.039	0.2517	7245.0	9629.0	170.2	27.20	36.02	441.0	11.0	0.0332	1.00495
300.0	3.899	0.2430	7522.0	9991.0	171.5	27.55	36.33	448.2	11.3	0.0345	1.00478
310.0	3.768	0.2349	7801.0	10360.0	172.7	27.93	36.67	455.2	11.6	0.0359	1.00462
320.0	3.647	0.2273	8085.0	10720.0	173.8	28.34	37.05	461.9	11.9	0.0373	1.00447
330.0	3.533	0.2202	8372.0	11100.0	175.0	28.77	37.45	468.5	12.2	0.0387	1.00433
340.0	3.426	0.2136	8664.0	11470.0	176.1	29.23	37.88	474.9	12.6	0.0401	1.00420
350.0	3.326	0.2073	8960.0	11850.0	177.2	29.71	38.34	481.2	12.9	0.0416	1.00408
360.0	3.231	0.2014	9261.0	12240.0	178.3	30.20	38.81	487.3	13.2	0.0431	1.00396
370.0	3.142	0.1959	9567.0	12630.0	179.4	30.72	39.31	493.3	13.5	0.0446	1.00385
380.0	3.058	0.1906	9878.0	13030.0	180.4	31.24	39.82	499.2	13.7	0.0462	1.00375
400.0	2.902	0.1809	10520.0	13830.0	182.5	32.34	40.88	510.5	14.3	0.0494	1.00356
420.0	2.762	0.1722	11180.0	14660.0	184.5	33.47	41.99	521.5	14.9	0.0527	1.00339
440.0	2.635	0.1642	11860.0	15510.0	186.5	34.62	43.12	532.2	15.4	0.0561	1.00323
460.0	2.519	0.1570	12570.0	16390.0	188.4	35.78	44.26	542.6	16.0	0.0596	1.00309
480.0	2.413	0.1504	13290.0	17280.0	190.3	36.93	45.40	552.7	16.5	0.0632	1.00296
500.0	2.316	0.1443	14050.0	18200.0	192.2	38.07	46.52	562.6	17.0	0.0667	1.00284
520.0	2.226	0.1388	14820.0	19140.0	194.1	39.17	47.61	572.4	17.5	0.0703	1.00273
540.0	2.143	0.1336	15610.0	20110.0	195.9	40.23	48.65	582.0	18.0	0.0739	1.00263
560.0	2.066	0.1288	16430.0	21090.0	197.7	41.22	49.63	591.6	18.5	0.0775	1.00254
580.0	1.994	0.1243	17260.0	22090.0	199.4	42.13	50.54	601.0	19.0	0.0809	1.00245
600.0	1.928	0.1202	18120.0	23110.0	201.2	42.95	51.35	610.3	19.5	0.0843	1.00237
				0.80 MPa isobar							
90.88[a]	452.0	28.17	-5727.0	-5699.0	67.95	34.04	53.38	1539.0	206.0	0.225	1.67771
100.0	439.6	27.40	-5239.0	-5210.0	73.08	33.44	54.04	1456.0	158.0	0.209	1.65592
120.0	410.8	25.61	-4136.0	-4105.0	83.14	32.59	56.65	1255.0	98.5	0.176	1.60562
130.0	394.9	24.62	-3562.0	-3529.0	87.75	32.09	58.49	1147.0	80.7	0.160	1.57832
140.0	377.5	23.53	-2966.0	-2932.0	92.17	31.56	61.12	1034.0	66.8	0.145	1.54866
144.379[b]	368.6	22.98	-2687.0	-2652.0	94.14	31.33	62.93	976.3	61.2	0.138	1.53368
144.379[b]	12.43	0.7749	3240.0	4272.0	142.1	27.60	43.11	286.7	5.95	0.0175	1.01526
145.0	12.51	0.7796	3255.0	4281.0	142.2	27.58	43.05	287.4	5.97	0.0176	1.01535
150.0	11.86	0.7391	3410.0	4492.0	143.6	27.16	41.46	295.9	6.15	0.0181	1.01455

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
155.0	11.29	0.7039	3560.0	4696.0	144.9	26.83	40.26	303.7	6.34	0.0186	1.01386
160.0	10.79	0.6728	3706.0	4895.0	146.2	26.58	39.31	311.2	6.52	0.0191	1.01324
170.0	9.947	0.6201	3991.0	5281.0	148.5	26.20	37.96	324.9	6.88	0.0202	1.01220
180.0	9.248	0.5764	4268.0	5656.0	150.7	25.96	37.05	337.6	7.24	0.0216	1.01134
190.0	8.655	0.5395	4540.0	6023.0	152.7	25.82	36.43	349.4	7.61	0.0362	1.01062
200.0	8.143	0.5076	4809.0	6385.0	154.5	25.75	36.00	360.5	7.96	0.0238	1.00999
205.0	7.912	0.4932	4942.0	6565.0	155.4	25.74	35.85	365.8	8.14	0.0240	1.00970
210.0	7.695	0.4796	5076.0	6743.0	156.3	25.74	35.72	371.0	8.32	0.0244	1.00944
215.0	7.491	0.4669	5208.0	6922.0	157.1	25.76	35.62	376.0	8.49	0.0249	1.00919
220.0	7.298	0.4549	5341.0	7100.0	157.9	25.78	35.54	381.0	8.67	0.0254	1.00895
230.0	6.944	0.4329	5606.0	7455.0	159.5	25.87	35.45	390.5	9.02	0.0264	1.00852
240.0	6.625	0.4130	5872.0	7809.0	161.0	26.00	35.44	399.7	9.36	0.0275	1.00813
250.0	6.337	0.3950	6138.0	8164.0	162.5	26.17	35.49	408.4	9.70	0.0286	1.00777
260.0	6.073	0.3786	6406.0	8519.0	163.9	26.38	35.60	416.8	10.0	0.0297	1.00745
270.0	5.832	0.3635	6675.0	8876.0	165.2	26.63	35.77	424.9	10.4	0.0309	1.00715
280.0	5.611	0.3497	6947.0	9235.0	166.5	26.92	35.97	432.8	10.7	0.0321	1.00688
290.0	5.406	0.3370	7221.0	9596.0	167.8	27.23	36.23	440.3	11.0	0.0334	1.00663
300.0	5.216	0.3251	7499.0	9959.0	169.0	27.58	36.52	447.6	11.3	0.0347	1.00640
310.0	5.040	0.3141	7779.0	10330.0	170.2	27.96	36.85	454.7	11.7	0.0360	1.00618
320.0	4.875	0.3039	8064.0	10700.0	171.4	28.36	37.21	461.5	12.0	0.0374	1.00598
330.0	4.722	0.2943	8352.0	11070.0	172.5	28.79	37.60	468.2	12.3	0.0388	1.00579
340.0	4.578	0.2853	8645.0	11450.0	173.7	29.25	38.02	474.7	12.6	0.0402	1.00562
350.0	4.443	0.2769	8942.0	11830.0	174.8	29.72	38.46	481.0	12.9	0.0417	1.00545
360.0	4.315	0.2690	9244.0	12220.0	175.9	30.22	38.93	487.2	13.2	0.0432	1.00529
370.0	4.195	0.2615	9550.0	12610.0	176.9	30.73	39.42	493.2	13.5	0.0448	1.00515
380.0	4.082	0.2545	9862.0	13010.0	178.0	31.26	39.92	499.1	13.8	0.0463	1.00501
400.0	3.873	0.2414	10500.0	13810.0	180.1	32.35	40.97	510.5	14.3	0.0495	1.00475
420.0	3.685	0.2297	11160.0	14650.0	182.1	33.48	42.07	521.6	14.9	0.0528	1.00452
440.0	3.515	0.2191	11850.0	15500.0	184.1	34.63	43.19	532.3	15.4	0.0562	1.00431
460.0	3.360	0.2094	12550.0	16370.0	186.0	35.79	44.32	542.7	16.0	0.0597	1.00412
480.0	3.218	0.2006	13280.0	17270.0	187.9	36.94	45.46	552.9	16.5	0.0633	1.00395
500.0	3.088	0.1925	14030.0	18190.0	189.8	38.08	46.57	562.9	17.0	0.0668	1.00379
520.0	2.968	0.1850	14810.0	19130.0	191.7	39.18	47.66	572.7	17.5	0.0704	1.00364
540.0	2.857	0.1781	15600.0	20100.0	193.5	40.23	48.70	582.4	18.0	0.0740	1.00351
560.0	2.754	0.1717	16420.0	21080.0	195.3	41.22	49.67	591.9	18.5	0.0775	1.00338
580.0	2.658	0.1657	17260.0	22080.0	197.0	42.14	50.57	601.3	19.0	0.0810	1.00326
600.0	2.569	0.1602	18110.0	23100.0	198.7	42.95	51.38	610.7	19.5	0.0844	1.00315
					1.00 MPa isobar						
90.93[a]	452.1	28.18	-5727.0	-5691.0	67.96	34.05	53.37	1540.0	206.0	0.225	1.67781
100.0	439.8	27.41	-5241.0	-5205.0	73.05	33.44	54.02	1458.0	158.0	0.209	1.65617
120.0	411.0	25.62	-4139.0	-4100.0	83.11	32.60	56.60	1257.0	98.8	0.176	1.60599
130.0	395.2	24.63	-3566.0	-3526.0	87.71	32.09	58.42	1150.0	80.9	0.160	1.57877
140.0	377.9	23.55	-2972.0	-2930.0	92.13	31.57	60.99	1037.0	67.0	0.145	1.54925
149.109[b]	359.4	22.40	-2392.0	-2347.0	96.16	31.12	64.97	920.3	56.2	0.131	1.51811
149.109[b]	15.52	0.9673	3285.0	4319.0	140.9	27.98	45.38	286.5	6.20	0.0186	1.01907
150.0	15.54	0.9689	3309.0	4341.0	141.0	27.92	45.17	287.8	6.23	0.0187	1.01911
155.0	14.70	0.9161	3470.0	4562.0	142.5	27.45	43.15	296.7	6.41	0.0192	1.01806
160.0	13.97	0.8709	3625.0	4774.0	143.8	27.08	41.65	305.0	6.59	0.0196	1.01717
165.0	13.34	0.8313	3776.0	4979.0	145.1	26.79	40.50	312.7	6.77	0.0201	1.01638
170.0	12.77	0.7962	3923.0	5179.0	146.3	26.56	39.59	320.0	6.95	0.0207	1.01569
180.0	11.81	0.7361	4209.0	5568.0	148.5	26.23	38.26	333.6	7.30	0.0222	1.01450
190.0	11.01	0.6862	4488.0	5946.0	150.5	26.02	37.37	346.0	7.66	0.0392	1.01352
200.0	10.33	0.6437	4763.0	6316.0	152.4	25.91	36.75	357.7	8.01	0.0243	1.01268
205.0	10.02	0.6247	4898.0	6499.0	153.3	25.88	36.52	363.2	8.19	0.0244	1.01230
210.0	9.737	0.6069	5034.0	6681.0	154.2	25.86	36.33	368.6	8.37	0.0248	1.01195
215.0	9.469	0.5903	5168.0	6863.0	155.1	25.87	36.18	373.9	8.54	0.0252	1.01163
220.0	9.218	0.5746	5303.0	7043.0	155.9	25.88	36.06	379.0	8.71	0.0257	1.01132
230.0	8.758	0.5459	5571.0	7403.0	157.5	25.95	35.89	388.8	9.06	0.0267	1.01075
240.0	8.345	0.5202	5839.0	7761.0	159.0	26.07	35.82	398.2	9.40	0.0277	1.01024
250.0	7.973	0.4970	6107.0	8120.0	160.5	26.23	35.83	407.1	9.74	0.0288	1.00979

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
260.0	7.636	0.4759	6377.0	8478.0	161.9	26.43	35.90	415.7	10.1	0.0299	1.00937
270.0	7.327	0.4567	6648.0	8838.0	163.2	26.67	36.03	424.0	10.4	0.0311	1.00899
280.0	7.044	0.4391	6921.0	9199.0	164.6	26.95	36.21	431.9	10.7	0.0323	1.00865
290.0	6.784	0.4228	7197.0	9562.0	165.8	27.27	36.44	439.6	11.0	0.0336	1.00833
300.0	6.542	0.4078	7476.0	9928.0	167.1	27.61	36.71	447.0	11.4	0.0349	1.00803
310.0	6.319	0.3939	7757.0	10300.0	168.3	27.99	37.02	454.2	11.7	0.0362	1.00776
320.0	6.110	0.3809	8043.0	10670.0	169.5	28.39	37.37	461.1	12.0	0.0376	1.00750
330.0	5.916	0.3688	8332.0	11040.0	170.6	28.82	37.75	467.9	12.3	0.0390	1.00726
340.0	5.734	0.3574	8626.0	11420.0	171.7	29.27	38.16	474.4	12.6	0.0404	1.00704
350.0	5.563	0.3468	8923.0	11810.0	172.9	29.74	38.59	480.8	12.9	0.0419	1.00683
360.0	5.403	0.3368	9226.0	12200.0	174.0	30.24	39.05	487.0	13.2	0.0434	1.00663
370.0	5.252	0.3273	9533.0	12590.0	175.0	30.75	39.53	493.1	13.5	0.0449	1.00645
380.0	5.109	0.3184	9846.0	12990.0	176.1	31.27	40.02	499.0	13.8	0.0464	1.00627
400.0	4.846	0.3021	10490.0	13800.0	178.2	32.36	41.06	510.6	14.4	0.0496	1.00595
420.0	4.609	0.2873	11150.0	14630.0	180.2	33.49	42.15	521.7	14.9	0.0530	1.00566
440.0	4.395	0.2740	11830.0	15480.0	182.2	34.64	43.26	532.5	15.5	0.0564	1.00540
460.0	4.201	0.2618	12540.0	16360.0	184.1	35.80	44.39	542.9	16.0	0.0598	1.00516
480.0	4.023	0.2508	13270.0	17260.0	186.0	36.95	45.52	553.1	16.5	0.0634	1.00494
500.0	3.860	0.2406	14020.0	18180.0	187.9	38.09	46.63	563.2	17.0	0.0669	1.00474
520.0	3.709	0.2312	14800.0	19120.0	189.8	39.19	47.71	573.0	17.5	0.0705	1.00455
540.0	3.571	0.2226	15590.0	20090.0	191.6	40.24	48.74	582.7	18.0	0.0741	1.00438
560.0	3.442	0.2145	16410.0	21070.0	193.4	41.23	49.72	592.2	18.5	0.0776	1.00423
580.0	3.322	0.2071	17250.0	22080.0	195.2	42.14	50.61	601.7	19.0	0.0811	1.00408
600.0	3.211	0.2001	18100.0	23100.0	196.9	42.96	51.42	611.1	19.5	0.0845	1.00394
					1.20 MPa isobar						
90.98[a]	452.1	28.18	-5726.0	-5683.0	67.97	34.05	53.35	1541.0	207.0	0.225	1.67790
100.0	439.9	27.42	-5244.0	-5200.0	73.03	33.45	54.00	1459.0	158.0	0.209	1.65642
120.0	411.2	25.63	-4143.0	-4096.0	83.09	32.60	56.55	1259.0	99.1	0.176	1.60635
130.0	395.5	24.65	-3571.0	-3522.0	87.68	32.10	58.34	1153.0	81.2	0.161	1.57923
140.0	378.2	23.58	-2978.0	-2927.0	92.09	31.58	60.87	1040.0	67.3	0.146	1.54984
150.0	358.7	22.36	-2354.0	-2300.0	96.41	31.09	64.86	919.3	55.8	0.130	1.51698
153.198[b]	350.9	21.87	-2131.0	-2076.0	97.89	30.95	67.15	870.8	52.1	0.125	1.50401
153.198[b]	18.67	1.164	3314.0	4345.0	139.8	28.35	47.84	285.8	6.43	0.0197	1.02299
155.0	18.47	1.151	3371.0	4413.0	140.2	28.17	47.02	289.0	6.50	0.0198	1.02274
160.0	17.43	1.086	3537.0	4642.0	141.7	27.66	44.62	298.3	6.67	0.0203	1.02145
165.0	16.55	1.031	3697.0	4860.0	143.0	27.27	42.86	306.9	6.84	0.0207	1.02036
170.0	15.78	0.9836	3851.0	5071.0	144.3	26.95	41.52	314.8	7.02	0.0213	1.01941
175.0	15.10	0.9414	4001.0	5276.0	145.5	26.71	40.47	322.3	7.19	0.0219	1.01857
180.0	14.50	0.9036	4148.0	5476.0	146.6	26.51	39.63	329.4	7.37	0.0228	1.01783
190.0	13.45	0.8387	4435.0	5866.0	148.7	26.23	38.40	342.6	7.72	0.0428	1.01654
200.0	12.58	0.7842	4715.0	6245.0	150.7	26.07	37.57	354.8	8.07	0.0248	1.01546
205.0	12.19	0.7600	4853.0	6432.0	151.6	26.02	37.25	360.6	8.24	0.0249	1.01498
210.0	11.83	0.7375	4991.0	6618.0	152.5	25.99	36.99	366.2	8.42	0.0252	1.01454
215.0	11.49	0.7165	5128.0	6802.0	153.4	25.98	36.78	371.7	8.59	0.0255	1.01412
220.0	11.18	0.6969	5264.0	6986.0	154.2	25.98	36.60	376.9	8.76	0.0260	1.01374
225.0	10.88	0.6784	5400.0	7168.0	155.0	26.00	36.46	382.1	8.93	0.0265	1.01337
230.0	10.60	0.6610	5535.0	7350.0	155.8	26.03	36.35	387.1	9.10	0.0269	1.01303
240.0	10.09	0.6291	5806.0	7713.0	157.4	26.14	36.22	396.7	9.44	0.0280	1.01240
250.0	9.633	0.6004	6077.0	8075.0	158.8	26.29	36.17	405.9	9.78	0.0290	1.01183
260.0	9.216	0.5745	6348.0	8437.0	160.3	26.48	36.20	414.7	10.1	0.0301	1.01132
270.0	8.837	0.5509	6621.0	8799.0	161.6	26.72	36.29	423.1	10.4	0.0313	1.01085
280.0	8.491	0.5292	6896.0	9163.0	162.9	26.99	36.45	431.2	10.8	0.0325	1.01043
290.0	8.172	0.5094	7173.0	9528.0	164.2	27.30	36.65	438.9	11.1	0.0337	1.01004
300.0	7.878	0.4910	7452.0	9896.0	165.5	27.64	36.91	446.4	11.4	0.0350	1.00968
310.0	7.605	0.4741	7735.0	10270.0	166.7	28.01	37.20	453.7	11.7	0.0363	1.00934
320.0	7.352	0.4583	8022.0	10640.0	167.9	28.41	37.53	460.7	12.0	0.0377	1.00903
330.0	7.116	0.4435	8312.0	11020.0	169.0	28.84	37.90	467.5	12.3	0.0391	1.00874
340.0	6.895	0.4298	8606.0	11400.0	170.2	29.29	38.30	474.2	12.6	0.0405	1.00847
350.0	6.688	0.4169	8905.0	11780.0	171.3	29.76	38.72	480.6	12.9	0.0420	1.00821
360.0	6.493	0.4048	9208.0	12170.0	172.4	30.25	39.17	486.9	13.2	0.0435	1.00797
370.0	6.310	0.3933	9516.0	12570.0	173.5	30.76	39.64	493.0	13.5	0.0450	1.00775

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
380.0	6.138	0.3826	9829.0	12970.0	174.5	31.29	40.13	499.0	13.8	0.0466	1.00754
400.0	5.820	0.3628	10470.0	13780.0	176.6	32.38	41.15	510.6	14.4	0.0498	1.00715
420.0	5.535	0.3450	11130.0	14610.0	178.7	33.50	42.23	521.8	14.9	0.0531	1.00680
440.0	5.277	0.3289	11820.0	15470.0	180.6	34.65	43.33	532.6	15.5	0.0565	1.00648
460.0	5.042	0.3143	12530.0	16350.0	182.6	35.81	44.45	543.1	16.0	0.0599	1.00619
480.0	4.828	0.3009	13260.0	17250.0	184.5	36.96	45.57	553.4	16.5	0.0635	1.00593
500.0	4.632	0.2887	14010.0	18170.0	186.4	38.10	46.68	563.4	17.1	0.0670	1.00569
520.0	4.451	0.2774	14790.0	19110.0	188.2	39.20	47.76	573.3	17.6	0.0706	1.00547
540.0	4.284	0.2670	15580.0	20080.0	190.1	40.25	48.79	583.0	18.1	0.0742	1.00526
560.0	4.129	0.2574	16400.0	21060.0	191.9	41.24	49.76	592.6	18.5	0.0777	1.00507
580.0	3.985	0.2484	17240.0	22070.0	193.6	42.15	50.65	602.1	19.0	0.0812	1.00489
600.0	3.851	0.2401	18090.0	23090.0	195.4	42.97	51.45	611.5	19.5	0.0845	1.00473
				1.40 MPa isobar							
91.04[a]	452.2	28.19	-5725.0	-5675.0	67.97	34.05	53.34	1542.0	207.0	0.225	1.67799
100.0	440.1	27.43	-5246.0	-5195.0	73.01	33.46	53.97	1461.0	159.0	0.209	1.65667
120.0	411.5	25.65	-4146.0	-4092.0	83.06	32.61	56.50	1261.0	99.3	0.177	1.60671
130.0	395.8	24.67	-3575.0	-3518.0	87.65	32.11	58.26	1155.0	81.4	0.161	1.57968
140.0	378.6	23.60	-2983.0	-2924.0	92.05	31.59	60.74	1044.0	67.5	0.146	1.55043
150.0	359.2	22.39	-2361.0	-2299.0	96.36	31.10	64.63	923.6	56.1	0.131	1.51779
156.824[b]	343.0	21.38	-1895.0	-1829.0	99.42	30.82	69.51	826.1	48.8	0.120	1.49091
156.824[b]	21.92	1.366	3332.0	4356.0	138.9	28.70	50.54	284.8	6.65	0.0207	1.02703
160.0	21.26	1.325	3439.0	4496.0	139.7	28.33	48.53	291.0	6.76	0.0210	1.02620
165.0	20.03	1.249	3610.0	4732.0	141.2	27.80	45.82	300.6	6.93	0.0214	1.02469
170.0	19.00	1.184	3773.0	4955.0	142.5	27.39	43.85	309.4	7.10	0.0219	1.02341
175.0	18.11	1.129	3931.0	5171.0	143.8	27.07	42.37	317.5	7.27	0.0226	1.02230
180.0	17.33	1.080	4083.0	5380.0	145.0	26.82	41.22	325.1	7.44	0.0234	1.02133
190.0	16.00	0.9974	4379.0	5783.0	147.1	26.45	39.56	339.2	7.78	0.0470	1.01969
200.0	14.91	0.9292	4666.0	6173.0	149.1	26.24	38.45	352.0	8.13	0.0253	1.01834
205.0	14.43	0.8993	4807.0	6364.0	150.1	26.17	38.04	358.0	8.30	0.0253	1.01775
210.0	13.98	0.8716	4947.0	6553.0	151.0	26.12	37.70	363.8	8.47	0.0255	1.01720
215.0	13.57	0.8458	5086.0	6741.0	151.9	26.10	37.41	369.4	8.64	0.0259	1.01669
220.0	13.18	0.8219	5224.0	6927.0	152.7	26.09	37.18	374.9	8.81	0.0263	1.01621
225.0	12.82	0.7994	5361.0	7113.0	153.6	26.10	36.99	380.2	8.98	0.0268	1.01577
230.0	12.49	0.7783	5499.0	7297.0	154.4	26.12	36.84	385.3	9.15	0.0272	1.01535
240.0	11.87	0.7397	5772.0	7665.0	155.9	26.21	36.63	395.2	9.48	0.0282	1.01459
250.0	11.31	0.7053	6045.0	8030.0	157.4	26.35	36.52	404.6	9.82	0.0293	1.01391
260.0	10.82	0.6742	6319.0	8395.0	158.9	26.53	36.51	413.6	10.1	0.0304	1.01329
270.0	10.36	0.6460	6593.0	8761.0	160.2	26.76	36.57	422.2	10.5	0.0315	1.01274
280.0	9.950	0.6202	6870.0	9127.0	161.6	27.03	36.69	430.4	10.8	0.0327	1.01223
290.0	9.571	0.5966	7148.0	9495.0	162.9	27.33	36.87	438.3	11.1	0.0339	1.01176
300.0	9.222	0.5748	7429.0	9865.0	164.1	27.67	37.11	445.9	11.4	0.0352	1.01133
310.0	8.899	0.5547	7713.0	10240.0	165.3	28.04	37.38	453.2	11.7	0.0365	1.01094
320.0	8.600	0.5360	8001.0	10610.0	166.5	28.44	37.70	460.4	12.0	0.0379	1.01057
330.0	8.321	0.5187	8292.0	10990.0	167.7	28.86	38.05	467.2	12.4	0.0393	1.01022
340.0	8.060	0.5024	8587.0	11370.0	168.8	29.31	38.44	473.9	12.7	0.0407	1.00990
350.0	7.816	0.4872	8886.0	11760.0	170.0	29.78	38.85	480.4	13.0	0.0421	1.00960
360.0	7.587	0.4729	9190.0	12150.0	171.1	30.27	39.29	486.7	13.2	0.0436	1.00932
370.0	7.372	0.4595	9499.0	12550.0	172.1	30.78	39.75	492.9	13.5	0.0451	1.00906
380.0	7.169	0.4469	9813.0	12950.0	173.2	31.30	40.23	498.9	13.8	0.0467	1.00881
400.0	6.796	0.4236	10460.0	13760.0	175.3	32.39	41.25	510.6	14.4	0.0499	1.00835
420.0	6.461	0.4028	11120.0	14600.0	177.3	33.52	42.31	521.9	15.0	0.0532	1.00794
440.0	6.159	0.3839	11810.0	15450.0	179.3	34.66	43.41	532.7	15.5	0.0566	1.00757
460.0	5.884	0.3668	12520.0	16330.0	181.3	35.82	44.52	543.3	16.0	0.0600	1.00723
480.0	5.633	0.3511	13250.0	17230.0	183.2	36.97	45.63	553.6	16.6	0.0636	1.00692
500.0	5.404	0.3368	14000.0	18160.0	185.1	38.11	46.73	563.7	17.1	0.0671	1.00664
520.0	5.192	0.3236	14780.0	19100.0	186.9	39.21	47.80	573.6	17.6	0.0707	1.00638

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	4.997	0.3115	15570.0	20070.0	188.8	40.26	48.83	583.3	18.1	0.0743	1.00614
560.0	4.816	0.3002	16390.0	21060.0	190.6	41.25	49.80	592.9	18.6	0.0778	1.00592
580.0	4.648	0.2897	17230.0	22060.0	192.3	42.16	50.69	602.4	19.0	0.0813	1.00571
600.0	4.492	0.2800	18080.0	23080.0	194.1	42.97	51.49	611.8	19.5	0.0846	1.00552
					1.60 MPa isobar						
91.09[a]	452.3	28.19	-5724.0	-5667.0	67.98	34.06	53.33	1543.0	207.0	0.225	1.67809
100.0	440.2	27.44	-5248.0	-5190.0	72.99	33.47	53.95	1462.0	159.0	0.209	1.65692
120.0	411.7	25.66	-4150.0	-4087.0	83.03	32.62	56.46	1263.0	99.6	0.177	1.60707
130.0	396.0	24.69	-3579.0	-3515.0	87.61	32.12	58.19	1158.0	81.7	0.161	1.58013
140.0	378.9	23.62	-2989.0	-2921.0	92.01	31.60	60.62	1047.0	67.7	0.146	1.55101
150.0	359.7	22.42	-2369.0	-2298.0	96.31	31.10	64.41	927.8	56.4	0.131	1.51858
155.0	348.8	21.74	-2042.0	-1969.0	98.47	30.89	67.27	863.4	51.3	0.124	1.50051
160.095[b]	335.5	20.91	-1677.0	-1601.0	100.8	30.72	72.09	784.9	45.9	0.115	1.47855
160.095[b]	25.27	1.575	3339.0	4355.0	138.0	29.05	53.53	283.5	6.87	0.0218	1.03121
165.0	23.87	1.488	3515.0	4590.0	139.4	28.41	49.68	293.7	7.03	0.0222	1.02947
170.0	22.49	1.402	3690.0	4831.0	140.9	27.88	46.75	303.5	7.19	0.0227	1.02775
175.0	21.33	1.329	3856.0	5059.0	142.2	27.47	44.64	312.4	7.35	0.0233	1.02630
180.0	20.32	1.267	4015.0	5278.0	143.4	27.15	43.06	320.6	7.52	0.0242	1.02505
185.0	19.44	1.212	4170.0	5490.0	144.6	26.89	41.83	328.3	7.68	0.0261	1.02396
190.0	18.66	1.163	4321.0	5697.0	145.7	26.69	40.85	335.6	7.85	0.0519	1.02299
200.0	17.32	1.079	4615.0	6098.0	147.8	26.41	39.42	349.0	8.19	0.0259	1.02133
205.0	16.73	1.043	4759.0	6294.0	148.7	26.32	38.89	355.3	8.36	0.0258	1.02060
210.0	16.19	1.009	4902.0	6487.0	149.7	26.26	38.45	361.4	8.53	0.0260	1.01994
215.0	15.70	0.9785	5043.0	6678.0	150.6	26.22	38.09	367.2	8.70	0.0263	1.01932
220.0	15.24	0.9497	5183.0	6868.0	151.4	26.20	37.79	372.9	8.86	0.0267	1.01875
225.0	14.81	0.9229	5323.0	7056.0	152.3	26.19	37.54	378.3	9.03	0.0271	1.01822
230.0	14.40	0.8979	5462.0	7244.0	153.1	26.21	37.34	383.6	9.20	0.0275	1.01773
235.0	14.03	0.8743	5600.0	7430.0	153.9	26.24	37.18	388.8	9.37	0.0280	1.01726
240.0	13.67	0.8522	5738.0	7615.0	154.7	26.28	37.06	393.8	9.53	0.0285	1.01682
250.0	13.02	0.8115	6013.0	7985.0	156.2	26.41	36.89	403.4	9.86	0.0295	1.01602
260.0	12.43	0.7751	6289.0	8354.0	157.6	26.58	36.83	412.5	10.2	0.0306	1.01529
270.0	11.90	0.7420	6566.0	8722.0	159.0	26.80	36.85	421.3	10.5	0.0317	1.01464
280.0	11.42	0.7120	6844.0	9091.0	160.4	27.07	36.94	429.6	10.8	0.0329	1.01405
290.0	10.98	0.6845	7123.0	9461.0	161.7	27.37	37.10	437.6	11.1	0.0341	1.01350
300.0	10.58	0.6592	7406.0	9833.0	162.9	27.70	37.31	445.4	11.5	0.0354	1.01300
310.0	10.20	0.6359	7691.0	10210.0	164.2	28.06	37.57	452.8	11.8	0.0367	1.01254
320.0	9.854	0.6142	7980.0	10580.0	165.4	28.46	37.87	460.0	12.1	0.0380	1.01212
330.0	9.531	0.5941	8272.0	10960.0	166.5	28.88	38.20	466.9	12.4	0.0394	1.01172
340.0	9.230	0.5754	8568.0	11350.0	167.7	29.33	38.58	473.7	12.7	0.0408	1.01135
350.0	8.949	0.5578	8868.0	11740.0	168.8	29.80	38.98	480.2	13.0	0.0423	1.01100
360.0	8.685	0.5413	9173.0	12130.0	169.9	30.29	39.41	486.6	13.3	0.0438	1.01068
370.0	8.437	0.5259	9482.0	12520.0	171.0	30.80	39.86	492.8	13.6	0.0453	1.01037
380.0	8.203	0.5113	9796.0	12930.0	172.1	31.32	40.34	498.9	13.9	0.0468	1.01008
400.0	7.774	0.4846	10440.0	13740.0	174.2	32.40	41.34	510.7	14.4	0.0500	1.00955
420.0	7.389	0.4606	11110.0	14580.0	176.2	33.53	42.39	522.0	15.0	0.0533	1.00908
440.0	7.042	0.4389	11790.0	15440.0	178.2	34.68	43.48	532.9	15.5	0.0567	1.00865
460.0	6.726	0.4193	12500.0	16320.0	180.1	35.83	44.59	543.5	16.1	0.0601	1.00827
480.0	6.439	0.4013	13240.0	17220.0	182.1	36.98	45.69	553.9	16.6	0.0637	1.00791
500.0	6.176	0.3849	13990.0	18150.0	184.0	38.12	46.79	564.0	17.1	0.0672	1.00759
520.0	5.933	0.3698	14770.0	19090.0	185.8	39.21	47.85	573.9	17.6	0.0708	1.00729
540.0	5.710	0.3559	15560.0	20060.0	187.6	40.27	48.88	583.6	18.1	0.0744	1.00702
560.0	5.503	0.3430	16380.0	21050.0	189.4	41.25	49.84	593.3	18.6	0.0779	1.00676
580.0	5.311	0.3310	17220.0	22050.0	191.2	42.17	50.73	602.8	19.0	0.0814	1.00653
600.0	5.132	0.3199	18070.0	23080.0	192.9	42.98	51.52	612.2	19.5	0.0847	1.00631
					1.80 MPa isobar						
91.14[a]	452.3	28.19	-5723.0	-5659.0	67.99	34.06	53.31	1544.0	207.0	0.225	1.67818
100.0	440.4	27.45	-5250.0	-5185.0	72.96	33.48	53.93	1464.0	160.0	0.210	1.65716
120.0	411.9	25.67	-4153.0	-4083.0	83.00	32.63	56.41	1266.0	99.9	0.177	1.60743
130.0	396.3	24.70	-3584.0	-3511.0	87.58	32.13	58.12	1161.0	81.9	0.162	1.58057

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
140.0	379.3	23.64	-2995.0	-2918.0	91.97	31.60	60.50	1050.0	68.0	0.146	1.55159
150.0	360.1	22.45	-2377.0	-2296.0	96.26	31.11	64.20	931.9	56.6	0.132	1.51937
155.0	349.4	21.78	-2052.0	-1969.0	98.41	30.90	66.95	868.2	51.5	0.124	1.50146
160.0	337.5	21.03	-1711.0	-1625.0	100.6	30.72	70.83	799.8	46.7	0.116	1.48177
163.084[b]	328.3	20.46	-1473.0	-1385.0	102.1	30.65	74.96	746.5	43.4	0.111	1.46671
163.084[b]	28.74	1.791	3339.0	4343.0	137.2	29.40	56.90	282.0	7.08	0.0230	1.03555
165.0	28.19	1.757	3408.0	4433.0	137.7	29.13	54.98	286.2	7.14	0.0231	1.03487
170.0	26.31	1.640	3598.0	4696.0	139.3	28.43	50.46	297.2	7.29	0.0235	1.03252
175.0	24.79	1.545	3775.0	4940.0	140.7	27.91	47.42	307.0	7.44	0.0241	1.03062
180.0	23.51	1.465	3943.0	5171.0	142.0	27.51	45.23	315.9	7.60	0.0251	1.02903
185.0	22.41	1.397	4104.0	5393.0	143.2	27.19	43.59	324.2	7.76	0.0271	1.02765
190.0	21.44	1.337	4261.0	5608.0	144.4	26.95	42.31	331.9	7.93	0.0577	1.02645
200.0	19.81	1.235	4563.0	6021.0	146.5	26.60	40.48	346.1	8.26	0.0266	1.02443
205.0	19.11	1.191	4710.0	6222.0	147.5	26.49	39.82	352.7	8.42	0.0263	1.02356
210.0	18.47	1.151	4856.0	6419.0	148.5	26.40	39.27	359.0	8.59	0.0264	1.02276
215.0	17.88	1.115	4999.0	6614.0	149.4	26.34	38.81	365.0	8.75	0.0267	1.02203
220.0	17.34	1.081	5142.0	6808.0	150.3	26.31	38.44	370.8	8.92	0.0270	1.02136
225.0	16.83	1.049	5283.0	6999.0	151.1	26.29	38.13	376.5	9.09	0.0274	1.02073
230.0	16.36	1.020	5424.0	7189.0	152.0	26.30	37.87	381.9	9.25	0.0278	1.02015
235.0	15.92	0.9923	5564.0	7378.0	152.8	26.32	37.67	387.2	9.42	0.0283	1.01961
240.0	15.51	0.9665	5703.0	7566.0	153.6	26.35	37.50	392.3	9.58	0.0288	1.01909
250.0	14.75	0.9193	5981.0	7939.0	155.1	26.47	37.27	402.2	9.91	0.0298	1.01816
260.0	14.07	0.8771	6259.0	8311.0	156.5	26.63	37.16	411.5	10.2	0.0308	1.01732
270.0	13.46	0.8391	6538.0	8683.0	157.9	26.85	37.14	420.4	10.6	0.0319	1.01657
280.0	12.91	0.8046	6817.0	9054.0	159.3	27.10	37.20	428.9	10.9	0.0331	1.01588
290.0	12.40	0.7731	7099.0	9427.0	160.6	27.40	37.32	437.0	11.2	0.0343	1.01526
300.0	11.94	0.7442	7382.0	9801.0	161.9	27.73	37.51	444.8	11.5	0.0355	1.01469
310.0	11.51	0.7175	7669.0	10180.0	163.1	28.09	37.75	452.4	11.8	0.0368	1.01416
320.0	11.11	0.6928	7958.0	10560.0	164.3	28.48	38.03	459.6	12.1	0.0382	1.01367
330.0	10.75	0.6699	8251.0	10940.0	165.5	28.90	38.36	466.7	12.4	0.0396	1.01322
340.0	10.40	0.6486	8548.0	11320.0	166.6	29.35	38.72	473.5	12.7	0.0410	1.01280
350.0	10.09	0.6286	8849.0	11710.0	167.8	29.82	39.11	480.1	13.0	0.0424	1.01240
360.0	9.785	0.6099	9155.0	12110.0	168.9	30.31	39.53	486.5	13.3	0.0439	1.01203
370.0	9.504	0.5924	9465.0	12500.0	170.0	30.81	39.98	492.8	13.6	0.0454	1.01169
380.0	9.239	0.5759	9780.0	12910.0	171.0	31.33	40.44	498.9	13.9	0.0470	1.01136
390.0	8.989	0.5603	10100.0	13310.0	172.1	31.87	40.93	504.9	14.2	0.0485	1.01105
400.0	8.753	0.5456	10430.0	13720.0	173.1	32.42	41.43	510.7	14.4	0.0501	1.01076
420.0	8.317	0.5185	11090.0	14560.0	175.2	33.54	42.47	522.1	15.0	0.0534	1.01023
440.0	7.925	0.4940	11780.0	15420.0	177.2	34.69	43.55	533.1	15.5	0.0568	1.00974
460.0	7.569	0.4718	12490.0	16310.0	179.1	35.84	44.65	543.7	16.1	0.0603	1.00930
480.0	7.244	0.4516	13220.0	17210.0	181.1	36.99	45.75	554.1	16.6	0.0638	1.00891
500.0	6.947	0.4330	13980.0	18140.0	183.0	38.12	46.84	564.3	17.1	0.0673	1.00854
520.0	6.674	0.4160	14760.0	19080.0	184.8	39.22	47.90	574.2	17.6	0.0709	1.00820
540.0	6.422	0.4003	15550.0	20050.0	186.6	40.27	48.92	584.0	18.1	0.0745	1.00789
560.0	6.189	0.3858	16370.0	21040.0	188.4	41.26	49.88	593.6	18.6	0.0780	1.00761
580.0	5.973	0.3723	17210.0	22050.0	190.2	42.17	50.77	603.2	19.1	0.0814	1.00734
600.0	5.771	0.3597	18070.0	23070.0	191.9	42.99	51.56	612.6	19.5	0.0848	1.00709
					2.00 MPa isobar						
91.19[a]	452.4	28.20	-5723.0	-5652.0	68.00	34.06	53.30	1544.0	207.0	0.225	1.67827
100.0	440.5	27.46	-5253.0	-5180.0	72.94	33.49	53.91	1465.0	160.0	0.210	1.65741
120.0	412.1	25.69	-4156.0	-4079.0	82.97	32.64	56.36	1268.0	100.0	0.177	1.60778
130.0	396.6	24.72	-3588.0	-3507.0	87.55	32.14	58.05	1163.0	82.2	0.162	1.58102
140.0	379.6	23.66	-3000.0	-2916.0	91.93	31.61	60.38	1053.0	68.2	0.147	1.55216
150.0	360.6	22.48	-2384.0	-2295.0	96.21	31.12	63.98	936.0	56.9	0.132	1.52014
155.0	350.0	21.81	-2061.0	-1969.0	98.35	30.90	66.65	872.9	51.8	0.124	1.50239
160.0	338.2	21.08	-1722.0	-1627.0	100.5	30.72	70.37	805.4	47.0	0.117	1.48293
165.0	324.8	20.24	-1361.0	-1262.0	102.8	30.60	75.99	731.3	42.3	0.109	1.46100
165.843[b]	321.2	20.02	-1281.0	-1181.0	103.3	30.60	78.18	710.2	41.2	0.107	1.45525
165.843[b]	32.35	2.016	3330.0	4322.0	136.4	29.75	60.75	280.5	7.29	0.0242	1.04009
170.0	30.57	1.905	3496.0	4545.0	137.8	29.07	55.44	290.3	7.41	0.0245	1.03786

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
175.0	28.56	1.780	3687.0	4810.0	139.3	28.41	50.91	301.2	7.55	0.0251	1.03534
180.0	26.93	1.678	3865.0	5057.0	140.7	27.91	47.85	311.0	7.70	0.0260	1.03330
185.0	25.55	1.593	4035.0	5290.0	142.0	27.52	45.64	319.9	7.85	0.0284	1.03158
190.0	24.37	1.519	4197.0	5514.0	143.2	27.22	43.97	328.1	8.01	0.0644	1.03010
195.0	23.33	1.454	4355.0	5731.0	144.3	26.98	42.68	335.8	8.17	0.0297	1.02881
200.0	22.40	1.396	4509.0	5941.0	145.4	26.80	41.65	343.1	8.33	0.0273	1.02765
205.0	21.57	1.344	4660.0	6148.0	146.4	26.66	40.82	349.9	8.49	0.0269	1.02662
210.0	20.81	1.297	4808.0	6350.0	147.3	26.55	40.15	356.5	8.65	0.0269	1.02568
215.0	20.12	1.254	4955.0	6549.0	148.3	26.47	39.59	362.8	8.82	0.0271	1.02482
220.0	19.49	1.215	5099.0	6746.0	149.2	26.42	39.13	368.8	8.98	0.0274	1.02403
225.0	18.90	1.178	5243.0	6941.0	150.1	26.39	38.75	374.6	9.14	0.0278	1.02331
230.0	18.35	1.144	5385.0	7134.0	150.9	26.39	38.43	380.2	9.30	0.0282	1.02263
235.0	17.85	1.112	5527.0	7325.0	151.7	26.40	38.17	385.6	9.47	0.0286	1.02200
240.0	17.37	1.083	5668.0	7515.0	152.5	26.43	37.96	390.9	9.63	0.0291	1.02141
245.0	16.92	1.055	5809.0	7705.0	153.3	26.47	37.79	396.0	9.79	0.0295	1.02085
250.0	16.50	1.029	5949.0	7893.0	154.1	26.53	37.66	401.0	9.95	0.0300	1.02033
260.0	15.73	0.9805	6229.0	8269.0	155.6	26.69	37.49	410.5	10.3	0.0310	1.01938
270.0	15.04	0.9372	6510.0	8644.0	157.0	26.89	37.43	419.5	10.6	0.0321	1.01852
280.0	14.41	0.8980	6791.0	9018.0	158.3	27.14	37.46	428.2	10.9	0.0332	1.01774
290.0	13.83	0.8623	7074.0	9393.0	159.6	27.43	37.56	436.4	11.2	0.0344	1.01703
300.0	13.31	0.8297	7359.0	9769.0	160.9	27.76	37.72	444.3	11.5	0.0357	1.01639
310.0	12.83	0.7996	7646.0	10150.0	162.2	28.12	37.94	452.0	11.8	0.0370	1.01579
320.0	12.38	0.7718	7937.0	10530.0	163.4	28.51	38.20	459.3	12.1	0.0383	1.01524
330.0	11.97	0.7460	8231.0	10910.0	164.5	28.93	38.51	466.4	12.4	0.0397	1.01473
340.0	11.58	0.7221	8529.0	11300.0	165.7	29.37	38.86	473.3	12.7	0.0411	1.01426
350.0	11.23	0.6997	8831.0	11690.0	166.8	29.84	39.24	479.9	13.0	0.0426	1.01381
360.0	10.89	0.6787	9137.0	12080.0	167.9	30.32	39.65	486.4	13.3	0.0440	1.01340
370.0	10.57	0.6591	9448.0	12480.0	169.0	30.83	40.09	492.7	13.6	0.0455	1.01301
380.0	10.28	0.6406	9763.0	12890.0	170.1	31.35	40.55	498.9	13.9	0.0471	1.01264
390.0	9.998	0.6232	10080.0	13290.0	171.2	31.88	41.03	504.9	14.2	0.0487	1.01230
400.0	9.734	0.6067	10410.0	13710.0	172.2	32.43	41.52	510.8	14.5	0.0503	1.01197
420.0	9.247	0.5764	11080.0	14550.0	174.3	33.55	42.56	522.2	15.0	0.0535	1.01137
440.0	8.809	0.5491	11770.0	15410.0	176.3	34.70	43.63	533.3	15.6	0.0569	1.01083
460.0	8.412	0.5243	12480.0	16290.0	178.2	35.85	44.72	544.0	16.1	0.0604	1.01034
480.0	8.050	0.5018	13210.0	17200.0	180.2	37.00	45.81	554.4	16.6	0.0639	1.00990
500.0	7.719	0.4812	13970.0	18120.0	182.1	38.13	46.89	564.5	17.1	0.0674	1.00949
520.0	7.415	0.4622	14750.0	19070.0	183.9	39.23	47.95	574.5	17.6	0.0710	1.00912
540.0	7.135	0.4447	15540.0	20040.0	185.7	40.28	48.97	584.3	18.1	0.0745	1.00877
560.0	6.875	0.4285	16360.0	21030.0	187.5	41.27	49.92	594.0	18.6	0.0781	1.00845
580.0	6.634	0.4135	17200.0	22040.0	189.3	42.18	50.80	603.5	19.1	0.0815	1.00816
600.0	6.410	0.3995	18060.0	23060.0	191.0	42.99	51.59	613.0	19.5	0.0849	1.00788
				2.50 MPa isobar							
91.32[a]	452.5	28.21	-5720.0	-5632.0	68.02	34.07	53.26	1547.0	208.0	0.225	1.67851
100.0	440.9	27.48	-5258.0	-5167.0	72.88	33.51	53.86	1469.0	161.0	0.210	1.65802
120.0	412.6	25.72	-4165.0	-4068.0	82.90	32.66	56.25	1273.0	101.0	0.178	1.60867
130.0	397.2	24.76	-3598.0	-3497.0	87.46	32.16	57.87	1170.0	82.8	0.162	1.58211
140.0	380.5	23.72	-3014.0	-2908.0	91.83	31.63	60.10	1061.0	68.8	0.148	1.55356
150.0	361.8	22.55	-2402.0	-2292.0	96.08	31.13	63.48	946.1	57.5	0.133	1.52204
155.0	351.3	21.90	-2082.0	-1968.0	98.20	30.91	65.94	884.5	52.4	0.125	1.50466
160.0	339.9	21.19	-1749.0	-1631.0	100.3	30.72	69.30	819.0	47.7	0.118	1.48573
165.0	327.0	20.38	-1395.0	-1273.0	102.5	30.59	74.21	748.0	43.1	0.110	1.46462
170.0	311.9	19.44	-1012.0	-883.4	104.9	30.55	82.28	668.2	38.5	0.103	1.44014
171.962[b]	304.0	18.95	-833.5	-701.6	105.9	30.60	88.51	626.2	36.4	0.0996	1.42746
171.962[b]	42.15	2.627	3279.0	4231.0	134.6	30.64	73.37	276.0	7.83	0.0281	1.05248
175.0	40.01	2.494	3421.0	4423.0	135.7	29.99	65.82	284.6	7.89	0.0283	1.04978
176.0	39.30	2.449	3468.0	4488.0	136.1	29.79	63.77	287.3	7.90	0.0284	1.04887
178.0	37.99	2.368	3557.0	4612.0	136.8	29.43	60.35	292.5	7.94	0.0288	1.04722
180.0	36.84	2.296	3641.0	4730.0	137.5	29.11	57.63	297.3	7.99	0.0293	1.04576
185.0	34.40	2.145	3839.0	5005.0	139.0	28.48	52.69	308.3	8.11	0.0324	1.04269
190.0	32.44	2.022	4023.0	5260.0	140.3	28.00	49.37	318.1	8.24	0.0866	1.04022
195.0	30.78	1.919	4197.0	5500.0	141.6	27.63	46.98	327.1	8.39	0.0333	1.03814

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
196.0	30.48	1.900	4231.0	5547.0	141.8	27.56	46.58	328.8	8.41	0.0320	1.03777
200.0	29.36	1.830	4364.0	5730.0	142.7	27.34	45.18	335.3	8.53	0.0295	1.03636
205.0	28.11	1.752	4526.0	5953.0	143.8	27.12	43.78	343.0	8.68	0.0285	1.03480
210.0	27.01	1.683	4684.0	6169.0	144.9	26.95	42.68	350.3	8.83	0.0283	1.03342
215.0	26.01	1.621	4838.0	6380.0	145.9	26.82	41.78	357.2	8.99	0.0283	1.03217
220.0	25.11	1.565	4989.0	6587.0	146.8	26.73	41.05	363.7	9.14	0.0285	1.03104
225.0	24.28	1.514	5139.0	6791.0	147.7	26.66	40.45	370.0	9.30	0.0287	1.03002
230.0	23.52	1.466	5287.0	6992.0	148.6	26.63	39.96	376.0	9.45	0.0291	1.02907
235.0	22.82	1.423	5433.0	7190.0	149.5	26.61	39.55	381.8	9.61	0.0294	1.02820
240.0	22.17	1.382	5578.0	7387.0	150.3	26.62	39.21	387.4	9.77	0.0298	1.02739
245.0	21.57	1.344	5723.0	7582.0	151.1	26.64	38.93	392.8	9.92	0.0302	1.02663
250.0	21.00	1.309	5866.0	7777.0	151.9	26.69	38.70	398.0	10.1	0.0307	1.02592
260.0	19.96	1.244	6153.0	8162.0	153.4	26.82	38.38	408.0	10.4	0.0316	1.02464
270.0	19.04	1.187	6438.0	8545.0	154.8	27.00	38.20	417.5	10.7	0.0327	1.02349
280.0	18.21	1.135	6724.0	8926.0	156.2	27.24	38.13	426.4	11.0	0.0337	1.02247
290.0	17.46	1.089	7011.0	9307.0	157.6	27.52	38.15	435.0	11.3	0.0349	1.02154
300.0	16.78	1.046	7299.0	9689.0	158.9	27.83	38.25	443.2	11.6	0.0361	1.02069
310.0	16.15	1.007	7590.0	10070.0	160.1	28.18	38.42	451.0	11.9	0.0374	1.01991
320.0	15.58	0.9710	7883.0	10460.0	161.3	28.57	38.64	458.6	12.2	0.0387	1.01920
330.0	15.05	0.9378	8180.0	10850.0	162.5	28.98	38.91	465.8	12.5	0.0401	1.01854
340.0	14.55	0.9070	8480.0	11240.0	163.7	29.42	39.22	472.9	12.8	0.0415	1.01793
350.0	14.09	0.8784	8784.0	11630.0	164.8	29.88	39.58	479.7	13.1	0.0429	1.01736
360.0	13.66	0.8516	9092.0	12030.0	166.0	30.37	39.96	486.3	13.4	0.0444	1.01683
370.0	13.26	0.8265	9405.0	12430.0	167.1	30.87	40.38	492.7	13.7	0.0459	1.01633
380.0	12.88	0.8030	9722.0	12840.0	168.2	31.39	40.82	498.9	14.0	0.0474	1.01587
390.0	12.53	0.7808	10040.0	13250.0	169.2	31.92	41.28	505.0	14.2	0.0490	1.01543
400.0	12.19	0.7599	10370.0	13660.0	170.3	32.46	41.76	511.0	14.5	0.0506	1.01501
420.0	11.58	0.7215	11040.0	14510.0	172.3	33.58	42.76	522.6	15.1	0.0538	1.01425
440.0	11.02	0.6870	11730.0	15370.0	174.3	34.73	43.81	533.7	15.6	0.0572	1.01357
460.0	10.52	0.6558	12450.0	16260.0	176.3	35.88	44.88	544.5	16.1	0.0606	1.01295
480.0	10.06	0.6274	13180.0	17170.0	178.2	37.03	45.96	555.0	16.7	0.0641	1.01239
500.0	9.648	0.6014	13940.0	18100.0	180.1	38.16	47.03	565.3	17.2	0.0677	1.01187
520.0	9.266	0.5776	14720.0	19050.0	182.0	39.25	48.07	575.3	17.7	0.0712	1.01140
540.0	8.914	0.5556	15520.0	20020.0	183.8	40.30	49.08	585.2	18.2	0.0748	1.01097
560.0	8.588	0.5353	16340.0	21010.0	185.6	41.29	50.02	594.9	18.6	0.0783	1.01057
580.0	8.286	0.5165	17180.0	22020.0	187.4	42.20	50.90	604.5	19.1	0.0817	1.01019
600.0	8.005	0.4990	18040.0	23050.0	189.2	43.01	51.68	614.0	19.6	0.0851	1.00985
					3.00 MPa isobar						
91.44[a]	452.7	28.22	-5718.0	-5612.0	68.05	34.08	53.23	1549.0	208.0	0.225	1.67874
100.0	441.3	27.51	-5264.0	-5155.0	72.83	33.53	53.80	1473.0	162.0	0.211	1.65862
120.0	413.2	25.75	-4173.0	-4057.0	82.83	32.68	56.13	1279.0	102.0	0.178	1.60954
140.0	381.3	23.77	-3027.0	-2901.0	91.73	31.65	59.83	1069.0	69.4	0.148	1.55494
150.0	362.9	22.62	-2420.0	-2288.0	95.96	31.15	63.01	955.8	58.1	0.134	1.52389
160.0	341.5	21.29	-1774.0	-1633.0	100.2	30.73	68.35	832.1	48.4	0.119	1.48841
165.0	329.1	20.51	-1428.0	-1282.0	102.3	30.58	72.68	763.7	43.9	0.112	1.46802
170.0	314.8	19.62	-1056.0	-902.6	104.6	30.52	79.45	688.2	39.4	0.104	1.44476
172.0	308.2	19.21	-896.1	-739.9	105.6	30.52	83.43	655.0	37.6	0.101	1.43426
174.0	301.1	18.77	-727.9	-568.1	106.6	30.56	88.72	619.3	35.7	0.0988	1.42279
176.0	293.0	18.26	-547.9	-383.6	107.6	30.64	96.23	580.1	33.8	0.0962	1.40996
177.0	288.5	17.98	-451.7	-284.9	108.2	30.70	101.4	558.7	32.8	0.0951	1.40286
177.2	287.6	17.93	-431.9	-264.5	108.3	30.72	102.6	554.3	32.5	0.0949	1.40136
177.245[b]	286.5	17.86	-414.3	-246.3	108.4	30.75	104.6	547.9	32.3	0.0945	1.39960
177.245[b]	53.48	3.333	3184.0	4084.0	132.8	31.60	93.63	271.2	8.42	0.0338	1.06694
180.0	50.19	3.129	3343.0	4302.0	134.0	30.81	79.34	280.5	8.42	0.0344	1.06273
182.0	48.04	2.995	3451.0	4453.0	134.9	30.31	72.33	286.8	8.43	0.0353	1.05999
184.0	46.23	2.881	3551.0	4593.0	135.6	29.90	67.24	292.4	8.45	0.0370	1.05768
186.0	44.65	2.783	3645.0	4723.0	136.3	29.54	63.36	297.7	8.48	0.0404	1.05567
188.0	43.25	2.696	3734.0	4847.0	137.0	29.23	60.28	302.6	8.51	0.0492	1.05390
190.0	42.00	2.618	3819.0	4965.0	137.6	28.95	57.76	307.2	8.55	0.119	1.05231
195.0	39.35	2.453	4018.0	5241.0	139.1	28.39	53.12	317.8	8.66	0.0383	1.04895

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
196.0	38.88	2.424	4056.0	5294.0	139.3	28.30	52.39	319.7	8.68	0.0362	1.04836
198.0	38.00	2.369	4131.0	5397.0	139.9	28.12	51.08	323.6	8.73	0.0336	1.04724
200.0	37.18	2.317	4204.0	5498.0	140.4	27.97	49.92	327.3	8.78	0.0322	1.04621
202.0	36.41	2.269	4275.0	5597.0	140.9	27.83	48.91	330.8	8.83	0.0313	1.04524
204.0	35.69	2.224	4345.0	5694.0	141.3	27.70	48.00	334.3	8.88	0.0307	1.04433
206.0	35.01	2.182	4414.0	5789.0	141.8	27.59	47.20	337.6	8.93	0.0303	1.04347
210.0	33.76	2.104	4549.0	5975.0	142.7	27.39	45.81	344.0	9.04	0.0299	1.04189
215.0	32.36	2.017	4713.0	6200.0	143.7	27.20	44.43	351.6	9.18	0.0297	1.04014
220.0	31.12	1.940	4873.0	6420.0	144.8	27.06	43.32	358.7	9.33	0.0297	1.03858
225.0	30.00	1.870	5029.0	6634.0	145.7	26.95	42.42	365.5	9.47	0.0298	1.03717
230.0	28.98	1.806	5183.0	6844.0	146.6	26.88	41.69	371.9	9.62	0.0300	1.03590
235.0	28.05	1.748	5335.0	7051.0	147.5	26.84	41.09	378.1	9.77	0.0303	1.03473
240.0	27.19	1.695	5485.0	7255.0	148.4	26.82	40.59	384.0	9.92	0.0307	1.03366
245.0	26.40	1.645	5634.0	7457.0	149.2	26.82	40.18	389.7	10.1	0.0310	1.03267
250.0	25.66	1.599	5781.0	7657.0	150.0	26.85	39.84	395.2	10.2	0.0314	1.03175
255.0	24.97	1.557	5928.0	7856.0	150.8	26.89	39.56	400.6	10.4	0.0318	1.03089
260.0	24.33	1.516	6074.0	8053.0	151.6	26.95	39.33	405.7	10.5	0.0323	1.03008
270.0	23.15	1.443	6366.0	8444.0	153.1	27.12	39.01	415.6	10.8	0.0332	1.02862
280.0	22.10	1.378	6656.0	8833.0	154.5	27.34	38.83	424.9	11.1	0.0343	1.02731
290.0	21.16	1.319	6947.0	9221.0	155.8	27.60	38.77	433.7	11.4	0.0354	1.02614
300.0	20.31	1.266	7239.0	9609.0	157.2	27.91	38.80	442.1	11.7	0.0366	1.02508
310.0	19.53	1.217	7533.0	9998.0	158.4	28.25	38.91	450.2	12.0	0.0379	1.02411
320.0	18.81	1.173	7829.0	10390.0	159.7	28.63	39.08	457.9	12.3	0.0392	1.02322
330.0	18.16	1.132	8129.0	10780.0	160.9	29.04	39.31	465.3	12.6	0.0405	1.02241
340.0	17.55	1.094	8431.0	11170.0	162.0	29.47	39.59	472.5	12.9	0.0419	1.02165
350.0	16.98	1.058	8737.0	11570.0	163.2	29.93	39.91	479.4	13.2	0.0433	1.02095
360.0	16.45	1.026	9047.0	11970.0	164.3	30.41	40.27	486.2	13.5	0.0447	1.02029
370.0	15.96	0.9950	9362.0	12380.0	165.4	30.91	40.66	492.7	13.8	0.0462	1.01968
380.0	15.50	0.9662	9681.0	12790.0	166.5	31.42	41.08	499.1	14.0	0.0478	1.01911
390.0	15.07	0.9392	10000.0	13200.0	167.6	31.96	41.53	505.2	14.3	0.0493	1.01858
400.0	14.66	0.9137	10330.0	13620.0	168.7	32.50	41.99	511.3	14.6	0.0509	1.01807
420.0	13.91	0.8670	11010.0	14470.0	170.7	33.61	42.97	523.0	15.1	0.0541	1.01714
440.0	13.24	0.8251	11700.0	15340.0	172.8	34.75	43.99	534.3	15.7	0.0575	1.01631
460.0	12.63	0.7873	12420.0	16230.0	174.7	35.90	45.04	545.2	16.2	0.0609	1.01556
480.0	12.08	0.7529	13150.0	17140.0	176.7	37.05	46.11	555.7	16.7	0.0644	1.01488
500.0	11.58	0.7216	13910.0	18070.0	178.6	38.18	47.16	566.1	17.2	0.0679	1.01426
520.0	11.12	0.6928	14690.0	19020.0	180.4	39.27	48.19	576.2	17.7	0.0715	1.01369
540.0	10.69	0.6664	15500.0	20000.0	182.3	40.32	49.19	586.1	18.2	0.0750	1.01316
560.0	10.30	0.6419	16320.0	20990.0	184.1	41.31	50.13	595.8	18.7	0.0785	1.01268
580.0	9.935	0.6193	17160.0	22000.0	185.9	42.21	50.99	605.5	19.1	0.0820	1.01223
600.0	9.597	0.5982	18010.0	23030.0	187.6	43.03	51.77	615.0	19.6	0.0853	1.01181
					3.50 MPa isobar						
91.57[a]	452.9	28.23	-5716.0	-5592.0	68.07	34.09	53.20	1551.0	208.0	0.226	1.67897
100.0	441.7	27.53	-5269.0	-5142.0	72.77	33.55	53.75	1477.0	163.0	0.211	1.65923
120.0	413.7	25.79	-4181.0	-4045.0	82.76	32.70	56.03	1284.0	102.0	0.179	1.61040
140.0	382.1	23.82	-3040.0	-2893.0	91.64	31.67	59.57	1077.0	70.0	0.149	1.55630
150.0	364.0	22.69	-2438.0	-2283.0	95.84	31.16	62.57	965.4	58.7	0.135	1.52568
160.0	343.1	21.39	-1799.0	-1635.0	100.0	30.74	67.48	844.6	49.0	0.120	1.49097
165.0	331.1	20.64	-1458.0	-1289.0	102.2	30.58	71.34	778.7	44.6	0.113	1.47123
170.0	317.4	19.78	-1096.0	-918.7	104.4	30.49	77.12	706.8	40.2	0.106	1.44899
175.0	301.1	18.77	-697.4	-510.9	106.7	30.52	87.04	625.2	35.8	0.0990	1.42277
176.0	297.3	18.53	-611.3	-422.4	107.2	30.55	90.01	607.1	34.9	0.0978	1.41679
178.0	289.1	18.02	-429.3	-235.1	108.3	30.64	97.83	568.2	33.0	0.0958	1.40374
180.0	279.5	17.42	-229.1	-28.2	109.4	30.80	110.2	524.4	30.9	0.0943	1.38860
181.0	273.9	17.07	-118.5	86.5	110.1	30.93	119.7	499.8	29.8	0.0938	1.37983
181.910[b]	267.4	16.66	1.4	211.4	110.8	31.11	134.7	471.2	28.5	0.0934	1.36967
181.910[b]	67.33	4.197	3033.0	3867.0	130.9	32.67	132.3	266.1	9.14	0.0440	1.08482
185.0	60.83	3.791	3269.0	4192.0	132.6	31.47	95.47	278.8	9.02	0.0476	1.07641
186.0	59.17	3.688	3335.0	4284.0	133.1	31.16	88.93	282.4	8.99	0.0504	1.07427
188.0	56.37	3.514	3456.0	4452.0	134.0	30.62	79.49	289.0	8.97	0.0631	1.07067
190.0	54.05	3.369	3565.0	4604.0	134.8	30.18	72.92	294.9	8.97	0.167	1.06769

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
192.0	52.07	3.245	3666.0	4745.0	135.6	29.80	68.04	300.3	8.98	0.0791	1.06515
194.0	50.33	3.137	3761.0	4877.0	136.3	29.47	64.26	305.4	8.99	0.0500	1.06293
196.0	48.79	3.041	3852.0	5002.0	136.9	29.18	61.22	310.1	9.02	0.0418	1.06097
198.0	47.41	2.955	3938.0	5122.0	137.5	28.93	58.73	314.6	9.05	0.0379	1.05920
200.0	46.16	2.877	4021.0	5237.0	138.1	28.70	56.64	318.9	9.08	0.0357	1.05760
202.0	45.01	2.805	4101.0	5349.0	138.6	28.50	54.86	322.9	9.12	0.0343	1.05614
204.0	43.95	2.739	4179.0	5457.0	139.2	28.32	53.33	326.8	9.16	0.0334	1.05479
206.0	42.96	2.678	4255.0	5562.0	139.7	28.16	52.00	330.6	9.20	0.0327	1.05354
208.0	42.05	2.621	4330.0	5665.0	140.2	28.02	50.83	334.2	9.24	0.0322	1.05238
210.0	41.19	2.567	4402.0	5766.0	140.7	27.89	49.79	337.7	9.29	0.0318	1.05129
212.0	40.38	2.517	4474.0	5864.0	141.1	27.77	48.87	341.1	9.34	0.0315	1.05027
215.0	39.26	2.447	4579.0	6009.0	141.8	27.62	47.66	346.0	9.41	0.0313	1.04885
220.0	37.57	2.342	4749.0	6243.0	142.9	27.41	46.02	353.8	9.54	0.0311	1.04672
225.0	36.08	2.249	4914.0	6470.0	143.9	27.26	44.72	361.1	9.67	0.0311	1.04484
230.0	34.75	2.166	5075.0	6691.0	144.9	27.15	43.67	368.0	9.81	0.0312	1.04316
235.0	33.54	2.091	5233.0	6907.0	145.8	27.07	42.82	374.6	9.94	0.0313	1.04164
240.0	32.44	2.022	5388.0	7119.0	146.7	27.03	42.13	380.8	10.1	0.0316	1.04025
245.0	31.43	1.959	5542.0	7328.0	147.6	27.01	41.55	386.8	10.2	0.0319	1.03899
250.0	30.50	1.901	5694.0	7535.0	148.4	27.02	41.07	392.6	10.4	0.0322	1.03782
255.0	29.63	1.847	5845.0	7739.0	149.2	27.05	40.68	398.2	10.5	0.0326	1.03673
260.0	28.83	1.797	5994.0	7942.0	150.0	27.09	40.35	403.6	10.7	0.0329	1.03572
265.0	28.08	1.750	6143.0	8143.0	150.8	27.16	40.09	408.8	10.8	0.0334	1.03478
270.0	27.37	1.706	6291.0	8343.0	151.5	27.23	39.87	413.8	11.0	0.0338	1.03390
280.0	26.08	1.626	6587.0	8740.0	153.0	27.44	39.57	423.4	11.2	0.0348	1.03229
290.0	24.93	1.554	6883.0	9135.0	154.3	27.69	39.42	432.5	11.5	0.0359	1.03085
300.0	23.89	1.489	7178.0	9529.0	155.7	27.98	39.37	441.2	11.8	0.0371	1.02955
310.0	22.95	1.431	7476.0	9922.0	157.0	28.32	39.41	449.5	12.1	0.0383	1.02838
320.0	22.09	1.377	7775.0	10320.0	158.2	28.69	39.54	457.4	12.4	0.0396	1.02730
330.0	21.30	1.328	8077.0	10710.0	159.4	29.09	39.72	465.0	12.7	0.0409	1.02632
340.0	20.57	1.282	8382.0	11110.0	160.6	29.52	39.97	472.3	13.0	0.0423	1.02541
350.0	19.89	1.240	8690.0	11510.0	161.8	29.97	40.26	479.3	13.3	0.0437	1.02457
360.0	19.27	1.201	9002.0	11920.0	162.9	30.45	40.59	486.2	13.6	0.0451	1.02379
370.0	18.68	1.164	9319.0	12320.0	164.0	30.95	40.96	492.8	13.8	0.0466	1.02306
380.0	18.13	1.130	9639.0	12740.0	165.1	31.46	41.35	499.2	14.1	0.0481	1.02238
390.0	17.62	1.098	9965.0	13150.0	166.2	31.99	41.78	505.5	14.4	0.0496	1.02174
400.0	17.13	1.068	10290.0	13570.0	167.3	32.53	42.22	511.6	14.7	0.0512	1.02114
420.0	16.25	1.013	10970.0	14430.0	169.4	33.64	43.17	523.5	15.2	0.0544	1.02005
440.0	15.46	0.9634	11670.0	15300.0	171.4	34.78	44.17	534.8	15.7	0.0578	1.01906
460.0	14.74	0.9189	12380.0	16190.0	173.4	35.93	45.21	545.8	16.2	0.0612	1.01818
480.0	14.09	0.8785	13120.0	17110.0	175.3	37.07	46.25	556.5	16.8	0.0646	1.01738
500.0	13.50	0.8417	13880.0	18040.0	177.2	38.20	47.29	566.9	17.3	0.0682	1.01664
520.0	12.96	0.8080	14670.0	19000.0	179.1	39.29	48.31	577.0	17.8	0.0717	1.01598
540.0	12.47	0.7770	15470.0	19980.0	181.0	40.34	49.30	587.0	18.2	0.0752	1.01536
560.0	12.01	0.7484	16290.0	20970.0	182.8	41.33	50.23	596.8	18.7	0.0787	1.01479
580.0	11.58	0.7219	17140.0	21980.0	184.5	42.23	51.08	606.5	19.2	0.0822	1.01427
600.0	11.19	0.6972	17990.0	23010.0	186.3	43.04	51.85	616.1	19.7	0.0855	1.01378
					4.00 MPa isobar						
91.70[a]	453.0	28.24	-5714.0	-5572.0	68.09	34.09	53.17	1553.0	209.0	0.226	1.67919
100.0	442.0	27.55	-5274.0	-5129.0	72.72	33.57	53.70	1481.0	164.0	0.212	1.65982
120.0	414.2	25.82	-4189.0	-4034.0	82.69	32.72	55.92	1289.0	103.0	0.180	1.61125
140.0	382.9	23.87	-3053.0	-2885.0	91.54	31.69	59.33	1084.0	70.6	0.150	1.55762
150.0	365.1	22.75	-2454.0	-2279.0	95.73	31.18	62.16	974.7	59.3	0.135	1.52743
160.0	344.6	21.48	-1823.0	-1636.0	99.87	30.74	66.69	856.7	49.7	0.121	1.49343
165.0	333.0	20.75	-1487.0	-1295.0	102.0	30.58	70.16	792.9	45.3	0.114	1.47426
170.0	319.8	19.94	-1133.0	-932.2	104.1	30.47	75.17	724.1	41.0	0.107	1.45291
175.0	304.5	18.98	-748.8	-538.1	106.4	30.46	83.22	647.6	36.7	0.100	1.42825
176.0	301.1	18.77	-666.9	-453.7	106.9	30.47	85.49	631.0	35.9	0.0993	1.42274
178.0	293.6	18.30	-495.9	-277.4	107.9	30.53	91.15	595.9	34.1	0.0973	1.41092
180.0	285.3	17.78	-312.5	-87.6	109.0	30.63	99.17	557.6	32.2	0.0959	1.39769
182.0	275.5	17.17	-110.7	122.2	110.1	30.81	111.7	514.6	30.2	0.0954	1.38235

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
184.0	263.3	16.41	122.5	366.2	111.5	31.12	135.2	464.1	27.9	0.0967	1.36341
185.0	255.6	15.93	260.7	511.8	112.2	31.37	158.1	433.9	26.5	0.0985	1.35145
185.5	250.9	15.64	339.5	595.2	112.7	31.54	176.5	416.7	25.7	0.0998	1.34436
186.089[b]	243.8	15.20	454.1	717.3	113.3	31.83	217.3	391.2	24.6	0.102	1.33348
186.089[b]	86.30	5.379	2786.0	3529.0	128.5	33.93	238.4	260.7	10.1	0.0679	1.10970
190.0	71.29	4.444	3212.0	4112.0	131.6	31.89	110.9	280.1	9.65	0.236	1.09000
192.0	67.10	4.183	3359.0	4316.0	132.6	31.24	94.09	287.4	9.56	0.104	1.08454
193.0	65.37	4.075	3425.0	4407.0	133.1	30.97	88.32	290.7	9.53	0.0744	1.08230
194.0	63.82	3.978	3487.0	4493.0	133.5	30.72	83.62	293.8	9.51	0.0613	1.08029
195.0	62.41	3.890	3546.0	4574.0	134.0	30.49	79.70	296.8	9.49	0.0540	1.07846
196.0	61.11	3.809	3602.0	4652.0	134.4	30.28	76.38	299.7	9.48	0.0492	1.07679
198.0	58.81	3.666	3708.0	4799.0	135.1	29.90	71.02	305.0	9.47	0.0435	1.07383
200.0	56.81	3.541	3808.0	4937.0	135.8	29.57	66.87	310.1	9.47	0.0402	1.07125
202.0	55.04	3.431	3902.0	5067.0	136.4	29.29	63.55	314.8	9.49	0.0381	1.06897
204.0	53.45	3.332	3991.0	5192.0	137.1	29.04	60.84	319.2	9.50	0.0366	1.06693
206.0	52.01	3.242	4077.0	5311.0	137.6	28.82	58.57	323.5	9.53	0.0355	1.06509
208.0	50.69	3.160	4160.0	5426.0	138.2	28.62	56.64	327.6	9.55	0.0347	1.06340
210.0	49.48	3.084	4241.0	5538.0	138.7	28.44	54.98	331.5	9.59	0.0341	1.06185
212.0	48.36	3.014	4319.0	5646.0	139.2	28.29	53.54	335.2	9.62	0.0337	1.06042
214.0	47.31	2.949	4396.0	5752.0	139.7	28.14	52.28	338.8	9.66	0.0333	1.05909
216.0	46.34	2.888	4471.0	5856.0	140.2	28.02	51.16	342.3	9.70	0.0330	1.05784
218.0	45.42	2.831	4544.0	5957.0	140.7	27.90	50.16	345.7	9.74	0.0328	1.05668
220.0	44.56	2.777	4616.0	6056.0	141.1	27.80	49.28	349.0	9.78	0.0327	1.05558
225.0	42.60	2.655	4791.0	6298.0	142.2	27.59	47.42	356.9	9.90	0.0324	1.05309
230.0	40.87	2.548	4961.0	6531.0	143.3	27.44	45.96	364.2	10.0	0.0324	1.05090
235.0	39.33	2.452	5126.0	6758.0	144.2	27.33	44.79	371.2	10.1	0.0324	1.04895
240.0	37.94	2.365	5288.0	6979.0	145.2	27.25	43.84	377.8	10.3	0.0326	1.04720
245.0	36.68	2.286	5447.0	7196.0	146.1	27.21	43.06	384.1	10.4	0.0328	1.04561
250.0	35.52	2.214	5604.0	7410.0	146.9	27.19	42.42	390.2	10.5	0.0330	1.04415
255.0	34.46	2.148	5759.0	7621.0	147.8	27.20	41.88	396.0	10.7	0.0333	1.04281
260.0	33.47	2.087	5912.0	7829.0	148.6	27.23	41.44	401.6	10.8	0.0337	1.04157
265.0	32.56	2.029	6064.0	8035.0	149.4	27.28	41.08	407.0	11.0	0.0340	1.04042
270.0	31.70	1.976	6216.0	8240.0	150.1	27.35	40.78	412.2	11.1	0.0345	1.03934
275.0	30.90	1.926	6367.0	8443.0	150.9	27.44	40.54	417.3	11.2	0.0349	1.03834
280.0	30.15	1.879	6517.0	8646.0	151.6	27.54	40.35	422.1	11.4	0.0354	1.03739
290.0	28.77	1.793	6817.0	9048.0	153.0	27.77	40.09	431.5	11.7	0.0364	1.03566
300.0	27.54	1.716	7117.0	9448.0	154.4	28.06	39.96	440.4	11.9	0.0376	1.03411
310.0	26.42	1.647	7418.0	9847.0	155.7	28.38	39.93	448.9	12.2	0.0388	1.03272
320.0	25.40	1.583	7720.0	10250.0	156.9	28.75	40.00	457.0	12.5	0.0400	1.03145
330.0	24.47	1.525	8025.0	10650.0	158.2	29.14	40.14	464.7	12.8	0.0413	1.03028
340.0	23.62	1.472	8333.0	11050.0	159.4	29.57	40.35	472.1	13.1	0.0427	1.02922
350.0	22.83	1.423	8643.0	11450.0	160.5	30.02	40.60	479.3	13.4	0.0441	1.02823
360.0	22.09	1.377	8957.0	11860.0	161.7	30.49	40.91	486.3	13.6	0.0455	1.02732
370.0	21.41	1.335	9276.0	12270.0	162.8	30.99	41.25	493.0	13.9	0.0469	1.02647
380.0	20.77	1.295	9598.0	12690.0	163.9	31.50	41.62	499.5	14.2	0.0484	1.02567
390.0	20.18	1.258	9925.0	13110.0	165.0	32.02	42.03	505.9	14.5	0.0500	1.02493
400.0	19.62	1.223	10260.0	13530.0	166.1	32.56	42.46	512.0	14.7	0.0515	1.02423
410.0	19.09	1.190	10590.0	13950.0	167.1	33.11	42.91	518.1	15.0	0.0531	1.02358
420.0	18.59	1.159	10930.0	14390.0	168.2	33.67	43.38	524.0	15.3	0.0547	1.02296
440.0	17.68	1.102	11630.0	15260.0	170.2	34.81	44.36	535.5	15.8	0.0580	1.02182
460.0	16.85	1.051	12350.0	16160.0	172.2	35.95	45.37	546.6	16.3	0.0614	1.02080
480.0	16.11	1.004	13090.0	17080.0	174.2	37.10	46.40	557.3	16.8	0.0649	1.01988
500.0	15.43	0.9617	13860.0	18020.0	176.1	38.22	47.43	567.7	17.3	0.0684	1.01903
520.0	14.81	0.9230	14640.0	18980.0	178.0	39.31	48.44	577.9	17.8	0.0719	1.01826
540.0	14.24	0.8874	15450.0	19950.0	179.8	40.36	49.41	588.0	18.3	0.0755	1.01756
560.0	13.71	0.8546	16270.0	20950.0	181.6	41.34	50.33	597.8	18.8	0.0790	1.01690
580.0	13.22	0.8243	17110.0	21970.0	183.4	42.25	51.18	607.5	19.2	0.0824	1.01630
600.0	12.77	0.7960	17970.0	23000.0	185.1	43.06	51.94	617.1	19.7	0.0857	1.01574

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					4.20 MPa isobar						
91.75[a]	453.1	28.24	-5713.0	-5565.0	68.10	34.10	53.15	1554.0	209.0	0.226	1.67929
100.0	442.2	27.56	-5277.0	-5124.0	72.70	33.57	53.68	1482.0	164.0	0.212	1.66006
120.0	414.4	25.83	-4192.0	-4030.0	82.67	32.73	55.88	1291.0	103.0	0.180	1.61159
140.0	383.3	23.89	-3058.0	-2882.0	91.51	31.69	59.23	1087.0	70.8	0.150	1.55815
150.0	365.5	22.78	-2461.0	-2277.0	95.68	31.18	62.00	978.4	59.5	0.136	1.52812
160.0	345.2	21.52	-1832.0	-1637.0	99.81	30.75	66.39	861.4	49.9	0.122	1.49438
165.0	333.7	20.80	-1499.0	-1297.0	101.9	30.58	69.72	798.4	45.5	0.114	1.47543
170.0	320.8	19.99	-1147.0	-937.0	104.1	30.46	74.47	730.7	41.3	0.107	1.45441
175.0	305.8	19.06	-767.9	-547.6	106.3	30.44	81.93	656.0	37.1	0.101	1.43028
176.0	302.5	18.85	-687.4	-464.6	106.8	30.45	84.00	639.9	36.2	0.0998	1.42493
178.0	295.3	18.41	-520.0	-291.8	107.8	30.50	89.06	606.0	34.5	0.0978	1.41351
180.0	287.3	17.91	-341.7	-107.1	108.8	30.58	96.01	569.3	32.7	0.0964	1.40084
182.0	278.1	17.33	-147.8	94.5	109.9	30.73	106.4	528.8	30.7	0.0960	1.38641
184.0	267.0	16.65	70.7	323.0	111.2	30.98	124.0	482.5	28.6	0.0974	1.36916
185.0	260.3	16.23	195.0	453.9	111.9	31.17	138.9	455.9	27.4	0.0994	1.35880
186.0	252.3	15.73	336.8	603.9	112.7	31.44	163.5	425.6	26.0	0.103	1.34643
186.5	247.5	15.43	418.0	690.3	113.1	31.62	183.7	408.4	25.2	0.105	1.33904
187.0	241.8	15.07	510.7	789.4	113.7	31.85	215.4	388.9	24.3	0.109	1.33034
187.5	234.5	14.62	622.9	910.2	114.3	32.18	275.4	366.0	23.2	0.113	1.31938
187.644[b]	231.3	14.42	669.8	961.1	114.6	32.34	315.1	356.3	22.8	0.114	1.31454
187.644[b]	97.12	6.053	2632.0	3326.0	127.2	34.53	361.9	258.5	10.7	0.0910	1.12407
190.0	81.69	5.092	3006.0	3831.0	129.9	32.85	151.9	272.9	10.1	0.270	1.10362
191.0	78.12	4.869	3109.0	3971.0	130.6	32.38	130.0	277.4	9.99	0.286	1.09893
191.5	76.61	4.775	3155.0	4034.0	130.9	32.18	122.1	279.5	9.94	0.159	1.09694
192.0	75.22	4.689	3198.0	4094.0	131.2	31.98	115.5	281.5	9.90	0.117	1.09514
193.0	72.78	4.536	3278.0	4204.0	131.8	31.64	105.2	285.3	9.84	0.0820	1.09194
194.0	70.66	4.404	3351.0	4305.0	132.3	31.33	97.29	288.8	9.79	0.0668	1.08918
195.0	68.79	4.288	3419.0	4399.0	132.8	31.05	91.09	292.1	9.75	0.0583	1.08674
196.0	67.11	4.183	3483.0	4487.0	133.3	30.80	86.05	295.2	9.72	0.0528	1.08456
197.0	65.59	4.088	3544.0	4571.0	133.7	30.56	81.87	298.2	9.70	0.0490	1.08259
198.0	64.20	4.002	3602.0	4651.0	134.1	30.35	78.33	301.1	9.69	0.0462	1.08079
199.0	62.92	3.922	3657.0	4728.0	134.5	30.16	75.28	303.8	9.68	0.0440	1.07913
200.0	61.74	3.848	3710.0	4802.0	134.9	29.97	72.64	306.4	9.67	0.0423	1.07760
202.0	59.60	3.715	3812.0	4943.0	135.6	29.65	68.26	311.5	9.66	0.0398	1.07484
204.0	57.71	3.597	3908.0	5076.0	136.2	29.36	64.77	316.2	9.67	0.0381	1.07241
206.0	56.02	3.492	3999.0	5202.0	136.8	29.11	61.91	320.6	9.68	0.0368	1.07023
208.0	54.49	3.396	4087.0	5323.0	137.4	28.88	59.53	324.9	9.70	0.0359	1.06827
210.0	53.09	3.309	4171.0	5440.0	138.0	28.69	57.51	329.0	9.72	0.0352	1.06648
212.0	51.81	3.229	4253.0	5554.0	138.5	28.51	55.78	332.9	9.75	0.0346	1.06483
214.0	50.62	3.155	4333.0	5664.0	139.0	28.35	54.28	336.6	9.78	0.0342	1.06331
216.0	49.51	3.086	4410.0	5771.0	139.5	28.21	52.96	340.3	9.82	0.0339	1.06190
218.0	48.48	3.022	4486.0	5876.0	140.0	28.08	51.80	343.8	9.85	0.0336	1.06059
220.0	47.52	2.962	4560.0	5978.0	140.5	27.97	50.77	347.2	9.89	0.0334	1.05935
222.0	46.61	2.905	4633.0	6079.0	140.9	27.86	49.84	350.5	9.93	0.0332	1.05819
225.0	45.33	2.826	4740.0	6226.0	141.6	27.73	48.63	355.2	10.00	0.0331	1.05658
230.0	43.43	2.707	4914.0	6465.0	142.6	27.56	46.96	362.8	10.1	0.0329	1.05415
235.0	41.74	2.601	5082.0	6697.0	143.6	27.43	45.64	369.9	10.2	0.0329	1.05200
240.0	40.22	2.507	5247.0	6922.0	144.6	27.34	44.57	376.7	10.4	0.0330	1.05008
245.0	38.84	2.421	5408.0	7143.0	145.5	27.29	43.70	383.1	10.5	0.0332	1.04834
250.0	37.59	2.343	5567.0	7359.0	146.4	27.27	42.99	389.3	10.6	0.0334	1.04676
255.0	36.44	2.271	5724.0	7573.0	147.2	27.27	42.39	395.2	10.7	0.0337	1.04530
260.0	35.37	2.205	5879.0	7784.0	148.0	27.29	41.90	400.9	10.9	0.0340	1.04396
265.0	34.39	2.143	6033.0	7992.0	148.8	27.34	41.50	406.3	11.0	0.0343	1.04272
270.0	33.47	2.086	6185.0	8199.0	149.6	27.40	41.16	411.6	11.2	0.0347	1.04156
275.0	32.61	2.033	6337.0	8404.0	150.4	27.48	40.89	416.7	11.3	0.0351	1.04048
280.0	31.80	1.982	6489.0	8608.0	151.1	27.58	40.67	421.7	11.4	0.0356	1.03947
290.0	30.33	1.890	6791.0	9013.0	152.5	27.81	40.36	431.2	11.7	0.0366	1.03762
300.0	29.01	1.808	7092.0	9415.0	153.9	28.09	40.20	440.1	12.0	0.0378	1.03596
310.0	27.82	1.734	7395.0	9817.0	155.2	28.41	40.15	448.7	12.3	0.0389	1.03447
320.0	26.74	1.667	7698.0	10220.0	156.5	28.77	40.19	456.8	12.6	0.0402	1.03312

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
330.0	25.75	1.605	8004.0	10620.0	157.7	29.16	40.31	464.6	12.8	0.0415	1.03188
340.0	24.84	1.549	8313.0	11020.0	158.9	29.59	40.50	472.1	13.1	0.0428	1.03075
350.0	24.01	1.496	8624.0	11430.0	160.1	30.04	40.74	479.3	13.4	0.0442	1.02970
360.0	23.23	1.448	8939.0	11840.0	161.2	30.51	41.03	486.3	13.7	0.0456	1.02874
370.0	22.51	1.403	9258.0	12250.0	162.4	31.00	41.37	493.1	13.9	0.0471	1.02784
380.0	21.83	1.361	9581.0	12670.0	163.5	31.51	41.73	499.6	14.2	0.0486	1.02700
390.0	21.20	1.322	9909.0	13090.0	164.6	32.04	42.13	506.0	14.5	0.0501	1.02621
400.0	20.61	1.285	10240.0	13510.0	165.6	32.58	42.55	512.2	14.8	0.0517	1.02547
410.0	20.06	1.250	10580.0	13940.0	166.7	33.12	43.00	518.3	15.0	0.0532	1.02478
420.0	19.53	1.217	10920.0	14370.0	167.7	33.68	43.46	524.2	15.3	0.0549	1.02413
440.0	18.57	1.157	11620.0	15250.0	169.8	34.82	44.43	535.8	15.8	0.0582	1.02293
460.0	17.70	1.103	12340.0	16150.0	171.8	35.96	45.43	546.9	16.3	0.0616	1.02185
480.0	16.91	1.054	13080.0	17070.0	173.7	37.10	46.46	557.6	16.8	0.0650	1.02088
500.0	16.20	1.010	13850.0	18010.0	175.6	38.23	47.48	568.1	17.3	0.0685	1.01999
520.0	15.55	0.9690	14630.0	18970.0	177.5	39.32	48.48	578.3	17.8	0.0720	1.01918
540.0	14.95	0.9316	15440.0	19940.0	179.4	40.37	49.45	588.3	18.3	0.0756	1.01844
560.0	14.39	0.8971	16260.0	20940.0	181.2	41.35	50.37	598.2	18.8	0.0791	1.01775
580.0	13.88	0.8652	17100.0	21960.0	183.0	42.26	51.21	607.9	19.2	0.0825	1.01711
600.0	13.40	0.8355	17960.0	22990.0	184.7	43.07	51.97	617.6	19.7	0.0858	1.01653
					4.40 MPa isobar						
91.80[a]	453.1	28.25	-5712.0	-5557.0	68.11	34.10	53.14	1555.0	209.0	0.226	1.67938
100.0	442.3	27.57	-5279.0	-5119.0	72.67	33.58	53.66	1484.0	165.0	0.212	1.66030
120.0	414.6	25.84	-4196.0	-4025.0	82.64	32.73	55.84	1294.0	103.0	0.180	1.61193
140.0	383.6	23.91	-3063.0	-2879.0	91.47	31.70	59.14	1090.0	71.0	0.150	1.55867
150.0	365.9	22.81	-2468.0	-2275.0	95.64	31.19	61.85	982.0	59.7	0.136	1.52880
160.0	345.8	21.55	-1841.0	-1637.0	99.75	30.75	66.11	866.1	50.2	0.122	1.49533
165.0	334.4	20.84	-1510.0	-1299.0	101.8	30.58	69.30	803.8	45.8	0.115	1.47658
170.0	321.7	20.05	-1161.0	-941.4	104.0	30.46	73.81	737.2	41.6	0.108	1.45586
175.0	307.0	19.14	-786.3	-556.4	106.2	30.42	80.76	664.1	37.4	0.102	1.43224
180.0	289.2	18.02	-369.0	-124.9	108.6	30.54	93.31	580.4	33.1	0.0970	1.40379
182.0	280.5	17.48	-181.8	69.9	109.7	30.66	102.0	542.0	31.3	0.0966	1.39011
184.0	270.3	16.85	25.4	286.6	110.9	30.86	115.9	498.9	29.2	0.0980	1.37415
185.0	264.3	16.47	140.4	407.5	111.5	31.01	126.6	474.8	28.1	0.100	1.36486
186.0	257.4	16.04	267.1	541.4	112.3	31.21	142.3	448.2	26.9	0.104	1.35423
187.0	249.1	15.53	412.1	695.5	113.1	31.50	168.5	418.0	25.5	0.110	1.34149
187.5	244.1	15.21	495.5	784.8	113.6	31.69	189.9	400.9	24.7	0.115	1.33385
188.0	238.1	14.84	591.0	887.5	114.1	31.94	223.7	381.6	23.8	0.122	1.32483
188.5	230.6	14.37	707.1	1013.0	114.8	32.28	287.2	359.1	22.7	0.132	1.31343
188.6	228.7	14.26	734.3	1043.0	114.9	32.37	307.6	354.0	22.5	0.135	1.31069
188.8	224.6	14.00	795.4	1110.0	115.3	32.58	365.4	342.8	21.9	0.141	1.30444
189.0	219.3	13.67	870.2	1192.0	115.7	32.85	470.0	329.8	21.2	0.149	1.29662
189.1	216.0	13.46	916.7	1243.0	116.0	33.02	565.7	322.2	20.8	0.154	1.29168
189.136[b]	213.9	13.33	945.2	1275.0	116.2	33.14	648.5	317.5	20.5	0.155	1.28855
189.136[b]	112.8	7.031	2401.0	3027.0	125.4	35.20	767.0	256.6	11.7	0.152	1.14518
190.0	98.48	6.138	2688.0	3405.0	127.4	34.17	288.9	263.9	10.9	0.306	1.12590
190.5	94.22	5.873	2784.0	3533.0	128.1	33.78	230.7	267.1	10.7	3.84	1.12021
191.0	90.91	5.667	2863.0	3639.0	128.7	33.44	196.4	270.0	10.6	0.324	1.11581
191.5	88.19	5.497	2931.0	3731.0	129.1	33.15	173.4	272.6	10.5	0.179	1.11220
192.0	85.86	5.352	2992.0	3814.0	129.6	32.88	156.7	275.0	10.4	0.130	1.10913
192.5	83.84	5.226	3047.0	3889.0	130.0	32.64	144.0	277.2	10.3	0.105	1.10645
193.0	82.03	5.113	3098.0	3958.0	130.3	32.42	133.9	279.4	10.3	0.0903	1.10408
193.5	80.41	5.012	3145.0	4023.0	130.7	32.22	125.7	281.4	10.2	0.0802	1.10194
194.0	78.93	4.920	3190.0	4084.0	131.0	32.03	118.8	283.4	10.2	0.0729	1.09999
195.0	76.31	4.757	3272.0	4197.0	131.6	31.68	108.0	287.1	10.1	0.0631	1.09656
196.0	74.05	4.615	3348.0	4301.0	132.1	31.38	99.74	290.6	10.0	0.0567	1.09360
197.0	72.05	4.491	3417.0	4397.0	132.6	31.10	93.26	293.9	9.97	0.0523	1.09100
198.0	70.26	4.380	3483.0	4488.0	133.0	30.85	88.00	297.0	9.94	0.0491	1.08867
199.0	68.65	4.279	3545.0	4573.0	133.5	30.62	83.62	299.9	9.91	0.0466	1.08657
200.0	67.17	4.187	3604.0	4655.0	133.9	30.40	79.93	302.8	9.89	0.0446	1.08465
201.0	65.82	4.102	3661.0	4734.0	134.3	30.21	76.76	305.5	9.88	0.0430	1.08289
202.0	64.56	4.024	3715.0	4809.0	134.6	30.03	74.00	308.1	9.86	0.0417	1.08126

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
204.0	62.29	3.883	3819.0	4952.0	135.3	29.70	69.44	313.1	9.85	0.0397	1.07833
206.0	60.30	3.758	3917.0	5087.0	136.0	29.41	65.81	317.8	9.85	0.0382	1.07575
208.0	58.51	3.647	4009.0	5216.0	136.6	29.16	62.85	322.3	9.86	0.0371	1.07345
210.0	56.90	3.547	4098.0	5339.0	137.2	28.94	60.38	326.5	9.87	0.0363	1.07137
212.0	55.43	3.455	4184.0	5458.0	137.8	28.74	58.29	330.6	9.89	0.0356	1.06948
214.0	54.07	3.371	4267.0	5572.0	138.3	28.56	56.50	334.5	9.91	0.0351	1.06774
216.0	52.83	3.293	4348.0	5684.0	138.8	28.40	54.95	338.2	9.94	0.0347	1.06614
218.0	51.67	3.220	4426.0	5792.0	139.3	28.26	53.58	341.8	9.97	0.0344	1.06466
220.0	50.58	3.153	4503.0	5898.0	139.8	28.14	52.38	345.4	10.0	0.0341	1.06327
222.0	49.57	3.090	4578.0	6002.0	140.3	28.02	51.32	348.7	10.0	0.0339	1.06198
224.0	48.61	3.030	4651.0	6104.0	140.7	27.92	50.36	352.0	10.1	0.0338	1.06076
230.0	46.05	2.870	4866.0	6398.0	142.0	27.68	48.03	361.4	10.2	0.0335	1.05749
235.0	44.19	2.755	5037.0	6635.0	143.1	27.53	46.54	368.7	10.3	0.0334	1.05513
240.0	42.54	2.651	5205.0	6864.0	144.0	27.43	45.34	375.6	10.4	0.0335	1.05303
245.0	41.04	2.558	5369.0	7088.0	144.9	27.37	44.37	382.2	10.6	0.0336	1.05113
250.0	39.69	2.474	5530.0	7308.0	145.8	27.34	43.58	388.4	10.7	0.0338	1.04941
255.0	38.44	2.396	5688.0	7524.0	146.7	27.33	42.92	394.4	10.8	0.0340	1.04784
260.0	37.30	2.325	5845.0	7738.0	147.5	27.35	42.37	400.2	10.9	0.0343	1.04639
265.0	36.24	2.259	6000.0	7948.0	148.3	27.39	41.92	405.7	11.1	0.0346	1.04506
270.0	35.25	2.197	6155.0	8157.0	149.1	27.45	41.55	411.1	11.2	0.0350	1.04381
275.0	34.33	2.140	6308.0	8364.0	149.9	27.52	41.24	416.2	11.4	0.0354	1.04265
280.0	33.47	2.086	6460.0	8570.0	150.6	27.62	40.99	421.3	11.5	0.0358	1.04157
290.0	31.89	1.988	6764.0	8978.0	152.0	27.84	40.64	430.8	11.8	0.0368	1.03959
300.0	30.49	1.901	7068.0	9383.0	153.4	28.12	40.44	439.9	12.0	0.0380	1.03782
310.0	29.23	1.822	7371.0	9787.0	154.7	28.44	40.36	448.5	12.3	0.0391	1.03624
320.0	28.08	1.750	7676.0	10190.0	156.0	28.79	40.38	456.7	12.6	0.0404	1.03480
330.0	27.03	1.685	7983.0	10590.0	157.3	29.19	40.48	464.6	12.9	0.0417	1.03349
340.0	26.07	1.625	8293.0	11000.0	158.5	29.61	40.65	472.1	13.2	0.0430	1.03229
350.0	25.19	1.570	8605.0	11410.0	159.6	30.05	40.88	479.4	13.4	0.0444	1.03118
360.0	24.37	1.519	8921.0	11820.0	160.8	30.53	41.16	486.4	13.7	0.0458	1.03016
370.0	23.61	1.471	9241.0	12230.0	161.9	31.02	41.48	493.2	14.0	0.0472	1.02921
380.0	22.90	1.427	9565.0	12650.0	163.0	31.53	41.84	499.8	14.2	0.0487	1.02832
390.0	22.23	1.386	9893.0	13070.0	164.1	32.05	42.23	506.2	14.5	0.0502	1.02749
400.0	21.61	1.347	10230.0	13490.0	165.2	32.59	42.65	512.4	14.8	0.0518	1.02672
410.0	21.02	1.310	10560.0	13920.0	166.3	33.14	43.09	518.5	15.0	0.0534	1.02599
420.0	20.47	1.276	10910.0	14350.0	167.3	33.69	43.54	524.5	15.3	0.0550	1.02530
440.0	19.46	1.213	11610.0	15230.0	169.4	34.83	44.50	536.0	15.8	0.0583	1.02404
460.0	18.54	1.156	12330.0	16130.0	171.4	35.97	45.50	547.2	16.3	0.0617	1.02290
480.0	17.72	1.104	13070.0	17050.0	173.3	37.11	46.51	558.0	16.8	0.0651	1.02188
500.0	16.97	1.058	13840.0	18000.0	175.2	38.24	47.53	568.4	17.3	0.0686	1.02095
520.0	16.28	1.015	14620.0	18960.0	177.1	39.33	48.53	578.7	17.8	0.0721	1.02010
540.0	15.65	0.9757	15430.0	19940.0	179.0	40.38	49.49	588.7	18.3	0.0757	1.01931
560.0	15.07	0.9395	16250.0	20940.0	180.8	41.36	50.41	598.6	18.8	0.0791	1.01859
580.0	14.54	0.9060	17100.0	21950.0	182.6	42.26	51.25	608.4	19.3	0.0826	1.01793
600.0	14.04	0.8749	17960.0	22980.0	184.3	43.07	52.01	618.0	19.7	0.0859	1.01731
					4.50 MPa isobar						
91.83[a]	453.2	28.25	-5712.0	-5553.0	68.11	34.10	53.13	1555.0	209.0	0.226	1.67942
100.0	442.4	27.58	-5280.0	-5117.0	72.66	33.58	53.65	1484.0	165.0	0.212	1.66042
120.0	414.7	25.85	-4197.0	-4023.0	82.63	32.74	55.82	1295.0	104.0	0.180	1.61210
140.0	383.7	23.92	-3065.0	-2877.0	91.45	31.71	59.09	1092.0	71.1	0.150	1.55892
150.0	366.1	22.82	-2471.0	-2274.0	95.61	31.19	61.77	983.8	59.8	0.136	1.52913
160.0	346.1	21.57	-1845.0	-1637.0	99.72	30.75	65.97	868.4	50.3	0.122	1.49579
165.0	334.7	20.86	-1515.0	-1299.0	101.8	30.58	69.10	806.5	45.9	0.115	1.47715
170.0	322.1	20.08	-1168.0	-943.6	103.9	30.45	73.50	740.4	41.7	0.108	1.45657
175.0	307.6	19.18	-795.3	-560.6	106.1	30.41	80.20	668.1	37.6	0.102	1.43319
180.0	290.1	18.08	-382.1	-133.2	108.6	30.52	92.10	585.7	33.3	0.0972	1.40520
182.0	281.6	17.55	-197.8	58.6	109.6	30.63	100.2	548.2	31.5	0.0968	1.39185
184.0	271.7	16.94	4.7	270.3	110.8	30.81	112.6	506.5	29.5	0.0983	1.37643
186.0	259.5	16.18	237.2	515.4	112.1	31.13	135.0	458.2	27.3	0.104	1.35756
187.0	251.9	15.70	373.2	659.7	112.9	31.37	155.4	430.1	26.0	0.110	1.34586
188.0	242.4	15.11	533.7	831.6	113.8	31.73	192.6	397.5	24.5	0.123	1.33132

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
188.5	236.4	14.73	630.3	935.7	114.3	31.98	226.9	378.5	23.6	0.134	1.32218
189.0	228.7	14.26	747.5	1063.0	115.0	32.33	290.5	356.3	22.5	0.152	1.31066
189.2	224.9	14.02	804.4	1125.0	115.3	32.51	335.4	346.1	22.0	0.163	1.30490
189.4	220.3	13.73	871.3	1199.0	115.7	32.74	407.2	334.5	21.4	0.178	1.29800
189.6	214.3	13.36	955.7	1293.0	116.2	33.05	545.7	321.0	20.6	0.199	1.28911
189.7	210.3	13.11	1010.0	1353.0	116.5	33.26	683.3	312.9	20.1	0.213	1.28327
189.8	205.1	12.78	1082.0	1434.0	117.0	33.55	973.9	303.1	19.5	0.230	1.27548
189.858[b]	200.5	12.49	1144.0	1504.0	117.3	33.80	1424.0	295.4	18.9	0.243	1.26872
189.858[b]	125.5	7.825	2211.0	2787.0	124.1	35.53	1677.0	256.3	12.5	0.263	1.16252
190.0	117.4	7.319	2352.0	2967.0	125.0	35.22	812.9	258.0	12.0	0.319	1.15144
190.2	111.9	6.977	2454.0	3099.0	125.7	34.93	549.2	259.8	11.7	0.472	1.14399
190.4	108.1	6.739	2528.0	3196.0	126.2	34.69	431.6	261.5	11.5	1.06	1.13883
190.6	105.1	6.553	2588.0	3275.0	126.7	34.48	362.7	263.0	11.3	1.85	1.13481
190.8	102.7	6.399	2639.0	3342.0	127.0	34.29	316.7	264.3	11.2	0.551	1.13150
191.0	100.6	6.268	2684.0	3402.0	127.3	34.12	283.5	265.6	11.1	0.342	1.12867
191.2	98.70	6.152	2725.0	3456.0	127.6	33.97	258.1	266.9	11.0	0.254	1.12620
191.4	97.05	6.049	2762.0	3506.0	127.9	33.82	238.1	268.1	10.9	0.205	1.12399
191.6	95.56	5.956	2796.0	3552.0	128.1	33.68	221.8	269.2	10.8	0.174	1.12200
191.8	94.19	5.871	2828.0	3595.0	128.3	33.55	208.2	270.3	10.8	0.153	1.12018
192.0	92.93	5.793	2858.0	3635.0	128.5	33.42	196.7	271.4	10.7	0.137	1.11851
192.5	90.16	5.620	2927.0	3727.0	129.0	33.14	174.2	273.9	10.6	0.111	1.11482
193.0	87.79	5.472	2988.0	3810.0	129.5	32.88	157.8	276.2	10.5	0.0947	1.11168
193.5	85.71	5.343	3044.0	3886.0	129.8	32.64	145.1	278.5	10.4	0.0839	1.10893
194.0	83.86	5.227	3095.0	3956.0	130.2	32.43	135.0	280.6	10.4	0.0761	1.10649
194.5	82.20	5.123	3143.0	4021.0	130.5	32.22	126.8	282.6	10.3	0.0702	1.10429
195.0	80.68	5.029	3188.0	4083.0	130.9	32.04	119.9	284.5	10.3	0.0656	1.10230
196.0	77.99	4.861	3271.0	4197.0	131.4	31.69	109.0	288.2	10.2	0.0588	1.09877
197.0	75.67	4.717	3348.0	4302.0	132.0	31.39	100.7	291.6	10.1	0.0541	1.09572
198.0	73.62	4.589	3418.0	4399.0	132.5	31.11	94.10	294.9	10.1	0.0506	1.09304
199.0	71.78	4.475	3485.0	4490.0	132.9	30.86	88.77	298.0	10.0	0.0479	1.09065
200.0	70.13	4.371	3547.0	4577.0	133.4	30.63	84.34	300.9	10.0	0.0458	1.08849
201.0	68.61	4.277	3607.0	4659.0	133.8	30.42	80.59	303.7	9.99	0.0441	1.08652
202.0	67.22	4.190	3664.0	4738.0	134.2	30.23	77.38	306.4	9.97	0.0427	1.08471
204.0	64.73	4.035	3772.0	4887.0	134.9	29.88	72.13	311.6	9.95	0.0405	1.08148
206.0	62.55	3.899	3873.0	5027.0	135.6	29.57	68.02	316.4	9.94	0.0390	1.07866
208.0	60.62	3.779	3969.0	5160.0	136.2	29.31	64.70	321.0	9.94	0.0378	1.07617
210.0	58.88	3.670	4061.0	5287.0	136.8	29.07	61.96	325.3	9.95	0.0369	1.07393
212.0	57.31	3.572	4148.0	5408.0	137.4	28.86	59.66	329.4	9.96	0.0362	1.07190
214.0	55.86	3.482	4233.0	5525.0	138.0	28.67	57.70	333.4	9.98	0.0356	1.07004
216.0	54.54	3.399	4315.0	5639.0	138.5	28.51	56.01	337.2	10.0	0.0351	1.06834
218.0	53.30	3.323	4395.0	5750.0	139.0	28.36	54.54	340.9	10.0	0.0348	1.06676
220.0	52.16	3.251	4473.0	5857.0	139.5	28.22	53.24	344.5	10.1	0.0345	1.06529
222.0	51.09	3.184	4550.0	5963.0	140.0	28.10	52.10	347.9	10.1	0.0343	1.06392
224.0	50.08	3.122	4624.0	6066.0	140.4	28.00	51.07	351.2	10.1	0.0341	1.06263
226.0	49.13	3.063	4698.0	6167.0	140.9	27.90	50.16	354.5	10.2	0.0340	1.06142
230.0	47.39	2.954	4841.0	6364.0	141.7	27.74	48.59	360.7	10.3	0.0338	1.05920
235.0	45.44	2.833	5015.0	6603.0	142.8	27.59	47.01	368.1	10.4	0.0337	1.05672
240.0	43.71	2.725	5184.0	6835.0	143.7	27.48	45.74	375.1	10.5	0.0337	1.05452
245.0	42.16	2.628	5349.0	7061.0	144.7	27.41	44.72	381.7	10.6	0.0338	1.05255
250.0	40.75	2.540	5511.0	7283.0	145.6	27.37	43.88	388.0	10.7	0.0339	1.05076
255.0	39.45	2.459	5670.0	7500.0	146.4	27.36	43.19	394.0	10.9	0.0342	1.04912
260.0	38.27	2.385	5828.0	7715.0	147.3	27.38	42.61	399.8	11.0	0.0344	1.04762
265.0	37.17	2.317	5984.0	7926.0	148.1	27.42	42.14	405.4	11.1	0.0347	1.04623
270.0	36.15	2.253	6139.0	8136.0	148.9	27.47	41.75	410.8	11.2	0.0351	1.04495
275.0	35.20	2.194	6293.0	8344.0	149.6	27.55	41.42	416.0	11.4	0.0355	1.04375
280.0	34.31	2.138	6446.0	8550.0	150.4	27.64	41.16	421.0	11.5	0.0360	1.04262
290.0	32.68	2.037	6751.0	8960.0	151.8	27.86	40.78	430.7	11.8	0.0370	1.04058
300.0	31.23	1.947	7055.0	9367.0	153.2	28.13	40.56	439.8	12.1	0.0381	1.03876
310.0	29.93	1.866	7360.0	9772.0	154.5	28.45	40.47	448.4	12.3	0.0392	1.03713
320.0	28.75	1.792	7665.0	10180.0	155.8	28.81	40.48	456.7	12.6	0.0405	1.03565
330.0	27.68	1.725	7973.0	10580.0	157.0	29.20	40.57	464.5	12.9	0.0417	1.03430
340.0	26.69	1.664	8283.0	10990.0	158.3	29.62	40.73	472.1	13.2	0.0431	1.03306
350.0	25.78	1.607	8596.0	11400.0	159.4	30.06	40.95	479.4	13.4	0.0444	1.03193

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
360.0	24.94	1.554	8912.0	11810.0	160.6	30.53	41.23	486.4	13.7	0.0459	1.03087
370.0	24.16	1.506	9232.0	12220.0	161.7	31.02	41.54	493.2	14.0	0.0473	1.02990
380.0	23.43	1.460	9557.0	12640.0	162.8	31.53	41.90	499.9	14.3	0.0488	1.02899
390.0	22.75	1.418	9885.0	13060.0	163.9	32.06	42.28	506.3	14.5	0.0503	1.02814
400.0	22.11	1.378	10220.0	13480.0	165.0	32.59	42.69	512.5	14.8	0.0519	1.02734
410.0	21.51	1.341	10560.0	13910.0	166.1	33.14	43.13	518.6	15.1	0.0534	1.02659
420.0	20.94	1.305	10900.0	14350.0	167.1	33.70	43.58	524.6	15.3	0.0550	1.02589
440.0	19.90	1.240	11600.0	15230.0	169.2	34.83	44.54	536.2	15.8	0.0583	1.02459
460.0	18.97	1.182	12320.0	16130.0	171.2	35.98	45.53	547.3	16.4	0.0617	1.02343
480.0	18.12	1.130	13060.0	17050.0	173.1	37.12	46.54	558.1	16.9	0.0652	1.02238
500.0	17.35	1.082	13830.0	17990.0	175.0	38.24	47.56	568.6	17.4	0.0687	1.02142
520.0	16.65	1.038	14620.0	18950.0	176.9	39.33	48.55	578.9	17.8	0.0722	1.02055
540.0	16.01	0.9977	15420.0	19930.0	178.8	40.38	49.52	588.9	18.3	0.0757	1.01975
560.0	15.41	0.9607	16250.0	20930.0	180.6	41.36	50.43	598.8	18.8	0.0792	1.01902
580.0	14.86	0.9264	17090.0	21950.0	182.4	42.27	51.27	608.6	19.3	0.0826	1.01833
600.0	14.35	0.8946	17950.0	22980.0	184.1	43.08	52.02	618.2	19.7	0.0859	1.01770
					4.55 MPa isobar						
91.84[a]	453.2	28.25	-5712.0	-5551.0	68.12	34.10	53.13	1556.0	209.0	0.226	1.67945
100.0	442.4	27.58	-5280.0	-5115.0	72.66	33.59	53.65	1485.0	165.0	0.212	1.66047
120.0	414.8	25.85	-4198.0	-4022.0	82.62	32.74	55.81	1295.0	104.0	0.180	1.61218
140.0	383.8	23.92	-3066.0	-2876.0	91.44	31.71	59.07	1093.0	71.2	0.151	1.55905
150.0	366.2	22.83	-2472.0	-2273.0	95.60	31.19	61.73	984.7	59.9	0.136	1.52930
160.0	346.2	21.58	-1847.0	-1637.0	99.71	30.75	65.90	869.5	50.3	0.122	1.49602
165.0	334.9	20.88	-1518.0	-1300.0	101.8	30.58	69.00	807.8	46.0	0.115	1.47743
170.0	322.3	20.09	-1171.0	-944.6	103.9	30.45	73.34	741.9	41.8	0.108	1.45693
175.0	307.9	19.19	-799.7	-562.7	106.1	30.41	79.94	670.0	37.7	0.102	1.43366
180.0	290.5	18.11	-388.5	-137.2	108.5	30.51	91.53	588.3	33.4	0.0974	1.40589
182.0	282.1	17.59	-205.6	53.2	109.6	30.61	99.30	551.2	31.6	0.0969	1.39270
184.0	272.4	16.98	-5.3	262.6	110.7	30.79	111.1	510.2	29.7	0.0984	1.37752
186.0	260.6	16.24	223.2	503.3	112.0	31.09	131.9	463.0	27.5	0.104	1.35912
187.0	253.2	15.78	355.4	643.6	112.8	31.31	150.1	435.8	26.2	0.110	1.34785
188.0	244.2	15.22	509.0	807.9	113.6	31.64	181.8	404.6	24.8	0.123	1.33411
188.5	238.7	14.88	599.3	905.1	114.2	31.86	208.9	386.7	23.9	0.134	1.32570
189.0	231.9	14.46	705.0	1020.0	114.8	32.16	254.3	366.5	23.0	0.153	1.31550
189.5	222.9	13.90	839.7	1167.0	115.5	32.58	349.6	342.3	21.7	0.189	1.30198
189.6	220.6	13.75	872.9	1204.0	115.7	32.70	383.7	336.7	21.4	0.201	1.29856
189.8	215.2	13.41	950.8	1290.0	116.2	32.98	490.8	324.2	20.7	0.234	1.29041
189.9	211.7	13.20	998.7	1343.0	116.5	33.16	584.0	317.0	20.3	0.258	1.28533
190.0	207.5	12.93	1057.0	1409.0	116.8	33.38	742.3	308.7	19.8	0.291	1.27905
190.1	201.7	12.57	1136.0	1498.0	117.3	33.69	1088.0	298.8	19.1	0.339	1.27052
190.2	190.9	11.90	1280.0	1662.0	118.1	34.25	2914.0	283.7	17.9	0.415	1.25477
190.214[b]	190.4	11.87	1287.0	1670.0	118.2	34.27	3034.0	283.2	17.9	0.429	1.25408
190.214[b]	135.8	8.464	2059.0	2597.0	123.1	35.65	3726.0	257.0	13.2	0.477	1.17664
195.0	83.06	5.177	3143.0	4021.0	130.5	32.22	127.2	283.2	10.4	0.0669	1.10544
195.5	81.53	5.082	3188.0	4083.0	130.8	32.04	120.3	285.1	10.3	0.0631	1.10341
196.0	80.12	4.994	3231.0	4142.0	131.1	31.86	114.4	287.0	10.3	0.0599	1.10156
197.0	77.59	4.837	3311.0	4251.0	131.7	31.54	104.9	290.5	10.2	0.0550	1.09825
198.0	75.39	4.699	3384.0	4352.0	132.2	31.25	97.57	293.8	10.2	0.0514	1.09536
199.0	73.43	4.577	3453.0	4447.0	132.7	30.99	91.65	297.0	10.1	0.0486	1.09280
200.0	71.67	4.467	3518.0	4536.0	133.1	30.75	86.78	300.0	10.1	0.0464	1.09050
201.0	70.07	4.367	3579.0	4621.0	133.5	30.53	82.70	302.8	10.1	0.0447	1.08841
202.0	68.60	4.276	3638.0	4702.0	133.9	30.33	79.21	305.6	10.0	0.0432	1.08650
204.0	65.99	4.113	3748.0	4854.0	134.7	29.97	73.57	310.8	10.0	0.0410	1.08311
206.0	63.71	3.971	3851.0	4997.0	135.4	29.65	69.19	315.7	9.99	0.0393	1.08016
208.0	61.70	3.846	3948.0	5132.0	136.0	29.38	65.68	320.3	9.99	0.0381	1.07756
210.0	59.90	3.734	4041.0	5260.0	136.6	29.14	62.79	324.7	9.99	0.0372	1.07524
212.0	58.26	3.632	4130.0	5383.0	137.2	28.92	60.38	328.9	10.0	0.0364	1.07313
214.0	56.77	3.539	4216.0	5502.0	137.8	28.73	58.33	332.9	10.0	0.0358	1.07121
216.0	55.40	3.453	4299.0	5617.0	138.3	28.56	56.56	336.7	10.0	0.0354	1.06945
218.0	54.14	3.374	4380.0	5728.0	138.8	28.40	55.03	340.4	10.1	0.0350	1.06783

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
220.0	52.96	3.301	4458.0	5837.0	139.3	28.27	53.69	344.0	10.1	0.0347	1.06631
222.0	51.86	3.232	4535.0	5943.0	139.8	28.14	52.50	347.5	10.1	0.0345	1.06490
224.0	50.82	3.168	4611.0	6047.0	140.3	28.03	51.44	350.9	10.2	0.0343	1.06358
226.0	49.85	3.107	4684.0	6149.0	140.7	27.94	50.49	354.1	10.2	0.0341	1.06234
230.0	48.06	2.996	4829.0	6347.0	141.6	27.77	48.87	360.4	10.3	0.0339	1.06006
235.0	46.08	2.872	5003.0	6588.0	142.6	27.62	47.25	367.8	10.4	0.0338	1.05753
240.0	44.31	2.762	5173.0	6820.0	143.6	27.50	45.95	374.8	10.5	0.0338	1.05528
245.0	42.72	2.663	5339.0	7047.0	144.5	27.43	44.89	381.4	10.6	0.0339	1.05326
250.0	41.28	2.573	5501.0	7270.0	145.4	27.39	44.03	387.8	10.7	0.0340	1.05144
255.0	39.96	2.491	5661.0	7488.0	146.3	27.38	43.32	393.9	10.9	0.0342	1.04977
260.0	38.75	2.416	5820.0	7703.0	147.1	27.39	42.73	399.7	11.0	0.0345	1.04824
265.0	37.64	2.346	5976.0	7915.0	148.0	27.43	42.25	405.3	11.1	0.0348	1.04683
270.0	36.60	2.281	6131.0	8126.0	148.7	27.48	41.84	410.7	11.3	0.0352	1.04552
275.0	35.63	2.221	6285.0	8334.0	149.5	27.56	41.51	415.9	11.4	0.0356	1.04430
280.0	34.73	2.165	6439.0	8541.0	150.2	27.65	41.24	420.9	11.5	0.0360	1.04315
290.0	33.08	2.062	6744.0	8951.0	151.7	27.87	40.85	430.6	11.8	0.0370	1.04108
300.0	31.61	1.970	7049.0	9358.0	153.1	28.14	40.62	439.7	12.1	0.0381	1.03923
310.0	30.29	1.888	7354.0	9764.0	154.4	28.46	40.52	448.4	12.4	0.0393	1.03757
320.0	29.09	1.813	7660.0	10170.0	155.7	28.81	40.52	456.6	12.6	0.0405	1.03607
330.0	28.00	1.745	7968.0	10570.0	156.9	29.20	40.61	464.5	12.9	0.0418	1.03470
340.0	27.00	1.683	8278.0	10980.0	158.1	29.62	40.77	472.1	13.2	0.0431	1.03345
350.0	26.08	1.625	8591.0	11390.0	159.3	30.07	40.99	479.4	13.5	0.0445	1.03230
360.0	25.22	1.572	8908.0	11800.0	160.5	30.54	41.26	486.5	13.7	0.0459	1.03123
370.0	24.43	1.523	9228.0	12220.0	161.6	31.03	41.57	493.3	14.0	0.0473	1.03024
380.0	23.69	1.477	9552.0	12630.0	162.7	31.54	41.92	499.9	14.3	0.0488	1.02932
390.0	23.00	1.434	9881.0	13050.0	163.8	32.06	42.31	506.3	14.5	0.0503	1.02846
400.0	22.36	1.394	10210.0	13480.0	164.9	32.60	42.72	512.6	14.8	0.0519	1.02765
410.0	21.75	1.356	10550.0	13910.0	166.0	33.15	43.15	518.7	15.1	0.0535	1.02689
420.0	21.18	1.320	10900.0	14340.0	167.0	33.70	43.60	524.7	15.3	0.0551	1.02618
440.0	20.12	1.254	11600.0	15220.0	169.1	34.84	44.56	536.2	15.9	0.0584	1.02487
460.0	19.18	1.195	12320.0	16130.0	171.1	35.98	45.55	547.4	16.4	0.0618	1.02369
480.0	18.32	1.142	13060.0	17050.0	173.0	37.12	46.56	558.2	16.9	0.0652	1.02263
500.0	17.55	1.094	13830.0	17990.0	174.9	38.24	47.57	568.7	17.4	0.0687	1.02166
520.0	16.84	1.049	14610.0	18950.0	176.8	39.34	48.57	579.0	17.9	0.0722	1.02078
540.0	16.18	1.009	15420.0	19930.0	178.7	40.38	49.53	589.0	18.3	0.0757	1.01997
560.0	15.58	0.9713	16250.0	20930.0	180.5	41.36	50.44	598.9	18.8	0.0792	1.01923
580.0	15.03	0.9366	17090.0	21950.0	182.3	42.27	51.28	608.7	19.3	0.0826	1.01854
600.0	14.51	0.9045	17950.0	22980.0	184.0	43.08	52.03	618.3	19.7	0.0859	1.01790
					4.65 MPa isobar						
91.86[a]	453.2	28.25	-5711.0	-5547.0	68.12	34.10	53.13	1556.0	209.0	0.226	1.67949
100.0	442.5	27.58	-5281.0	-5113.0	72.65	33.59	53.64	1486.0	165.0	0.212	1.66059
120.0	414.9	25.86	-4199.0	-4020.0	82.61	32.74	55.79	1296.0	104.0	0.180	1.61235
140.0	384.0	23.93	-3069.0	-2875.0	91.43	31.71	59.02	1094.0	71.3	0.151	1.55931
150.0	366.4	22.84	-2476.0	-2272.0	95.58	31.20	61.66	986.5	60.0	0.136	1.52964
160.0	346.5	21.60	-1852.0	-1637.0	99.68	30.75	65.76	871.8	50.5	0.122	1.49648
165.0	335.3	20.90	-1523.0	-1301.0	101.7	30.58	68.81	810.4	46.1	0.115	1.47799
170.0	322.8	20.12	-1178.0	-946.6	103.9	30.45	73.04	745.1	42.0	0.109	1.45763
175.0	308.5	19.23	-808.5	-566.7	106.1	30.40	79.42	673.9	37.9	0.102	1.43459
180.0	291.3	18.16	-401.0	-145.0	108.4	30.49	90.43	593.5	33.6	0.0976	1.40724
182.0	283.2	17.65	-220.7	42.7	109.5	30.58	97.66	557.2	31.9	0.0972	1.39434
184.0	273.8	17.06	-24.5	248.0	110.6	30.75	108.4	517.3	29.9	0.0986	1.37963
186.0	262.5	16.36	196.7	481.0	111.9	31.01	126.4	472.0	27.8	0.104	1.36205
187.0	255.6	15.93	322.5	614.3	112.6	31.21	141.4	446.3	26.7	0.111	1.35152
188.0	247.5	15.43	465.1	766.6	113.4	31.49	165.2	417.5	25.3	0.123	1.33906
188.5	242.7	15.13	546.1	853.6	113.8	31.67	183.8	401.5	24.6	0.135	1.33171
189.0	237.1	14.78	637.1	951.8	114.4	31.89	211.1	383.9	23.7	0.153	1.32322
189.5	230.3	14.35	743.5	1067.0	115.0	32.19	256.0	364.0	22.7	0.191	1.31295
190.0	221.3	13.79	877.8	1215.0	115.8	32.62	346.4	340.7	21.5	0.295	1.29949
190.2	216.5	13.50	946.1	1291.0	116.2	32.85	416.6	329.7	20.9	0.422	1.29245
190.4	210.5	13.12	1031.0	1385.0	116.6	33.16	540.7	317.2	20.2	0.914	1.28357

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
190.6	202.1	12.59	1148.0	1517.0	117.3	33.59	828.2	302.0	19.2	1.58	1.27106
190.7	195.7	12.20	1234.0	1616.0	117.9	33.92	1192.0	292.5	18.5	0.725	1.26173
190.8	185.2	11.54	1375.0	1778.0	118.7	34.43	2320.0	280.3	17.4	0.493	1.24654
190.9	157.9	9.841	1753.0	2226.0	121.1	35.39	5932.0	263.1	14.9	0.397	1.20751
191.0	139.1	8.670	2036.0	2572.0	122.9	35.51	2065.0	259.6	13.4	0.343	1.18122
191.1	131.3	8.183	2162.0	2730.0	123.7	35.40	1247.0	259.7	12.9	0.298	1.17043
191.2	126.3	7.873	2246.0	2837.0	124.3	35.27	917.5	260.3	12.6	0.264	1.16359
191.4	119.7	7.460	2363.0	2986.0	125.0	35.02	623.4	261.6	12.2	0.217	1.15452
191.6	115.1	7.175	2448.0	3096.0	125.6	34.79	485.3	263.0	11.9	0.185	1.14830
192.0	108.7	6.775	2573.0	3259.0	126.5	34.41	349.6	265.6	11.6	0.146	1.13962
192.2	106.2	6.623	2623.0	3325.0	126.8	34.24	310.6	266.8	11.4	0.133	1.13632
192.4	104.1	6.490	2668.0	3384.0	127.1	34.08	281.1	268.0	11.3	0.123	1.13346
192.6	102.2	6.372	2708.0	3438.0	127.4	33.94	257.9	269.1	11.2	0.114	1.13093
192.8	100.5	6.267	2746.0	3488.0	127.6	33.80	239.1	270.2	11.2	0.107	1.12866
193.0	99.00	6.171	2780.0	3534.0	127.9	33.67	223.6	271.3	11.1	0.101	1.12660
193.2	97.59	6.083	2813.0	3577.0	128.1	33.54	210.4	272.3	11.0	0.0962	1.12471
193.5	95.66	5.963	2858.0	3638.0	128.4	33.36	194.2	273.8	10.9	0.0896	1.12214
194.0	92.87	5.789	2926.0	3729.0	128.9	33.09	173.3	276.2	10.8	0.0811	1.11842
194.5	90.46	5.638	2987.0	3812.0	129.3	32.84	157.7	278.4	10.7	0.0747	1.11522
195.0	88.34	5.506	3043.0	3888.0	129.7	32.62	145.6	280.6	10.6	0.0696	1.11241
195.5	86.44	5.388	3095.0	3958.0	130.1	32.41	135.7	282.6	10.6	0.0655	1.10990
196.0	84.73	5.282	3143.0	4024.0	130.4	32.21	127.6	284.6	10.5	0.0621	1.10764
196.5	83.17	5.184	3189.0	4086.0	130.7	32.03	120.8	286.4	10.5	0.0593	1.10558
197.0	81.73	5.095	3232.0	4145.0	131.0	31.86	115.0	288.3	10.4	0.0569	1.10368
198.0	79.16	4.934	3312.0	4255.0	131.6	31.54	105.5	291.7	10.3	0.0530	1.10031
199.0	76.91	4.794	3386.0	4356.0	132.1	31.25	98.17	295.0	10.3	0.0501	1.09735
200.0	74.91	4.669	3456.0	4452.0	132.6	31.00	92.24	298.1	10.2	0.0477	1.09474
201.0	73.11	4.557	3521.0	4541.0	133.0	30.76	87.34	301.1	10.2	0.0458	1.09238
202.0	71.47	4.455	3583.0	4626.0	133.4	30.54	83.23	303.9	10.2	0.0443	1.09025
203.0	69.97	4.361	3642.0	4708.0	133.8	30.34	79.72	306.6	10.1	0.0430	1.08829
204.0	68.58	4.275	3698.0	4786.0	134.2	30.15	76.69	309.3	10.1	0.0419	1.08649
206.0	66.10	4.120	3806.0	4934.0	134.9	29.82	71.70	314.3	10.1	0.0401	1.08326
208.0	63.92	3.984	3906.0	5074.0	135.6	29.53	67.75	319.0	10.1	0.0388	1.08043
210.0	61.97	3.863	4002.0	5206.0	136.3	29.27	64.54	323.5	10.1	0.0378	1.07792
212.0	60.22	3.754	4093.0	5332.0	136.9	29.04	61.88	327.8	10.1	0.0370	1.07566
214.0	58.63	3.655	4181.0	5454.0	137.4	28.84	59.63	331.8	10.1	0.0363	1.07360
216.0	57.17	3.564	4266.0	5571.0	138.0	28.66	57.71	335.8	10.1	0.0358	1.07173
218.0	55.82	3.480	4348.0	5685.0	138.5	28.50	56.05	339.5	10.1	0.0354	1.07000
220.0	54.58	3.402	4428.0	5795.0	139.0	28.36	54.60	343.2	10.2	0.0351	1.06839
222.0	53.41	3.329	4506.0	5903.0	139.5	28.23	53.33	346.7	10.2	0.0348	1.06690
224.0	52.32	3.262	4583.0	6009.0	140.0	28.11	52.19	350.1	10.2	0.0346	1.06551
226.0	51.30	3.198	4658.0	6112.0	140.4	28.01	51.18	353.4	10.3	0.0344	1.06420
230.0	49.43	3.081	4804.0	6313.0	141.3	27.83	49.46	359.7	10.3	0.0342	1.06180
235.0	47.35	2.951	4980.0	6556.0	142.3	27.67	47.73	367.2	10.4	0.0341	1.05915
240.0	45.50	2.836	5152.0	6791.0	143.3	27.55	46.36	374.3	10.5	0.0340	1.05680
245.0	43.85	2.733	5319.0	7020.0	144.3	27.47	45.25	381.0	10.7	0.0341	1.05470
250.0	42.35	2.640	5482.0	7244.0	145.2	27.43	44.34	387.4	10.8	0.0342	1.05280
255.0	40.99	2.555	5643.0	7464.0	146.1	27.41	43.60	393.5	10.9	0.0344	1.05107
260.0	39.73	2.477	5802.0	7680.0	146.9	27.42	42.98	399.4	11.0	0.0347	1.04948
265.0	38.58	2.405	5960.0	7894.0	147.7	27.46	42.47	405.0	11.2	0.0350	1.04802
270.0	37.50	2.338	6116.0	8105.0	148.5	27.51	42.04	410.4	11.3	0.0353	1.04666
275.0	36.50	2.275	6271.0	8314.0	149.3	27.58	41.69	415.7	11.4	0.0357	1.04540
280.0	35.57	2.217	6425.0	8522.0	150.0	27.67	41.41	420.8	11.6	0.0361	1.04422
290.0	33.87	2.111	6731.0	8934.0	151.5	27.88	40.99	430.5	11.8	0.0371	1.04208
300.0	32.36	2.017	7037.0	9342.0	152.8	28.16	40.74	439.6	12.1	0.0382	1.04017
310.0	31.00	1.932	7342.0	9749.0	154.2	28.47	40.63	448.3	12.4	0.0394	1.03846
320.0	29.76	1.855	7649.0	10160.0	155.5	28.82	40.62	456.6	12.7	0.0406	1.03692
330.0	28.64	1.785	7957.0	10560.0	156.7	29.21	40.70	464.5	12.9	0.0419	1.03551
340.0	27.62	1.721	8268.0	10970.0	157.9	29.63	40.85	472.1	13.2	0.0432	1.03423
350.0	26.67	1.662	8582.0	11380.0	159.1	30.08	41.06	479.4	13.5	0.0446	1.03304
360.0	25.80	1.608	8899.0	11790.0	160.3	30.55	41.32	486.5	13.7	0.0460	1.03195
370.0	24.98	1.557	9219.0	12210.0	161.4	31.04	41.63	493.3	14.0	0.0474	1.03093
380.0	24.23	1.510	9544.0	12620.0	162.5	31.54	41.98	500.0	14.3	0.0489	1.02999

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
390.0	23.52	1.466	9873.0	13050.0	163.6	32.07	42.36	506.4	14.6	0.0504	1.02910
400.0	22.86	1.425	10210.0	13470.0	164.7	32.60	42.77	512.7	14.8	0.0520	1.02827
410.0	22.23	1.386	10540.0	13900.0	165.8	33.15	43.20	518.8	15.1	0.0535	1.02750
420.0	21.65	1.349	10890.0	14330.0	166.8	33.71	43.65	524.8	15.3	0.0551	1.02677
440.0	20.57	1.282	11590.0	15220.0	168.9	34.84	44.59	536.4	15.9	0.0584	1.02542
460.0	19.60	1.222	12310.0	16120.0	170.9	35.98	45.58	547.6	16.4	0.0618	1.02422
480.0	18.72	1.167	13060.0	17040.0	172.8	37.12	46.59	558.4	16.9	0.0653	1.02313
500.0	17.93	1.118	13820.0	17980.0	174.8	38.25	47.60	568.9	17.4	0.0687	1.02214
520.0	17.20	1.072	14610.0	18940.0	176.6	39.34	48.59	579.2	17.9	0.0723	1.02124
540.0	16.54	1.031	15410.0	19930.0	178.5	40.38	49.55	589.2	18.3	0.0758	1.02041
560.0	15.92	0.9925	16240.0	20930.0	180.3	41.37	50.46	599.1	18.8	0.0793	1.01965
580.0	15.35	0.9570	17080.0	21940.0	182.1	42.27	51.30	608.9	19.3	0.0827	1.01894
600.0	14.83	0.9242	17950.0	22980.0	183.8	43.08	52.05	618.5	19.7	0.0860	1.01829
					4.70 MPa isobar						
91.88[a]	453.2	28.25	-5711.0	-5545.0	68.12	34.10	53.12	1556.0	209.0	0.226	1.67951
100.0	442.5	27.58	-5282.0	-5112.0	72.64	33.59	53.63	1486.0	165.0	0.212	1.66065
120.0	414.9	25.86	-4200.0	-4019.0	82.60	32.75	55.78	1297.0	104.0	0.180	1.61243
140.0	384.0	23.94	-3070.0	-2874.0	91.42	31.71	59.00	1095.0	71.4	0.151	1.55944
150.0	366.5	22.84	-2477.0	-2272.0	95.57	31.20	61.62	987.4	60.1	0.137	1.52980
160.0	346.6	21.61	-1854.0	-1637.0	99.67	30.75	65.69	873.0	50.5	0.123	1.49671
165.0	335.4	20.91	-1526.0	-1301.0	101.7	30.58	68.71	811.8	46.2	0.116	1.47826
170.0	323.0	20.13	-1181.0	-947.6	103.8	30.45	72.90	746.6	42.0	0.109	1.45797
175.0	308.8	19.25	-812.8	-568.6	106.0	30.40	79.16	675.8	37.9	0.102	1.43504
180.0	291.8	18.19	-407.2	-148.7	108.4	30.48	89.91	596.0	33.7	0.0977	1.40790
182.0	283.7	17.68	-228.1	37.7	109.4	30.57	96.89	560.1	32.0	0.0973	1.39514
184.0	274.4	17.11	-33.8	241.0	110.5	30.73	107.1	520.7	30.1	0.0987	1.38064
186.0	263.4	16.42	184.2	470.5	111.8	30.98	124.0	476.3	28.0	0.104	1.36344
187.0	256.7	16.00	307.2	600.9	112.5	31.17	137.7	451.3	26.9	0.111	1.35323
188.0	248.9	15.52	445.3	748.2	113.3	31.42	158.8	423.5	25.6	0.123	1.34128
189.0	239.2	14.91	608.6	923.9	114.2	31.79	196.9	391.5	24.1	0.154	1.32644
189.5	233.0	14.53	706.6	1030.0	114.8	32.05	231.1	373.0	23.2	0.191	1.31714
190.0	225.3	14.05	824.5	1159.0	115.4	32.40	291.4	352.0	22.1	0.296	1.30556
190.2	221.5	13.81	880.8	1221.0	115.8	32.58	331.3	342.5	21.6	0.423	1.29989
190.4	217.1	13.53	945.5	1293.0	116.1	32.80	389.9	332.2	21.0	0.917	1.29326
190.6	211.6	13.19	1023.0	1380.0	116.6	33.07	485.2	320.6	20.3	1.58	1.28517
190.8	204.4	12.74	1124.0	1493.0	117.2	33.44	668.6	307.3	19.5	0.495	1.27454
190.9	199.6	12.44	1190.0	1567.0	117.6	33.68	842.8	299.5	18.9	0.384	1.26749
191.0	193.3	12.05	1276.0	1666.0	118.1	34.00	1161.0	290.8	18.2	0.318	1.25826
191.1	184.0	11.47	1402.0	1812.0	118.9	34.44	1859.0	280.4	17.2	0.275	1.24476
191.2	168.4	10.50	1616.0	2063.0	120.2	35.04	3196.0	269.0	15.8	0.246	1.22245
191.3	150.7	9.392	1872.0	2373.0	121.8	35.42	2584.0	262.5	14.3	0.228	1.19736
191.4	139.9	8.721	2038.0	2576.0	122.9	35.43	1608.0	261.0	13.5	0.213	1.18235
191.5	133.2	8.305	2145.0	2711.0	123.6	35.34	1138.0	261.0	13.1	0.198	1.17312
191.6	128.5	8.011	2224.0	2811.0	124.1	35.24	885.4	261.3	12.8	0.186	1.16661
191.8	121.9	7.598	2340.0	2959.0	124.9	35.01	624.9	262.5	12.3	0.165	1.15753
192.0	117.2	7.305	2426.0	3069.0	125.4	34.80	492.1	263.7	12.1	0.148	1.15115
192.5	109.3	6.811	2580.0	3270.0	126.5	34.35	335.3	266.7	11.6	0.121	1.14039
192.6	108.0	6.735	2605.0	3303.0	126.6	34.26	316.9	267.3	11.6	0.117	1.13875
192.8	105.8	6.598	2651.0	3363.0	127.0	34.11	286.8	268.5	11.4	0.110	1.13578
193.0	103.9	6.476	2692.0	3418.0	127.2	33.96	263.0	269.6	11.3	0.103	1.13316
193.2	102.1	6.367	2730.0	3468.0	127.5	33.82	243.7	270.7	11.3	0.0982	1.13081
193.4	100.5	6.267	2766.0	3515.0	127.8	33.69	227.7	271.7	11.2	0.0936	1.12867
193.6	99.09	6.176	2799.0	3560.0	128.0	33.57	214.2	272.7	11.1	0.0896	1.12672
194.0	96.49	6.015	2859.0	3641.0	128.4	33.34	192.7	274.7	11.0	0.0828	1.12325
194.5	93.70	5.841	2927.0	3732.0	128.9	33.07	172.5	277.0	10.9	0.0762	1.11953
195.0	91.29	5.690	2988.0	3814.0	129.3	32.83	157.3	279.2	10.8	0.0710	1.11632
195.5	89.16	5.558	3044.0	3890.0	129.7	32.60	145.4	281.3	10.7	0.0667	1.11350
196.0	87.26	5.439	3096.0	3960.0	130.0	32.40	135.7	283.3	10.6	0.0633	1.11098
196.5	85.53	5.332	3144.0	4026.0	130.4	32.20	127.7	285.3	10.6	0.0603	1.10870
197.0	83.96	5.234	3190.0	4088.0	130.7	32.02	121.0	287.1	10.5	0.0579	1.10662
198.0	81.17	5.060	3274.0	4203.0	131.3	31.69	110.2	290.7	10.4	0.0539	1.10295

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
199.0	78.75	4.909	3352.0	4309.0	131.8	31.39	101.9	294.0	10.4	0.0508	1.09977
200.0	76.61	4.776	3423.0	4407.0	132.3	31.12	95.29	297.2	10.3	0.0484	1.09697
201.0	74.70	4.656	3491.0	4500.0	132.8	30.88	89.92	300.2	10.3	0.0464	1.09446
202.0	72.97	4.548	3554.0	4588.0	133.2	30.65	85.44	303.1	10.2	0.0448	1.09220
203.0	71.39	4.450	3615.0	4671.0	133.6	30.44	81.64	305.8	10.2	0.0435	1.09013
204.0	69.93	4.359	3673.0	4751.0	134.0	30.25	78.37	308.5	10.2	0.0423	1.08824
206.0	67.33	4.197	3782.0	4902.0	134.7	29.91	73.03	313.6	10.1	0.0405	1.08485
208.0	65.05	4.055	3885.0	5044.0	135.4	29.60	68.84	318.4	10.1	0.0391	1.08190
210.0	63.03	3.929	3982.0	5178.0	136.1	29.34	65.46	322.9	10.1	0.0381	1.07929
212.0	61.22	3.816	4075.0	5306.0	136.7	29.11	62.66	327.2	10.1	0.0373	1.07695
214.0	59.57	3.713	4163.0	5429.0	137.2	28.90	60.31	331.3	10.1	0.0366	1.07482
216.0	58.07	3.620	4249.0	5548.0	137.8	28.71	58.31	335.3	10.1	0.0361	1.07288
218.0	56.68	3.533	4332.0	5662.0	138.3	28.55	56.58	339.1	10.2	0.0356	1.07110
220.0	55.40	3.453	4413.0	5774.0	138.8	28.40	55.08	342.7	10.2	0.0353	1.06945
222.0	54.20	3.379	4492.0	5883.0	139.3	28.27	53.75	346.3	10.2	0.0350	1.06792
224.0	53.09	3.309	4569.0	5989.0	139.8	28.15	52.58	349.7	10.3	0.0348	1.06648
226.0	52.04	3.244	4644.0	6093.0	140.3	28.04	51.53	353.0	10.3	0.0346	1.06514
228.0	51.05	3.182	4718.0	6195.0	140.7	27.95	50.60	356.3	10.3	0.0345	1.06388
230.0	50.12	3.124	4791.0	6296.0	141.2	27.87	49.75	359.4	10.4	0.0344	1.06268
235.0	47.99	2.991	4969.0	6540.0	142.2	27.70	47.98	366.9	10.5	0.0342	1.05997
240.0	46.11	2.874	5141.0	6776.0	143.2	27.58	46.57	374.0	10.6	0.0341	1.05757
245.0	44.42	2.769	5308.0	7006.0	144.1	27.49	45.43	380.8	10.7	0.0342	1.05542
250.0	42.89	2.674	5473.0	7231.0	145.1	27.45	44.50	387.2	10.8	0.0343	1.05348
255.0	41.50	2.587	5634.0	7451.0	145.9	27.43	43.73	393.3	10.9	0.0345	1.05172
260.0	40.23	2.507	5794.0	7668.0	146.8	27.44	43.10	399.2	11.1	0.0348	1.05010
265.0	39.05	2.434	5952.0	7883.0	147.6	27.47	42.58	404.9	11.2	0.0350	1.04861
270.0	37.96	2.366	6108.0	8094.0	148.4	27.52	42.14	410.3	11.3	0.0354	1.04724
275.0	36.94	2.303	6263.0	8304.0	149.2	27.59	41.79	415.6	11.4	0.0358	1.04595
280.0	35.99	2.244	6417.0	8512.0	149.9	27.68	41.49	420.7	11.6	0.0362	1.04475
290.0	34.27	2.136	6724.0	8925.0	151.3	27.89	41.06	430.4	11.8	0.0372	1.04258
300.0	32.73	2.040	7030.0	9334.0	152.7	28.16	40.81	439.6	12.1	0.0383	1.04064
310.0	31.35	1.954	7336.0	9741.0	154.1	28.48	40.68	448.3	12.4	0.0394	1.03891
320.0	30.10	1.876	7643.0	10150.0	155.4	28.83	40.67	456.6	12.7	0.0406	1.03734
330.0	28.97	1.806	7952.0	10560.0	156.6	29.22	40.74	464.5	12.9	0.0419	1.03592
340.0	27.93	1.741	8263.0	10960.0	157.8	29.64	40.89	472.1	13.2	0.0432	1.03461
350.0	26.97	1.681	8577.0	11370.0	159.0	30.08	41.10	479.5	13.5	0.0446	1.03341
360.0	26.08	1.626	8894.0	11790.0	160.2	30.55	41.36	486.5	13.8	0.0460	1.03230
370.0	25.26	1.574	9215.0	12200.0	161.3	31.04	41.66	493.4	14.0	0.0474	1.03128
380.0	24.49	1.527	9540.0	12620.0	162.4	31.55	42.01	500.0	14.3	0.0489	1.03032
390.0	23.78	1.482	9869.0	13040.0	163.5	32.07	42.38	506.5	14.6	0.0504	1.02942
400.0	23.10	1.440	10200.0	13470.0	164.6	32.61	42.79	512.7	14.8	0.0520	1.02859
410.0	22.47	1.401	10540.0	13900.0	165.7	33.16	43.22	518.9	15.1	0.0536	1.02780
420.0	21.88	1.364	10880.0	14330.0	166.7	33.71	43.67	524.9	15.4	0.0552	1.02706
440.0	20.79	1.296	11590.0	15210.0	168.8	34.84	44.61	536.5	15.9	0.0585	1.02570
460.0	19.81	1.235	12310.0	16120.0	170.8	35.99	45.60	547.6	16.4	0.0618	1.02448
480.0	18.93	1.180	13050.0	17040.0	172.7	37.13	46.60	558.5	16.9	0.0653	1.02338
500.0	18.12	1.130	13820.0	17980.0	174.7	38.25	47.61	569.0	17.4	0.0688	1.02238
520.0	17.39	1.084	14610.0	18940.0	176.5	39.34	48.60	579.3	17.9	0.0723	1.02147
540.0	16.71	1.042	15410.0	19920.0	178.4	40.39	49.56	589.3	18.3	0.0758	1.02063
560.0	16.09	1.003	16240.0	20920.0	180.2	41.37	50.47	599.2	18.8	0.0793	1.01986
580.0	15.52	0.9672	17080.0	21940.0	182.0	42.27	51.30	609.0	19.3	0.0827	1.01915
600.0	14.98	0.9340	17940.0	22980.0	183.8	43.08	52.06	618.7	19.7	0.0860	1.01849
					4.80 MPa isobar						
91.90[a]	453.3	28.25	-5711.0	-5541.0	68.13	34.10	53.12	1557.0	209.0	0.226	1.67956
100.0	442.6	27.59	-5283.0	-5109.0	72.63	33.60	53.62	1487.0	165.0	0.212	1.66077
120.0	415.0	25.87	-4202.0	-4016.0	82.59	32.75	55.76	1298.0	104.0	0.180	1.61260
140.0	384.2	23.95	-3073.0	-2872.0	91.40	31.72	58.95	1096.0	71.5	0.151	1.55969
150.0	366.7	22.86	-2480.0	-2270.0	95.55	31.20	61.55	989.2	60.2	0.137	1.53014
160.0	346.9	21.62	-1859.0	-1637.0	99.64	30.76	65.56	875.2	50.6	0.123	1.49717
165.0	335.8	20.93	-1531.0	-1302.0	101.7	30.58	68.52	814.4	46.3	0.116	1.47881
170.0	323.4	20.16	-1188.0	-949.5	103.8	30.45	72.61	749.7	42.2	0.109	1.45866

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
175.0	309.4	19.28	-821.3	-572.4	106.0	30.39	78.67	679.6	38.1	0.103	1.43595
180.0	292.6	18.24	-419.2	-156.0	108.3	30.46	88.91	600.9	33.9	0.0980	1.40919
182.0	284.7	17.74	-242.5	28.0	109.3	30.55	95.44	565.8	32.2	0.0975	1.39670
184.0	275.7	17.18	-51.7	227.6	110.4	30.69	104.8	527.5	30.3	0.0989	1.38260
186.0	265.1	16.52	160.3	450.8	111.6	30.92	119.7	484.6	28.3	0.104	1.36607
187.0	258.8	16.13	278.5	576.0	112.3	31.08	131.3	460.8	27.2	0.111	1.35642
188.0	251.6	15.68	409.1	715.2	113.1	31.30	148.2	434.7	26.0	0.124	1.34534
189.0	242.9	15.14	559.0	876.0	113.9	31.61	176.1	405.3	24.6	0.154	1.33204
189.5	237.6	14.81	645.2	969.3	114.4	31.82	198.3	388.9	23.8	0.191	1.32409
190.0	231.5	14.43	743.5	1076.0	115.0	32.08	231.9	370.8	23.0	0.297	1.31477
190.5	223.8	13.95	860.9	1205.0	115.6	32.42	289.2	350.5	21.9	3.39	1.30327
190.6	222.0	13.84	887.8	1235.0	115.8	32.51	305.9	346.1	21.7	1.58	1.30057
190.8	218.0	13.59	946.7	1300.0	116.1	32.70	348.6	336.7	21.1	0.500	1.29462
191.0	213.3	13.30	1014.0	1375.0	116.5	32.92	410.4	326.6	20.6	0.324	1.28767
191.2	207.6	12.94	1095.0	1466.0	117.0	33.21	507.2	315.5	19.9	0.249	1.27924
191.5	195.5	12.19	1263.0	1657.0	118.0	33.80	813.4	296.4	18.5	0.192	1.26153
191.6	189.8	11.83	1342.0	1748.0	118.5	34.07	1010.0	289.2	17.9	0.179	1.25319
191.8	173.9	10.84	1562.0	2004.0	119.8	34.73	1569.0	275.0	16.3	0.159	1.23027
191.9	164.1	10.23	1701.0	2170.0	120.7	35.03	1698.0	269.5	15.4	0.152	1.21629
192.5	128.4	8.007	2257.0	2857.0	124.3	35.05	675.7	264.0	12.8	0.124	1.16652
193.0	117.2	7.305	2461.0	3118.0	125.6	34.61	415.1	266.5	12.1	0.107	1.15113
193.5	110.2	6.872	2597.0	3296.0	126.5	34.21	308.5	269.2	11.7	0.0951	1.14172
193.6	109.1	6.802	2620.0	3326.0	126.7	34.13	294.3	269.7	11.7	0.0931	1.14021
193.8	107.1	6.674	2663.0	3382.0	127.0	33.99	270.3	270.7	11.6	0.0894	1.13743
194.0	105.2	6.559	2702.0	3434.0	127.3	33.86	250.6	271.7	11.5	0.0861	1.13495
194.2	103.5	6.454	2739.0	3483.0	127.5	33.73	234.2	272.7	11.4	0.0831	1.13269
194.4	102.0	6.358	2773.0	3528.0	127.7	33.61	220.4	273.7	11.3	0.0804	1.13062
195.0	98.03	6.111	2865.0	3650.0	128.4	33.27	188.9	276.5	11.1	0.0737	1.12531
195.5	95.27	5.938	2931.0	3740.0	128.8	33.02	170.3	278.8	11.0	0.0692	1.12162
196.0	92.86	5.788	2992.0	3821.0	129.2	32.78	156.0	280.9	10.9	0.0656	1.11841
196.5	90.73	5.655	3048.0	3896.0	129.6	32.57	144.6	282.9	10.8	0.0625	1.11558
197.0	88.82	5.536	3099.0	3966.0	130.0	32.36	135.3	284.9	10.7	0.0598	1.11304
197.5	87.08	5.428	3148.0	4032.0	130.3	32.18	127.5	286.7	10.7	0.0576	1.11075
198.0	85.49	5.329	3193.0	4094.0	130.6	32.00	121.0	288.6	10.6	0.0556	1.10865
199.0	82.67	5.153	3278.0	4209.0	131.2	31.67	110.4	292.0	10.5	0.0523	1.10492
200.0	80.21	5.000	3355.0	4315.0	131.7	31.38	102.2	295.3	10.5	0.0497	1.10169
201.0	78.04	4.864	3427.0	4414.0	132.2	31.12	95.64	298.4	10.4	0.0476	1.09884
202.0	76.09	4.743	3495.0	4507.0	132.7	30.87	90.29	301.4	10.4	0.0459	1.09629
203.0	74.33	4.633	3559.0	4595.0	133.1	30.65	85.82	304.3	10.3	0.0445	1.09398
204.0	72.72	4.533	3620.0	4679.0	133.5	30.45	82.02	307.0	10.3	0.0433	1.09188
205.0	71.24	4.440	3678.0	4759.0	133.9	30.26	78.75	309.7	10.3	0.0422	1.08994
206.0	69.86	4.355	3734.0	4837.0	134.3	30.08	75.90	312.2	10.2	0.0413	1.08815
208.0	67.39	4.200	3841.0	4984.0	135.0	29.76	71.17	317.1	10.2	0.0399	1.08494
210.0	65.21	4.065	3941.0	5122.0	135.7	29.48	67.40	321.7	10.2	0.0387	1.08211
212.0	63.26	3.943	4036.0	5254.0	136.3	29.23	64.31	326.1	10.2	0.0378	1.07958
214.0	61.50	3.833	4127.0	5380.0	136.9	29.01	61.73	330.3	10.2	0.0371	1.07731
216.0	59.90	3.733	4215.0	5501.0	137.5	28.82	59.55	334.3	10.2	0.0366	1.07524
218.0	58.42	3.642	4300.0	5618.0	138.0	28.65	57.68	338.2	10.2	0.0361	1.07334
220.0	57.07	3.557	4382.0	5732.0	138.5	28.49	56.05	341.9	10.3	0.0357	1.07159
222.0	55.80	3.478	4462.0	5842.0	139.0	28.35	54.63	345.5	10.3	0.0354	1.06997
224.0	54.63	3.405	4541.0	5950.0	139.5	28.23	53.37	348.9	10.3	0.0352	1.06846
226.0	53.52	3.336	4617.0	6056.0	140.0	28.12	52.26	352.3	10.3	0.0349	1.06705
228.0	52.49	3.272	4692.0	6159.0	140.4	28.02	51.26	355.6	10.4	0.0348	1.06572
230.0	51.51	3.211	4766.0	6261.0	140.9	27.93	50.36	358.8	10.4	0.0347	1.06446
235.0	49.28	3.072	4945.0	6508.0	141.9	27.75	48.48	366.4	10.5	0.0345	1.06162
240.0	47.32	2.949	5119.0	6746.0	142.9	27.62	46.99	373.5	10.6	0.0344	1.05912
245.0	45.56	2.840	5288.0	6978.0	143.9	27.54	45.79	380.3	10.7	0.0344	1.05688
250.0	43.98	2.741	5454.0	7205.0	144.8	27.48	44.82	386.8	10.8	0.0345	1.05486
255.0	42.54	2.651	5616.0	7427.0	145.7	27.46	44.02	393.0	11.0	0.0347	1.05303
260.0	41.22	2.569	5777.0	7645.0	146.5	27.47	43.35	398.9	11.1	0.0349	1.05136
265.0	40.00	2.493	5935.0	7860.0	147.4	27.50	42.80	404.6	11.2	0.0352	1.04982
270.0	38.87	2.423	6092.0	8073.0	148.1	27.54	42.35	410.1	11.3	0.0355	1.04839

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
275.0	37.82	2.358	6248.0	8284.0	148.9	27.61	41.97	415.4	11.5	0.0359	1.04706
280.0	36.84	2.296	6403.0	8493.0	149.7	27.70	41.66	420.5	11.6	0.0363	1.04583
285.0	35.92	2.239	6557.0	8701.0	150.4	27.80	41.41	425.4	11.7	0.0368	1.04467
290.0	35.06	2.186	6711.0	8907.0	151.1	27.91	41.21	430.2	11.9	0.0373	1.04358
300.0	33.48	2.087	7018.0	9318.0	152.5	28.18	40.93	439.5	12.1	0.0384	1.04159
310.0	32.06	1.999	7325.0	9726.0	153.9	28.49	40.79	448.2	12.4	0.0395	1.03981
320.0	30.78	1.919	7632.0	10130.0	155.2	28.84	40.76	456.5	12.7	0.0407	1.03820
330.0	29.61	1.846	7942.0	10540.0	156.4	29.23	40.83	464.5	13.0	0.0420	1.03673
340.0	28.55	1.779	8253.0	10950.0	157.6	29.65	40.96	472.1	13.2	0.0433	1.03539
350.0	27.56	1.718	8567.0	11360.0	158.8	30.09	41.17	479.5	13.5	0.0447	1.03416
360.0	26.65	1.661	8885.0	11770.0	160.0	30.56	41.42	486.6	13.8	0.0461	1.03302
370.0	25.81	1.609	9206.0	12190.0	161.1	31.05	41.72	493.4	14.0	0.0475	1.03197
380.0	25.02	1.560	9532.0	12610.0	162.2	31.55	42.06	500.1	14.3	0.0490	1.03099
390.0	24.29	1.514	9861.0	13030.0	163.3	32.08	42.43	506.6	14.6	0.0505	1.03007
400.0	23.60	1.471	10200.0	13460.0	164.4	32.61	42.84	512.9	14.8	0.0521	1.02921
410.0	22.96	1.431	10530.0	13890.0	165.5	33.16	43.26	519.0	15.1	0.0536	1.02840
420.0	22.35	1.393	10880.0	14320.0	166.5	33.72	43.71	525.0	15.4	0.0552	1.02765
440.0	21.23	1.324	11580.0	15210.0	168.6	34.85	44.65	536.6	15.9	0.0585	1.02626
460.0	20.23	1.261	12300.0	16110.0	170.6	35.99	45.63	547.8	16.4	0.0619	1.02501
480.0	19.33	1.205	13050.0	17030.0	172.6	37.13	46.63	558.6	16.9	0.0653	1.02388
500.0	18.51	1.154	13810.0	17970.0	174.5	38.25	47.64	569.2	17.4	0.0688	1.02286
520.0	17.76	1.107	14600.0	18940.0	176.4	39.35	48.63	579.5	17.9	0.0723	1.02193
540.0	17.07	1.064	15410.0	19920.0	178.2	40.39	49.58	589.5	18.4	0.0758	1.02107
560.0	16.43	1.024	16230.0	20920.0	180.0	41.37	50.49	599.5	18.8	0.0793	1.02028
580.0	15.84	0.9876	17080.0	21940.0	181.8	42.28	51.32	609.2	19.3	0.0827	1.01955
600.0	15.30	0.9537	17940.0	22970.0	183.6	43.09	52.07	618.9	19.8	0.0860	1.01888
					5.00 MPa isobar						
91.95[a]	453.3	28.26	-5710.0	-5533.0	68.14	34.11	53.10	1558.0	210.0	0.226	1.67965
100.0	442.8	27.60	-5285.0	-5104.0	72.61	33.60	53.61	1488.0	166.0	0.213	1.66100
120.0	415.2	25.88	-4205.0	-4012.0	82.56	32.76	55.72	1300.0	104.0	0.181	1.61293
140.0	384.5	23.97	-3077.0	-2869.0	91.36	31.72	58.86	1099.0	71.7	0.151	1.56020
150.0	367.1	22.88	-2487.0	-2268.0	95.50	31.21	61.40	992.7	60.4	0.137	1.53080
160.0	347.5	21.66	-1867.0	-1636.0	99.58	30.76	65.30	879.7	50.9	0.123	1.49807
165.0	336.4	20.97	-1541.0	-1303.0	101.6	30.58	68.15	819.5	46.6	0.116	1.47990
170.0	324.3	20.21	-1200.0	-953.1	103.7	30.44	72.05	755.8	42.5	0.109	1.46001
175.0	310.5	19.35	-838.0	-579.6	105.9	30.38	77.75	687.0	38.4	0.103	1.43771
180.0	294.2	18.34	-442.4	-169.7	108.2	30.43	87.08	610.5	34.3	0.0985	1.41168
182.0	286.6	17.86	-270.0	9.9	109.2	30.50	92.83	576.7	32.6	0.0980	1.39967
184.0	278.0	17.33	-85.5	203.0	110.2	30.62	100.8	540.2	30.9	0.0993	1.38627
186.0	268.2	16.72	116.6	415.7	111.4	30.81	112.8	500.0	28.9	0.105	1.37088
188.0	256.1	15.97	346.5	659.7	112.7	31.12	133.3	454.5	26.8	0.124	1.35231
189.0	248.8	15.51	478.6	801.0	113.4	31.34	150.5	428.8	25.6	0.154	1.34106
190.0	240.0	14.96	629.8	964.1	114.3	31.66	178.2	400.2	24.2	0.295	1.32762
190.5	234.7	14.63	716.5	1058.0	114.8	31.86	199.7	384.4	23.5	3.35	1.31963
191.0	228.5	14.25	814.4	1165.0	115.4	32.12	231.0	367.3	22.6	0.327	1.31037
191.2	225.7	14.07	857.9	1213.0	115.6	32.24	247.8	360.1	22.2	0.255	1.30617
191.4	222.7	13.88	904.6	1265.0	115.9	32.38	268.3	352.5	21.8	0.214	1.30161
191.6	219.3	13.67	955.2	1321.0	116.2	32.53	293.8	344.6	21.4	0.188	1.29661
191.8	215.6	13.44	1011.0	1383.0	116.5	32.70	326.2	336.3	20.9	0.169	1.29106
192.0	211.4	13.18	1073.0	1452.0	116.9	32.90	368.2	327.7	20.4	0.154	1.28481
192.5	197.6	12.32	1269.0	1675.0	118.0	33.54	545.4	304.5	18.8	0.129	1.26461
193.0	176.7	11.02	1565.0	2019.0	119.8	34.41	826.4	282.2	16.7	0.111	1.23432
193.5	152.6	9.515	1921.0	2446.0	122.0	34.95	807.2	270.7	14.6	0.0997	1.20013
194.0	135.5	8.444	2198.0	2790.0	123.8	34.87	571.7	268.8	13.3	0.0914	1.17620
194.5	124.6	7.770	2389.0	3032.0	125.0	34.56	411.4	270.0	12.6	0.0846	1.16131
195.0	117.2	7.308	2529.0	3213.0	126.0	34.23	319.7	272.0	12.2	0.0790	1.15121
196.0	107.4	6.692	2732.0	3479.0	127.3	33.63	226.0	276.3	11.7	0.0702	1.13783
196.5	103.8	6.467	2812.0	3585.0	127.9	33.36	199.4	278.4	11.5	0.0668	1.13298
197.0	100.7	6.276	2883.0	3680.0	128.3	33.11	179.5	280.5	11.4	0.0639	1.12887
197.5	98.03	6.110	2947.0	3766.0	128.8	32.88	164.1	282.5	11.2	0.0614	1.12531
198.0	95.68	5.964	3006.0	3845.0	129.2	32.67	151.8	284.5	11.1	0.0591	1.12217

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
198.5	93.57	5.833	3061.0	3918.0	129.6	32.47	141.7	286.4	11.1	0.0572	1.11936
199.0	91.67	5.714	3111.0	3987.0	129.9	32.28	133.3	288.2	11.0	0.0555	1.11683
199.5	89.92	5.605	3159.0	4051.0	130.2	32.10	126.2	290.0	10.9	0.0539	1.11452
200.0	88.32	5.505	3205.0	4113.0	130.5	31.93	120.1	291.7	10.9	0.0526	1.11239
201.0	85.46	5.327	3289.0	4228.0	131.1	31.62	110.1	295.0	10.8	0.0502	1.10861
202.0	82.96	5.171	3367.0	4334.0	131.6	31.34	102.2	298.2	10.7	0.0482	1.10531
203.0	80.74	5.033	3439.0	4433.0	132.1	31.09	95.90	301.2	10.6	0.0466	1.10239
204.0	78.74	4.908	3507.0	4526.0	132.6	30.85	90.67	304.1	10.6	0.0452	1.09976
205.0	76.93	4.795	3572.0	4614.0	133.0	30.64	86.28	306.8	10.5	0.0440	1.09739
206.0	75.27	4.692	3633.0	4699.0	133.4	30.44	82.52	309.5	10.5	0.0430	1.09522
207.0	73.75	4.597	3692.0	4780.0	133.8	30.25	79.28	312.1	10.5	0.0421	1.09322
208.0	72.33	4.508	3748.0	4857.0	134.2	30.08	76.44	314.6	10.4	0.0413	1.09137
210.0	69.77	4.349	3856.0	5005.0	134.9	29.77	71.72	319.4	10.4	0.0401	1.08804
212.0	67.52	4.209	3957.0	5145.0	135.6	29.49	67.93	324.0	10.4	0.0390	1.08511
214.0	65.50	4.083	4053.0	5278.0	136.2	29.25	64.83	328.3	10.4	0.0382	1.08249
216.0	63.68	3.969	4145.0	5405.0	136.8	29.04	62.23	332.4	10.4	0.0375	1.08014
218.0	62.02	3.866	4233.0	5527.0	137.3	28.85	60.03	336.4	10.4	0.0370	1.07799
220.0	60.50	3.771	4319.0	5645.0	137.9	28.68	58.14	340.2	10.4	0.0366	1.07602
222.0	59.09	3.683	4402.0	5759.0	138.4	28.52	56.49	343.9	10.4	0.0362	1.07421
224.0	57.78	3.602	4483.0	5871.0	138.9	28.39	55.05	347.5	10.4	0.0359	1.07252
226.0	56.56	3.526	4562.0	5980.0	139.4	28.27	53.78	350.9	10.5	0.0356	1.07095
228.0	55.42	3.455	4639.0	6086.0	139.8	28.16	52.65	354.3	10.5	0.0354	1.06949
230.0	54.35	3.388	4714.0	6190.0	140.3	28.06	51.64	357.5	10.5	0.0353	1.06811
235.0	51.92	3.236	4898.0	6443.0	141.4	27.86	49.53	365.3	10.6	0.0350	1.06499
240.0	49.78	3.103	5075.0	6686.0	142.4	27.72	47.87	372.6	10.7	0.0349	1.06226
245.0	47.88	2.985	5247.0	6922.0	143.4	27.62	46.54	379.5	10.8	0.0349	1.05984
250.0	46.17	2.878	5415.0	7152.0	144.3	27.56	45.47	386.0	10.9	0.0349	1.05766
255.0	44.63	2.782	5580.0	7377.0	145.2	27.53	44.59	392.3	11.0	0.0350	1.05569
260.0	43.21	2.693	5742.0	7598.0	146.1	27.53	43.86	398.3	11.2	0.0352	1.05389
265.0	41.91	2.612	5902.0	7816.0	146.9	27.55	43.26	404.1	11.3	0.0355	1.05224
270.0	40.71	2.537	6061.0	8031.0	147.7	27.59	42.76	409.6	11.4	0.0358	1.05072
275.0	39.59	2.468	6218.0	8244.0	148.5	27.66	42.34	415.0	11.5	0.0362	1.04931
280.0	38.55	2.403	6374.0	8455.0	149.2	27.74	42.00	420.1	11.7	0.0366	1.04799
285.0	37.58	2.342	6529.0	8664.0	150.0	27.83	41.72	425.1	11.8	0.0370	1.04676
290.0	36.66	2.285	6684.0	8872.0	150.7	27.95	41.50	430.0	11.9	0.0375	1.04560
300.0	34.99	2.181	6993.0	9285.0	152.1	28.21	41.18	439.3	12.2	0.0386	1.04349
310.0	33.49	2.088	7301.0	9696.0	153.4	28.52	41.01	448.1	12.5	0.0397	1.04161
320.0	32.14	2.003	7610.0	10110.0	154.7	28.86	40.96	456.5	12.7	0.0409	1.03991
330.0	30.91	1.927	7921.0	10520.0	156.0	29.25	41.00	464.5	13.0	0.0422	1.03836
340.0	29.79	1.857	8233.0	10930.0	157.2	29.66	41.12	472.2	13.3	0.0435	1.03695
350.0	28.75	1.792	8549.0	11340.0	158.4	30.11	41.31	479.6	13.5	0.0448	1.03565
360.0	27.80	1.733	8867.0	11750.0	159.6	30.57	41.55	486.7	13.8	0.0462	1.03446
370.0	26.91	1.678	9189.0	12170.0	160.7	31.06	41.84	493.6	14.1	0.0477	1.03335
380.0	26.09	1.626	9515.0	12590.0	161.9	31.57	42.17	500.3	14.3	0.0491	1.03232
390.0	25.32	1.578	9845.0	13010.0	163.0	32.09	42.54	506.8	14.6	0.0506	1.03136
400.0	24.60	1.534	10180.0	13440.0	164.0	32.63	42.93	513.1	14.9	0.0522	1.03046
410.0	23.93	1.491	10520.0	13870.0	165.1	33.17	43.35	519.2	15.1	0.0538	1.02962
420.0	23.29	1.452	10860.0	14310.0	166.2	33.73	43.79	525.3	15.4	0.0554	1.02882
440.0	22.12	1.379	11570.0	15190.0	168.2	34.86	44.72	536.9	15.9	0.0586	1.02737
460.0	21.08	1.314	12290.0	16100.0	170.2	36.00	45.69	548.1	16.4	0.0620	1.02606
480.0	20.13	1.255	13040.0	17020.0	172.2	37.14	46.69	559.0	16.9	0.0654	1.02489
500.0	19.27	1.201	13800.0	17960.0	174.1	38.26	47.69	569.6	17.4	0.0689	1.02382
520.0	18.49	1.153	14590.0	18930.0	176.0	39.35	48.67	579.9	17.9	0.0724	1.02284
540.0	17.77	1.108	15400.0	19910.0	177.9	40.40	49.62	590.0	18.4	0.0759	1.02195
560.0	17.11	1.067	16220.0	20910.0	179.7	41.38	50.53	599.9	18.8	0.0794	1.02113
580.0	16.50	1.028	17070.0	21930.0	181.5	42.28	51.36	609.7	19.3	0.0828	1.02037
600.0	15.93	0.9930	17930.0	22970.0	183.2	43.09	52.11	619.3	19.8	0.0861	1.01966

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					5.20 MPa isobar						
92.00[a]	453.4	28.26	-5709.0	-5525.0	68.15	34.11	53.09	1558.0	210.0	0.226	1.67974
100.0	442.9	27.61	-5287.0	-5099.0	72.59	33.61	53.59	1490.0	166.0	0.213	1.66124
120.0	415.4	25.89	-4208.0	-4007.0	82.53	32.77	55.68	1302.0	104.0	0.181	1.61326
140.0	384.8	23.99	-3082.0	-2865.0	91.33	31.73	58.78	1102.0	71.9	0.151	1.56071
150.0	367.5	22.91	-2493.0	-2266.0	95.46	31.21	61.26	996.3	60.6	0.137	1.53145
160.0	348.0	21.69	-1876.0	-1636.0	99.53	30.76	65.05	884.1	51.1	0.124	1.49896
165.0	337.1	21.01	-1552.0	-1304.0	101.6	30.58	67.80	824.6	46.8	0.117	1.48097
170.0	325.1	20.26	-1213.0	-956.4	103.6	30.44	71.52	761.7	42.7	0.110	1.46133
175.0	311.5	19.42	-854.1	-586.3	105.8	30.37	76.88	694.2	38.7	0.104	1.43941
180.0	295.7	18.43	-464.6	-182.4	108.1	30.40	85.43	619.7	34.7	0.0990	1.41405
182.0	288.3	17.97	-296.0	-6.7	109.0	30.46	90.56	587.0	33.0	0.0984	1.40246
184.0	280.2	17.47	-116.8	181.0	110.1	30.56	97.45	552.1	31.3	0.0996	1.38967
186.0	270.9	16.89	77.2	385.1	111.2	30.72	107.3	514.2	29.5	0.105	1.37520
188.0	260.0	16.21	293.2	614.1	112.4	30.97	123.0	472.1	27.5	0.123	1.35821
189.0	253.5	15.80	413.7	742.7	113.1	31.15	135.0	448.9	26.4	0.153	1.34829
190.0	246.1	15.34	546.8	885.7	113.8	31.38	152.2	423.7	25.2	0.291	1.33694
191.0	237.2	14.79	698.6	1050.0	114.7	31.69	179.1	396.1	23.9	0.326	1.32344
191.5	232.0	14.46	784.9	1145.0	115.2	31.90	199.2	381.0	23.1	0.202	1.31551
192.0	225.9	14.08	881.5	1251.0	115.7	32.15	227.1	365.0	22.3	0.159	1.30641
192.5	218.7	13.63	992.4	1374.0	116.4	32.45	267.8	348.0	21.3	0.135	1.29571
192.6	217.1	13.53	1017.0	1401.0	116.5	32.52	278.2	344.4	21.1	0.132	1.29331
192.8	213.7	13.32	1069.0	1459.0	116.8	32.68	301.8	337.2	20.7	0.125	1.28821
193.0	209.9	13.08	1125.0	1522.0	117.1	32.84	330.0	329.8	20.3	0.120	1.28264
194.0	184.2	11.48	1498.0	1951.0	119.4	33.94	541.4	293.8	17.4	0.0976	1.24506
194.5	167.5	10.44	1743.0	2241.0	120.9	34.45	600.0	281.6	15.9	0.0896	1.22117
195.0	151.9	9.468	1984.0	2533.0	122.4	34.68	553.9	275.7	14.6	0.0836	1.19908
196.0	130.1	8.107	2353.0	2994.0	124.7	34.41	373.2	274.4	13.1	0.0746	1.16874
197.0	117.3	7.314	2595.0	3306.0	126.3	33.88	262.6	277.4	12.3	0.0680	1.15135
198.0	109.0	6.793	2771.0	3537.0	127.5	33.37	203.9	281.1	11.9	0.0628	1.14002
198.5	105.7	6.590	2844.0	3633.0	128.0	33.14	184.4	282.9	11.7	0.0607	1.13562
199.0	102.9	6.412	2911.0	3722.0	128.4	32.92	169.0	284.8	11.6	0.0588	1.13179
199.5	100.3	6.255	2972.0	3803.0	128.8	32.72	156.6	286.6	11.5	0.0571	1.12841
200.0	98.09	6.114	3028.0	3879.0	129.2	32.52	146.2	288.4	11.4	0.0555	1.12539
200.5	96.04	5.987	3081.0	3949.0	129.5	32.34	137.6	290.1	11.3	0.0541	1.12265
201.0	94.17	5.870	3130.0	4016.0	129.9	32.16	130.2	291.8	11.2	0.0529	1.12016
202.0	90.86	5.664	3222.0	4140.0	130.5	31.84	118.2	295.1	11.1	0.0507	1.11577
203.0	88.00	5.485	3306.0	4254.0	131.0	31.55	109.0	298.3	11.0	0.0489	1.11197
204.0	85.49	5.329	3383.0	4359.0	131.6	31.28	101.6	301.3	10.9	0.0473	1.10865
205.0	83.24	5.189	3455.0	4457.0	132.0	31.04	95.62	304.2	10.8	0.0460	1.10568
206.0	81.21	5.062	3523.0	4550.0	132.5	30.82	90.60	307.0	10.8	0.0448	1.10302
207.0	79.37	4.947	3588.0	4639.0	132.9	30.61	86.35	309.7	10.7	0.0438	1.10059
208.0	77.68	4.842	3649.0	4723.0	133.3	30.42	82.69	312.3	10.7	0.0429	1.09837
210.0	74.67	4.654	3765.0	4883.0	134.1	30.07	76.73	317.2	10.6	0.0414	1.09443
212.0	72.05	4.491	3873.0	5031.0	134.8	29.77	72.06	321.9	10.6	0.0403	1.09101
214.0	69.73	4.347	3975.0	5171.0	135.5	29.50	68.30	326.4	10.6	0.0393	1.08799
216.0	67.66	4.217	4072.0	5305.0	136.1	29.26	65.21	330.7	10.6	0.0386	1.08529
218.0	65.78	4.100	4164.0	5433.0	136.7	29.05	62.61	334.7	10.5	0.0380	1.08286
220.0	64.07	3.994	4254.0	5556.0	137.2	28.87	60.41	338.7	10.6	0.0375	1.08065
222.0	62.50	3.896	4340.0	5674.0	137.8	28.70	58.51	342.4	10.6	0.0370	1.07861
224.0	61.05	3.806	4423.0	5790.0	138.3	28.55	56.86	346.1	10.6	0.0367	1.07674
226.0	59.70	3.721	4505.0	5902.0	138.8	28.42	55.41	349.6	10.6	0.0364	1.07500
228.0	58.45	3.643	4584.0	6011.0	139.3	28.30	54.13	353.0	10.6	0.0361	1.07338
230.0	57.27	3.570	4662.0	6119.0	139.7	28.19	52.99	356.3	10.6	0.0359	1.07186
232.0	56.16	3.501	4738.0	6224.0	140.2	28.10	51.97	359.6	10.7	0.0358	1.07044
235.0	54.61	3.404	4850.0	6377.0	140.8	27.98	50.63	364.3	10.7	0.0356	1.06845
240.0	52.30	3.260	5030.0	6626.0	141.9	27.82	48.79	371.7	10.8	0.0354	1.06548
245.0	50.24	3.132	5205.0	6866.0	142.9	27.71	47.32	378.7	10.9	0.0353	1.06286
250.0	48.41	3.017	5376.0	7099.0	143.8	27.63	46.14	385.3	11.0	0.0353	1.06051
255.0	46.75	2.914	5543.0	7328.0	144.7	27.60	45.18	391.7	11.1	0.0354	1.05839
260.0	45.23	2.819	5707.0	7551.0	145.6	27.59	44.38	397.8	11.2	0.0356	1.05647

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
265.0	43.84	2.733	5869.0	7772.0	146.4	27.60	43.72	403.6	11.4	0.0358	1.05470
270.0	42.56	2.653	6029.0	7989.0	147.3	27.64	43.18	409.2	11.5	0.0361	1.05308
275.0	41.38	2.579	6188.0	8204.0	148.0	27.70	42.72	414.6	11.6	0.0364	1.05157
280.0	40.27	2.510	6345.0	8416.0	148.8	27.78	42.35	419.8	11.7	0.0368	1.05017
285.0	39.24	2.446	6501.0	8627.0	149.6	27.87	42.04	424.9	11.9	0.0373	1.04887
290.0	38.27	2.386	6657.0	8837.0	150.3	27.98	41.79	429.8	12.0	0.0377	1.04764
300.0	36.51	2.276	6968.0	9253.0	151.7	28.24	41.43	439.2	12.2	0.0388	1.04541
310.0	34.93	2.177	7277.0	9666.0	153.0	28.54	41.23	448.0	12.5	0.0399	1.04342
320.0	33.50	2.088	7588.0	10080.0	154.4	28.89	41.15	456.5	12.8	0.0411	1.04163
330.0	32.21	2.008	7900.0	10490.0	155.6	29.27	41.17	464.5	13.0	0.0424	1.04000
340.0	31.03	1.934	8213.0	10900.0	156.9	29.68	41.28	472.3	13.3	0.0437	1.03852
350.0	29.95	1.867	8530.0	11320.0	158.1	30.12	41.45	479.7	13.6	0.0450	1.03716
360.0	28.95	1.804	8849.0	11730.0	159.2	30.59	41.68	486.8	13.8	0.0464	1.03590
370.0	28.02	1.747	9172.0	12150.0	160.4	31.08	41.96	493.8	14.1	0.0478	1.03474
380.0	27.16	1.693	9498.0	12570.0	161.5	31.58	42.28	500.5	14.4	0.0493	1.03366
390.0	26.36	1.643	9829.0	12990.0	162.6	32.10	42.64	507.0	14.6	0.0508	1.03265
400.0	25.60	1.596	10160.0	13420.0	163.7	32.64	43.02	513.3	14.9	0.0523	1.03171
410.0	24.90	1.552	10500.0	13860.0	164.7	33.18	43.44	519.5	15.2	0.0539	1.03083
420.0	24.23	1.510	10850.0	14290.0	165.8	33.74	43.87	525.5	15.4	0.0555	1.03000
440.0	23.01	1.435	11550.0	15180.0	167.9	34.87	44.79	537.2	15.9	0.0588	1.02848
460.0	21.92	1.367	12280.0	16080.0	169.9	36.01	45.76	548.5	16.4	0.0621	1.02712
480.0	20.94	1.305	13020.0	17010.0	171.8	37.15	46.75	559.4	16.9	0.0656	1.02589
500.0	20.04	1.249	13790.0	17950.0	173.8	38.27	47.74	569.9	17.4	0.0690	1.02477
520.0	19.23	1.198	14580.0	18920.0	175.7	39.36	48.72	580.3	17.9	0.0725	1.02376
540.0	18.48	1.152	15390.0	19900.0	177.5	40.41	49.67	590.4	18.4	0.0760	1.02283
560.0	17.79	1.109	16210.0	20900.0	179.3	41.39	50.57	600.3	18.9	0.0795	1.02197
580.0	17.15	1.069	17060.0	21920.0	181.1	42.29	51.40	610.1	19.3	0.0829	1.02118
600.0	16.56	1.032	17920.0	22960.0	182.9	43.10	52.14	619.8	19.8	0.0862	1.02045
					5.40 MPa isobar						
92.05[a]	453.4	28.26	-5708.0	-5517.0	68.15	34.11	53.08	1559.0	210.0	0.226	1.67983
100.0	443.0	27.62	-5289.0	-5094.0	72.57	33.62	53.57	1491.0	167.0	0.213	1.66147
120.0	415.6	25.91	-4211.0	-4003.0	82.51	32.77	55.64	1304.0	105.0	0.181	1.61359
140.0	385.1	24.01	-3087.0	-2862.0	91.29	31.74	58.69	1105.0	72.2	0.152	1.56121
150.0	367.9	22.93	-2499.0	-2264.0	95.42	31.22	61.12	999.7	60.8	0.138	1.53210
160.0	348.5	21.73	-1884.0	-1636.0	99.47	30.77	64.81	888.5	51.4	0.124	1.49983
170.0	325.9	20.31	-1225.0	-959.6	103.6	30.44	71.02	767.5	43.0	0.110	1.46263
175.0	312.6	19.48	-869.8	-592.6	105.7	30.36	76.07	701.2	39.0	0.104	1.44107
180.0	297.1	18.52	-485.8	-194.2	107.9	30.37	83.95	628.5	35.1	0.0994	1.41632
182.0	290.0	18.08	-320.6	-21.9	108.9	30.42	88.55	596.9	33.4	0.0988	1.40510
184.0	282.2	17.59	-146.0	160.9	109.9	30.50	94.59	563.3	31.8	0.1000	1.39283
186.0	273.5	17.05	41.2	358.0	111.0	30.64	102.9	527.3	30.0	0.105	1.37912
188.0	263.3	16.41	246.4	575.4	112.1	30.85	115.4	487.8	28.1	0.123	1.36337
190.0	251.0	15.64	479.9	825.0	113.4	31.17	136.3	443.7	26.0	0.286	1.34439
191.0	243.5	15.18	613.5	969.2	114.2	31.41	153.1	419.3	24.9	0.322	1.33298
191.5	239.3	14.92	686.5	1049.0	114.6	31.55	164.5	406.3	24.2	0.202	1.32657
192.0	234.6	14.63	765.0	1134.0	115.1	31.72	178.7	392.8	23.6	0.160	1.31954
192.5	229.4	14.30	850.3	1228.0	115.5	31.92	197.0	378.6	22.8	0.138	1.31172
193.0	223.6	13.94	944.6	1332.0	116.1	32.15	221.1	363.8	22.0	0.124	1.30291
193.5	216.8	13.51	1051.0	1450.0	116.7	32.44	253.6	348.4	21.2	0.113	1.29279
194.0	208.8	13.01	1173.0	1588.0	117.4	32.78	297.5	332.5	20.2	0.104	1.28093
196.0	162.9	10.15	1859.0	2391.0	121.5	34.31	457.8	284.4	15.6	0.0794	1.21461
198.0	127.3	7.938	2465.0	3145.0	125.4	34.00	286.5	280.0	13.0	0.0665	1.16501
200.0	110.3	6.872	2816.0	3602.0	127.6	33.12	185.1	285.9	12.0	0.0586	1.14173
200.5	107.3	6.688	2883.0	3690.0	128.1	32.91	170.6	287.5	11.9	0.0571	1.13775
201.0	104.7	6.524	2945.0	3773.0	128.5	32.72	158.7	289.2	11.8	0.0557	1.13421
201.5	102.3	6.377	3003.0	3849.0	128.9	32.54	148.6	290.9	11.7	0.0544	1.13103
202.0	100.2	6.243	3056.0	3921.0	129.2	32.36	140.1	292.5	11.6	0.0532	1.12815
202.5	98.18	6.120	3107.0	3990.0	129.6	32.19	132.7	294.1	11.5	0.0522	1.12552
203.0	96.37	6.007	3155.0	4054.0	129.9	32.03	126.3	295.7	11.4	0.0512	1.12310
204.0	93.13	5.805	3245.0	4175.0	130.5	31.73	115.7	298.7	11.3	0.0495	1.11878
205.0	90.30	5.629	3327.0	4287.0	131.0	31.46	107.4	301.7	11.2	0.0480	1.11503

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
206.0	87.80	5.473	3404.0	4390.0	131.5	31.21	100.5	304.6	11.1	0.0467	1.11170
207.0	85.55	5.332	3475.0	4488.0	132.0	30.98	94.90	307.4	11.0	0.0455	1.10873
208.0	83.51	5.205	3543.0	4580.0	132.5	30.76	90.15	310.1	11.0	0.0446	1.10604
209.0	81.65	5.089	3607.0	4669.0	133.9	30.56	86.08	312.7	10.9	0.0437	1.10359
210.0	79.93	4.982	3669.0	4753.0	133.3	30.38	82.57	315.2	10.9	0.0429	1.10133
212.0	76.87	4.792	3785.0	4912.0	134.0	30.05	76.78	320.0	10.8	0.0416	1.09732
214.0	74.21	4.625	3893.0	5061.0	134.7	29.75	72.22	324.6	10.8	0.0405	1.09383
216.0	71.84	4.478	3996.0	5201.0	135.4	29.49	68.52	329.0	10.7	0.0397	1.09074
218.0	69.72	4.346	4093.0	5335.0	136.0	29.27	65.46	333.2	10.7	0.0390	1.08798
220.0	67.80	4.226	4186.0	5464.0	136.6	29.06	62.89	337.2	10.7	0.0384	1.08548
222.0	66.05	4.117	4275.0	5587.0	137.2	28.88	60.70	341.1	10.7	0.0379	1.08321
224.0	64.44	4.016	4362.0	5707.0	137.7	28.72	58.80	344.8	10.7	0.0375	1.08112
226.0	62.95	3.924	4446.0	5822.0	138.2	28.57	57.15	348.4	10.7	0.0371	1.07919
228.0	61.56	3.837	4528.0	5935.0	138.7	28.44	55.70	351.9	10.7	0.0368	1.07740
230.0	60.27	3.757	4608.0	6045.0	139.2	28.33	54.42	355.2	10.8	0.0366	1.07573
232.0	59.06	3.681	4686.0	6153.0	139.6	28.23	53.28	358.5	10.8	0.0364	1.07417
234.0	57.92	3.610	4763.0	6259.0	140.1	28.13	52.25	361.7	10.8	0.0362	1.07270
240.0	54.86	3.420	4985.0	6564.0	141.4	27.92	49.74	370.8	10.9	0.0359	1.06877
245.0	52.65	3.282	5163.0	6809.0	142.4	27.79	48.13	377.9	11.0	0.0358	1.06594
250.0	50.67	3.159	5336.0	7046.0	143.4	27.71	46.84	384.7	11.1	0.0357	1.06341
255.0	48.89	3.048	5506.0	7278.0	144.3	27.66	45.78	391.1	11.2	0.0358	1.06114
260.0	47.28	2.947	5672.0	7504.0	145.2	27.65	44.92	397.3	11.3	0.0359	1.05908
265.0	45.80	2.855	5835.0	7727.0	146.0	27.66	44.20	403.2	11.4	0.0361	1.05719
270.0	44.44	2.770	5997.0	7946.0	146.8	27.69	43.61	408.8	11.5	0.0364	1.05546
275.0	43.18	2.692	6157.0	8163.0	147.6	27.75	43.11	414.3	11.7	0.0367	1.05386
280.0	42.01	2.619	6316.0	8378.0	148.4	27.82	42.70	419.6	11.8	0.0371	1.05238
285.0	40.92	2.551	6473.0	8590.0	149.1	27.91	42.37	424.7	11.9	0.0375	1.05099
290.0	39.90	2.487	6630.0	8801.0	149.9	28.01	42.09	429.6	12.0	0.0380	1.04970
300.0	38.03	2.371	6942.0	9220.0	151.3	28.27	41.69	439.0	12.3	0.0390	1.04734
310.0	36.37	2.267	7254.0	9636.0	152.7	28.57	41.45	448.0	12.6	0.0401	1.04524
320.0	34.87	2.174	7566.0	10050.0	154.0	28.91	41.35	456.5	12.8	0.0413	1.04335
330.0	33.52	2.089	7879.0	10460.0	155.2	29.29	41.35	464.6	13.1	0.0425	1.04165
340.0	32.28	2.012	8193.0	10880.0	156.5	29.70	41.43	472.3	13.4	0.0438	1.04009
350.0	31.15	1.941	8511.0	11290.0	157.7	30.14	41.59	479.8	13.6	0.0452	1.03866
360.0	30.10	1.876	8831.0	11710.0	158.9	30.61	41.81	487.0	13.9	0.0465	1.03735
370.0	29.13	1.816	9154.0	12130.0	160.0	31.09	42.08	493.9	14.1	0.0480	1.03613
380.0	28.23	1.760	9482.0	12550.0	161.1	31.60	42.39	500.7	14.4	0.0494	1.03500
390.0	27.39	1.707	9813.0	12980.0	162.2	32.12	42.74	507.2	14.7	0.0509	1.03395
400.0	26.60	1.658	10150.0	13410.0	163.3	32.65	43.12	513.6	14.9	0.0525	1.03297
410.0	25.87	1.612	10490.0	13840.0	164.4	33.20	43.52	519.8	15.2	0.0540	1.03204
420.0	25.17	1.569	10830.0	14280.0	165.5	33.75	43.95	525.8	15.5	0.0556	1.03118
440.0	23.90	1.490	11540.0	15160.0	167.5	34.88	44.86	537.5	16.0	0.0589	1.02959
460.0	22.77	1.419	12270.0	16070.0	169.5	36.02	45.82	548.8	16.5	0.0622	1.02817
480.0	21.74	1.355	13010.0	17000.0	171.5	37.16	46.80	559.7	17.0	0.0657	1.02689
500.0	20.81	1.297	13780.0	17940.0	173.4	38.28	47.79	570.3	17.5	0.0691	1.02573
520.0	19.96	1.244	14570.0	18910.0	175.3	39.37	48.77	580.7	17.9	0.0726	1.02467
540.0	19.18	1.196	15380.0	19890.0	177.2	40.41	49.71	590.8	18.4	0.0761	1.02371
560.0	18.47	1.151	16210.0	20900.0	179.0	41.39	50.61	600.7	18.9	0.0796	1.02281
580.0	17.80	1.110	17050.0	21920.0	180.8	42.30	51.43	610.5	19.3	0.0830	1.02199
600.0	17.19	1.072	17910.0	22950.0	182.6	43.11	52.17	620.2	19.8	0.0863	1.02123
					5.60 MPa isobar						
92.11[a]	453.5	28.27	-5707.0	-5509.0	68.16	34.12	53.07	1560.0	210.0	0.226	1.67992
100.0	443.2	27.62	-5291.0	-5089.0	72.54	33.63	53.55	1493.0	167.0	0.213	1.66171
120.0	415.8	25.92	-4214.0	-3998.0	82.48	32.78	55.60	1306.0	105.0	0.181	1.61392
140.0	385.4	24.02	-3092.0	-2859.0	91.26	31.75	58.60	1108.0	72.4	0.152	1.56171
150.0	368.3	22.96	-2506.0	-2262.0	95.37	31.23	60.98	1003.0	61.1	0.138	1.53274
160.0	349.1	21.76	-1893.0	-1635.0	99.42	30.77	64.57	892.8	51.6	0.124	1.50070
170.0	326.7	20.36	-1237.0	-962.4	103.5	30.43	70.54	773.2	43.3	0.111	1.46389
175.0	313.6	19.55	-885.1	-598.5	105.6	30.35	75.32	708.0	39.3	0.105	1.44268
180.0	298.5	18.60	-506.2	-205.2	107.8	30.35	82.61	637.0	35.4	0.0999	1.41849
182.0	291.6	18.18	-344.0	-36.0	108.8	30.39	86.76	606.4	33.8	0.0992	1.40762

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
184.0	284.1	17.71	-173.5	142.7	109.7	30.46	92.11	574.0	32.2	0.100	1.39580
186.0	275.8	17.19	7.9	333.7	110.8	30.57	99.29	539.5	30.5	0.105	1.38274
188.0	266.3	16.60	204.5	541.8	111.9	30.74	109.5	502.3	28.7	0.122	1.36797
190.0	255.1	15.90	423.2	775.4	113.1	31.01	125.4	461.4	26.8	0.281	1.35067
191.0	248.5	15.49	544.9	906.4	113.8	31.20	137.2	439.2	25.7	0.317	1.34062
192.0	241.0	15.02	678.5	1051.0	114.6	31.43	153.5	415.6	24.5	0.161	1.32922
192.5	236.8	14.76	751.2	1131.0	115.0	31.57	164.1	403.2	23.9	0.140	1.32285
193.0	232.2	14.48	828.9	1216.0	115.4	31.74	177.2	390.3	23.3	0.126	1.31592
193.5	227.2	14.16	912.8	1308.0	115.9	31.93	193.4	377.1	22.6	0.116	1.30829
194.0	221.5	13.81	1004.0	1410.0	116.4	32.15	213.7	363.4	21.8	0.108	1.29982
194.5	215.1	13.41	1105.0	1523.0	117.0	32.40	239.1	349.5	21.0	0.102	1.29032
195.0	207.8	12.96	1218.0	1650.0	117.6	32.69	270.5	335.7	20.1	0.0957	1.27956
196.0	190.3	11.86	1484.0	1956.0	119.2	33.37	342.3	310.2	18.2	0.0853	1.25384
197.0	170.0	10.60	1794.0	2322.0	121.1	33.95	378.5	293.0	16.3	0.0768	1.22469
198.0	151.2	9.427	2097.0	2691.0	122.9	34.14	349.2	285.6	14.7	0.0704	1.19815
200.0	125.7	7.836	2559.0	3273.0	125.9	33.62	236.7	285.5	13.0	0.0617	1.16276
202.0	111.3	6.935	2864.0	3672.0	127.9	32.86	169.3	290.8	12.2	0.0559	1.14311
202.5	108.6	6.769	2926.0	3754.0	128.3	32.68	158.4	292.2	12.1	0.0547	1.13949
203.0	106.2	6.617	2984.0	3831.0	128.6	32.51	149.0	293.7	11.9	0.0536	1.13622
203.5	104.0	6.480	3039.0	3903.0	129.0	32.34	140.9	295.2	11.8	0.0526	1.13325
204.0	101.9	6.353	3090.0	3972.0	129.3	32.18	133.8	296.7	11.7	0.0517	1.13052
205.0	98.30	6.127	3185.0	4099.0	130.0	31.88	122.1	299.7	11.6	0.0501	1.12567
206.0	95.15	5.931	3272.0	4217.0	130.5	31.61	112.8	302.6	11.5	0.0486	1.12148
207.0	92.38	5.758	3353.0	4325.0	131.1	31.35	105.3	305.4	11.4	0.0474	1.11779
208.0	89.90	5.604	3428.0	4428.0	131.5	31.12	99.07	308.1	11.3	0.0463	1.11450
209.0	87.67	5.464	3499.0	4524.0	132.0	30.90	93.84	310.8	11.2	0.0453	1.11153
210.0	85.63	5.338	3566.0	4616.0	132.4	30.70	89.39	313.3	11.1	0.0444	1.10884
211.0	83.76	5.221	3630.0	4703.0	132.9	30.51	85.54	315.8	11.1	0.0436	1.10638
212.0	82.04	5.114	3692.0	4787.0	133.3	30.33	82.19	318.3	11.1	0.0430	1.10411
214.0	78.95	4.921	3807.0	4945.0	134.0	30.01	76.64	323.0	11.0	0.0418	1.10005
216.0	76.25	4.753	3916.0	5094.0	134.7	29.73	72.21	327.4	10.9	0.0408	1.09651
218.0	73.85	4.603	4018.0	5235.0	135.3	29.48	68.60	331.7	10.9	0.0400	1.09337
220.0	71.69	4.469	4116.0	5369.0	136.0	29.26	65.60	335.8	10.9	0.0393	1.09055
222.0	69.73	4.347	4209.0	5497.0	136.5	29.06	63.07	339.8	10.9	0.0388	1.08800
224.0	67.94	4.235	4299.0	5621.0	137.1	28.89	60.90	343.6	10.9	0.0383	1.08567
226.0	66.30	4.133	4386.0	5741.0	137.6	28.73	59.02	347.2	10.9	0.0379	1.08354
228.0	64.77	4.038	4471.0	5858.0	138.1	28.59	57.38	350.8	10.9	0.0376	1.08156
230.0	63.36	3.949	4553.0	5971.0	138.6	28.47	55.94	354.2	10.9	0.0373	1.07973
232.0	62.03	3.867	4633.0	6082.0	139.1	28.35	54.66	357.6	10.9	0.0371	1.07802
234.0	60.79	3.789	4712.0	6190.0	139.6	28.25	53.52	360.8	10.9	0.0369	1.07641
236.0	59.62	3.717	4789.0	6296.0	140.0	28.16	52.50	364.0	11.0	0.0367	1.07491
240.0	57.48	3.583	4939.0	6502.0	140.9	28.02	50.74	370.0	11.0	0.0364	1.07214
245.0	55.09	3.434	5120.0	6751.0	141.9	27.88	48.97	377.3	11.1	0.0362	1.06908
250.0	52.98	3.302	5296.0	6992.0	142.9	27.79	47.56	384.1	11.2	0.0362	1.06636
255.0	51.07	3.184	5468.0	7227.0	143.8	27.73	46.41	390.6	11.3	0.0362	1.06393
260.0	49.35	3.076	5636.0	7457.0	144.7	27.71	45.47	396.8	11.4	0.0363	1.06172
265.0	47.78	2.978	5802.0	7682.0	145.6	27.71	44.69	402.8	11.5	0.0364	1.05972
270.0	46.33	2.888	5965.0	7904.0	146.4	27.74	44.04	408.5	11.6	0.0367	1.05788
275.0	45.00	2.805	6126.0	8123.0	147.2	27.79	43.51	414.0	11.7	0.0370	1.05618
280.0	43.76	2.728	6286.0	8339.0	148.0	27.86	43.06	419.3	11.9	0.0373	1.05461
285.0	42.61	2.656	6445.0	8553.0	148.7	27.95	42.69	424.5	12.0	0.0377	1.05314
290.0	41.53	2.589	6603.0	8766.0	149.5	28.05	42.39	429.4	12.1	0.0382	1.05177
300.0	39.57	2.466	6917.0	9188.0	150.9	28.30	41.95	438.9	12.4	0.0392	1.04929
310.0	37.82	2.357	7230.0	9606.0	152.3	28.59	41.68	447.9	12.6	0.0403	1.04707
320.0	36.25	2.260	7543.0	10020.0	153.6	28.93	41.55	456.5	12.9	0.0415	1.04509
330.0	34.83	2.171	7857.0	10440.0	154.9	29.31	41.52	464.6	13.1	0.0427	1.04330
340.0	33.53	2.090	8173.0	10850.0	156.1	29.72	41.59	472.4	13.4	0.0440	1.04167
350.0	32.35	2.016	8492.0	11270.0	157.3	30.16	41.73	479.9	13.7	0.0453	1.04017
360.0	31.25	1.948	8813.0	11690.0	158.5	30.62	41.94	487.2	13.9	0.0467	1.03880
370.0	30.24	1.885	9137.0	12110.0	159.7	31.11	42.20	494.1	14.2	0.0481	1.03753
380.0	29.30	1.826	9465.0	12530.0	160.8	31.61	42.50	500.9	14.4	0.0496	1.03635
390.0	28.42	1.772	9798.0	12960.0	161.9	32.13	42.84	507.5	14.7	0.0511	1.03525
400.0	27.61	1.721	10130.0	13390.0	163.0	32.66	43.21	513.8	15.0	0.0526	1.03422

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
410.0	26.84	1.673	10480.0	13820.0	164.1	33.21	43.61	520.1	15.2	0.0541	1.03326
420.0	26.12	1.628	10820.0	14260.0	165.1	33.76	44.04	526.1	15.5	0.0557	1.03236
440.0	24.80	1.546	11530.0	15150.0	167.2	34.89	44.94	537.9	16.0	0.0590	1.03071
460.0	23.61	1.472	12250.0	16060.0	169.2	36.03	45.88	549.2	16.5	0.0623	1.02923
480.0	22.55	1.405	13000.0	16990.0	171.2	37.17	46.86	560.1	17.0	0.0658	1.02790
500.0	21.58	1.345	13770.0	17930.0	173.1	38.29	47.84	570.7	17.5	0.0692	1.02669
520.0	20.70	1.290	14560.0	18900.0	175.0	39.38	48.81	581.1	18.0	0.0727	1.02559
540.0	19.89	1.240	15370.0	19890.0	176.9	40.42	49.75	591.2	18.4	0.0762	1.02458
560.0	19.14	1.193	16200.0	20890.0	178.7	41.40	50.64	601.2	18.9	0.0797	1.02366
580.0	18.46	1.150	17040.0	21910.0	180.5	42.30	51.47	611.0	19.4	0.0831	1.02280
600.0	17.82	1.111	17910.0	22950.0	182.2	43.11	52.21	620.7	19.8	0.0864	1.02201
					5.80 MPa isobar						
92.16[a]	453.6	28.27	-5706.0	-5501.0	68.17	34.12	53.05	1561.0	210.0	0.226	1.68001
100.0	443.3	27.63	-5293.0	-5084.0	72.52	33.63	53.53	1494.0	167.0	0.213	1.66194
120.0	416.0	25.93	-4217.0	-3994.0	82.45	32.79	55.56	1308.0	105.0	0.182	1.61425
140.0	385.7	24.04	-3097.0	-2855.0	91.22	31.75	58.52	1111.0	72.6	0.152	1.56220
150.0	368.7	22.98	-2512.0	-2259.0	95.33	31.23	60.85	1007.0	61.3	0.138	1.53337
160.0	349.6	21.79	-1901.0	-1635.0	99.36	30.77	64.34	897.1	51.8	0.125	1.50155
170.0	327.4	20.41	-1249.0	-965.1	103.4	30.43	70.08	778.8	43.5	0.111	1.46513
175.0	314.5	19.61	-899.9	-604.1	105.5	30.34	74.61	714.6	39.6	0.105	1.44424
180.0	299.8	18.69	-525.8	-215.4	107.7	30.33	81.38	645.2	35.8	0.100	1.42057
185.0	282.0	17.58	-112.7	217.3	110.1	30.46	92.83	567.9	31.8	0.102	1.39250
186.0	277.9	17.32	-23.1	311.7	110.6	30.51	96.19	551.0	31.0	0.105	1.38610
188.0	269.0	16.77	166.3	512.2	111.7	30.66	104.8	515.6	29.2	0.122	1.37214
190.0	258.6	16.12	373.7	733.5	112.8	30.88	117.4	477.3	27.4	0.275	1.35613
192.0	246.2	15.34	608.7	986.7	114.1	31.21	137.6	435.3	25.4	0.161	1.33700
193.0	238.7	14.88	741.8	1132.0	114.9	31.45	153.1	412.5	24.2	0.127	1.32566
194.0	230.0	14.34	890.4	1295.0	115.7	31.74	174.7	388.6	23.0	0.111	1.31258
194.5	225.1	14.03	972.3	1386.0	116.2	31.92	188.7	376.3	22.3	0.105	1.30520
195.0	219.7	13.69	1061.0	1484.0	116.7	32.13	205.5	363.8	21.6	0.0994	1.29711
195.5	213.7	13.32	1156.0	1592.0	117.3	32.35	225.4	351.3	20.9	0.0946	1.28822
196.0	207.1	12.91	1261.0	1710.0	117.9	32.61	248.0	339.0	20.1	0.0901	1.27842
198.0	174.8	10.90	1761.0	2294.0	120.8	33.65	322.1	301.0	16.8	0.0750	1.23155
200.0	144.4	9.002	2266.0	2911.0	123.9	33.84	278.7	289.4	14.3	0.0651	1.18863
202.0	124.6	7.768	2643.0	3390.0	126.3	33.28	204.0	290.8	13.0	0.0586	1.16127
202.5	121.0	7.541	2719.0	3488.0	126.8	33.12	189.5	291.9	12.8	0.0573	1.15630
203.0	117.7	7.337	2789.0	3580.0	127.3	32.95	176.9	293.0	12.6	0.0562	1.15185
203.5	114.8	7.154	2855.0	3665.0	127.7	32.78	165.8	294.3	12.5	0.0551	1.14786
204.0	112.1	6.988	2916.0	3746.0	128.1	32.61	156.1	295.6	12.3	0.0540	1.14424
204.5	109.7	6.836	2973.0	3822.0	128.4	32.45	147.7	297.0	12.2	0.0531	1.14094
205.0	107.4	6.696	3028.0	3894.0	128.8	32.30	140.2	298.3	12.1	0.0522	1.13792
206.0	103.4	6.448	3128.0	4027.0	129.4	32.00	127.7	301.1	11.9	0.0506	1.13257
207.0	99.99	6.233	3219.0	4150.0	130.0	31.73	117.8	303.8	11.8	0.0493	1.12794
208.0	96.96	6.043	3304.0	4264.0	130.6	31.48	109.7	306.5	11.6	0.0480	1.12388
209.0	94.25	5.875	3383.0	4370.0	131.1	31.24	103.0	309.2	11.5	0.0470	1.12028
210.0	91.82	5.723	3456.0	4470.0	131.6	31.02	97.32	311.8	11.5	0.0460	1.11704
211.0	89.61	5.586	3526.0	4565.0	132.0	30.81	92.52	314.3	11.4	0.0451	1.11411
212.0	87.59	5.460	3593.0	4655.0	132.5	30.62	88.38	316.8	11.3	0.0444	1.11144
213.0	85.73	5.344	3656.0	4742.0	132.9	30.44	84.78	319.2	11.3	0.0437	1.10898
214.0	84.01	5.236	3717.0	4825.0	133.3	30.28	81.62	321.5	11.2	0.0431	1.10670
216.0	80.91	5.043	3833.0	4983.0	134.0	29.97	76.32	326.1	11.2	0.0420	1.10262
218.0	78.18	4.873	3941.0	5131.0	134.7	29.70	72.06	330.4	11.1	0.0411	1.09905
220.0	75.76	4.722	4043.0	5271.0	135.3	29.46	68.56	334.6	11.1	0.0403	1.09586
222.0	73.57	4.586	4141.0	5405.0	135.9	29.25	65.64	338.6	11.1	0.0397	1.09301
224.0	71.58	4.462	4234.0	5534.0	136.5	29.06	63.15	342.4	11.0	0.0392	1.09041
226.0	69.76	4.349	4325.0	5658.0	137.0	28.89	61.02	346.2	11.0	0.0387	1.08804
228.0	68.09	4.244	4412.0	5778.0	137.6	28.74	59.17	349.8	11.0	0.0383	1.08586
230.0	66.54	4.147	4497.0	5895.0	138.1	28.60	57.55	353.3	11.0	0.0380	1.08385
232.0	65.09	4.057	4579.0	6009.0	138.6	28.48	56.12	356.7	11.0	0.0377	1.08197
234.0	63.74	3.973	4660.0	6120.0	139.1	28.37	54.85	360.0	11.1	0.0375	1.08022
236.0	62.47	3.894	4739.0	6228.0	139.5	28.28	53.72	363.2	11.1	0.0373	1.07858

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
238.0	61.28	3.820	4816.0	6335.0	140.0	28.19	52.70	366.3	11.1	0.0371	1.07704
240.0	60.15	3.749	4892.0	6439.0	140.4	28.12	51.78	369.3	11.1	0.0370	1.07559
245.0	57.58	3.589	5077.0	6693.0	141.4	27.97	49.84	376.6	11.2	0.0367	1.07228
250.0	55.31	3.448	5256.0	6938.0	142.4	27.86	48.30	383.6	11.3	0.0366	1.06936
255.0	53.28	3.321	5430.0	7176.0	143.4	27.80	47.05	390.1	11.4	0.0366	1.06676
260.0	51.45	3.207	5600.0	7409.0	144.3	27.77	46.03	396.4	11.5	0.0366	1.06441
265.0	49.78	3.103	5768.0	7637.0	145.2	27.77	45.19	402.4	11.6	0.0368	1.06227
270.0	48.25	3.007	5933.0	7861.0	146.0	27.79	44.49	408.2	11.7	0.0370	1.06032
275.0	46.83	2.919	6095.0	8082.0	146.8	27.83	43.91	413.8	11.8	0.0373	1.05852
280.0	45.53	2.838	6257.0	8300.0	147.6	27.90	43.42	419.1	11.9	0.0376	1.05685
285.0	44.31	2.762	6417.0	8517.0	148.4	27.98	43.02	424.3	12.0	0.0380	1.05531
290.0	43.18	2.691	6576.0	8731.0	149.1	28.08	42.69	429.3	12.2	0.0384	1.05386
300.0	41.11	2.563	6892.0	9155.0	150.5	28.33	42.21	438.9	12.4	0.0394	1.05124
310.0	39.28	2.448	7206.0	9576.0	151.9	28.62	41.90	447.9	12.7	0.0405	1.04892
320.0	37.63	2.346	7521.0	9994.0	153.2	28.96	41.75	456.5	12.9	0.0417	1.04684
330.0	36.14	2.253	7836.0	10410.0	154.5	29.33	41.70	464.7	13.2	0.0429	1.04496
340.0	34.79	2.168	8153.0	10830.0	155.8	29.74	41.75	472.6	13.4	0.0442	1.04325
350.0	33.55	2.091	8473.0	11250.0	157.0	30.18	41.88	480.1	13.7	0.0455	1.04169
360.0	32.41	2.020	8795.0	11670.0	158.2	30.64	42.07	487.3	14.0	0.0469	1.04025
370.0	31.35	1.954	9120.0	12090.0	159.3	31.12	42.32	494.4	14.2	0.0483	1.03893
380.0	30.37	1.893	9449.0	12510.0	160.5	31.62	42.61	501.1	14.5	0.0497	1.03770
390.0	29.46	1.836	9782.0	12940.0	161.6	32.14	42.94	507.7	14.7	0.0512	1.03655
400.0	28.61	1.783	10120.0	13370.0	162.7	32.68	43.31	514.1	15.0	0.0527	1.03548
410.0	27.81	1.733	10460.0	13810.0	163.7	33.22	43.70	520.3	15.3	0.0543	1.03448
420.0	27.06	1.687	10810.0	14250.0	164.8	33.77	44.12	526.4	15.5	0.0559	1.03354
440.0	25.69	1.601	11510.0	15140.0	166.9	34.90	45.01	538.2	16.0	0.0591	1.03182
460.0	24.46	1.524	12240.0	16050.0	168.9	36.04	45.95	549.5	16.5	0.0625	1.03028
480.0	23.35	1.455	12990.0	16970.0	170.9	37.18	46.92	560.5	17.0	0.0659	1.02890
500.0	22.35	1.393	13760.0	17920.0	172.8	38.30	47.90	571.1	17.5	0.0693	1.02765
520.0	21.43	1.336	14550.0	18890.0	174.7	39.39	48.86	581.5	18.0	0.0728	1.02651
540.0	20.59	1.284	15360.0	19880.0	176.6	40.43	49.80	591.7	18.5	0.0763	1.02546
560.0	19.82	1.235	16190.0	20880.0	178.4	41.41	50.68	601.6	18.9	0.0798	1.02450
580.0	19.11	1.191	17030.0	21900.0	180.2	42.31	51.50	611.4	19.4	0.0832	1.02361
600.0	18.45	1.150	17900.0	22940.0	181.9	43.12	52.24	621.1	19.8	0.0865	1.02279
					6.00 MPa isobar						
92.21[a]	453.6	28.28	-5706.0	-5493.0	68.18	34.12	53.04	1562.0	210.0	0.227	1.68010
100.0	443.5	27.64	-5296.0	-5078.0	72.50	33.64	53.51	1496.0	168.0	0.213	1.66217
120.0	416.2	25.94	-4220.0	-3989.0	82.43	32.80	55.52	1310.0	105.0	0.182	1.61457
140.0	386.0	24.06	-3101.0	-2852.0	91.19	31.76	58.44	1113.0	72.8	0.153	1.56269
150.0	369.0	23.00	-2518.0	-2257.0	95.29	31.24	60.72	1010.0	61.5	0.139	1.53400
160.0	350.1	21.82	-1909.0	-1634.0	99.31	30.78	64.12	901.3	52.1	0.125	1.50240
170.0	328.2	20.46	-1261.0	-967.6	103.3	30.43	69.64	784.4	43.8	0.112	1.46634
175.0	315.5	19.67	-914.4	-609.3	105.4	30.33	73.94	721.2	39.9	0.105	1.44576
180.0	301.0	18.76	-544.7	-224.9	107.6	30.31	80.25	653.2	36.1	0.101	1.42258
185.0	283.9	17.69	-139.4	199.7	109.9	30.41	90.58	578.1	32.2	0.102	1.39538
186.0	280.0	17.45	-52.1	291.8	110.4	30.46	93.52	562.0	31.4	0.105	1.38924
188.0	271.5	16.92	131.2	485.8	111.4	30.58	100.9	528.1	29.7	0.121	1.37597
190.0	261.8	16.32	329.5	697.1	112.6	30.77	111.2	491.9	28.0	0.270	1.36099
192.0	250.5	15.61	549.5	933.8	113.8	31.04	126.7	452.7	26.1	0.160	1.34355
193.0	243.9	15.20	671.1	1066.0	114.5	31.23	137.7	431.9	25.1	0.128	1.33353
194.0	236.5	14.74	803.3	1210.0	115.2	31.46	152.1	410.2	24.0	0.112	1.32230
195.0	228.0	14.21	949.4	1372.0	116.1	31.74	171.4	387.6	22.8	0.102	1.30952
195.5	223.2	13.91	1029.0	1460.0	116.5	31.91	183.4	376.2	22.1	0.0976	1.30241
196.0	218.1	13.59	1114.0	1555.0	117.0	32.09	197.2	364.8	21.5	0.0936	1.29473
196.5	212.5	13.24	1205.0	1658.0	117.5	32.30	212.6	353.5	20.8	0.0898	1.28642
197.0	206.4	12.87	1302.0	1768.0	118.1	32.52	229.3	342.5	20.1	0.0862	1.27745
198.0	192.9	12.02	1515.0	2014.0	119.3	32.98	261.9	323.0	18.6	0.0796	1.25767
200.0	163.8	10.21	1982.0	2570.0	122.1	33.63	279.8	299.5	15.9	0.0688	1.21590
202.0	140.0	8.728	2401.0	3088.0	124.7	33.51	232.9	294.0	14.1	0.0615	1.18251
202.5	135.3	8.436	2490.0	3201.0	125.3	33.39	218.6	294.1	13.8	0.0601	1.17603

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
203.0	131.1	8.173	2573.0	3307.0	125.8	33.26	204.9	294.5	13.5	0.0588	1.17020
203.5	127.3	7.935	2650.0	3406.0	126.3	33.12	192.3	295.2	13.3	0.0576	1.16495
204.0	123.8	7.720	2722.0	3499.0	126.7	32.97	180.7	296.0	13.1	0.0565	1.16022
204.5	120.7	7.524	2790.0	3587.0	127.2	32.82	170.3	297.0	12.9	0.0554	1.15593
205.0	117.8	7.345	2853.0	3670.0	127.6	32.67	160.9	298.1	12.7	0.0545	1.15203
205.5	115.2	7.182	2913.0	3748.0	127.9	32.52	152.5	299.3	12.6	0.0536	1.14846
206.0	112.8	7.031	2969.0	3822.0	128.3	32.37	145.0	300.5	12.5	0.0527	1.14519
207.0	108.5	6.763	3074.0	3961.0	129.0	32.09	132.3	303.0	12.2	0.0512	1.13937
208.0	104.8	6.530	3169.0	4088.0	129.6	31.82	122.0	305.5	12.1	0.0499	1.13434
209.0	101.5	6.326	3257.0	4205.0	130.2	31.57	113.5	308.0	11.9	0.0487	1.12994
210.0	98.56	6.144	3339.0	4315.0	130.7	31.34	106.5	310.6	11.8	0.0476	1.12603
211.0	95.94	5.980	3415.0	4419.0	131.2	31.12	100.5	313.1	11.7	0.0467	1.12253
212.0	93.56	5.832	3488.0	4517.0	131.6	30.91	95.41	315.5	11.6	0.0458	1.11936
213.0	91.39	5.697	3557.0	4610.0	132.1	30.72	91.02	317.9	11.6	0.0451	1.11648
214.0	89.40	5.572	3622.0	4699.0	132.5	30.54	87.20	320.3	11.5	0.0444	1.11383
215.0	87.55	5.457	3685.0	4784.0	132.9	30.37	83.85	322.6	11.4	0.0437	1.11139
216.0	85.84	5.351	3745.0	4867.0	133.3	30.21	80.88	324.9	11.4	0.0432	1.10912
218.0	82.74	5.158	3860.0	5023.0	134.0	29.92	75.86	329.3	11.3	0.0422	1.10504
220.0	80.01	4.987	3968.0	5171.0	134.7	29.67	71.79	333.5	11.3	0.0414	1.10145
222.0	77.57	4.835	4070.0	5311.0	135.3	29.44	68.42	337.5	11.2	0.0406	1.09824
224.0	75.36	4.697	4167.0	5445.0	135.9	29.23	65.58	341.4	11.2	0.0401	1.09535
226.0	73.35	4.572	4261.0	5573.0	136.5	29.05	63.16	345.2	11.2	0.0395	1.09272
228.0	71.51	4.457	4351.0	5698.0	137.0	28.89	61.07	348.9	11.2	0.0391	1.09032
230.0	69.81	4.351	4439.0	5818.0	137.5	28.74	59.26	352.4	11.2	0.0387	1.08810
232.0	68.23	4.253	4524.0	5935.0	138.1	28.61	57.66	355.9	11.2	0.0384	1.08605
234.0	66.76	4.161	4607.0	6049.0	138.5	28.50	56.25	359.2	11.2	0.0381	1.08414
236.0	65.39	4.076	4688.0	6160.0	139.0	28.39	55.00	362.4	11.2	0.0379	1.08236
238.0	64.10	3.995	4767.0	6269.0	139.5	28.30	53.88	365.6	11.2	0.0377	1.08069
240.0	62.88	3.919	4845.0	6375.0	139.9	28.22	52.87	368.7	11.2	0.0375	1.07912
245.0	60.12	3.747	5033.0	6634.0	141.0	28.06	50.74	376.1	11.3	0.0372	1.07555
250.0	57.69	3.596	5215.0	6884.0	142.0	27.94	49.06	383.1	11.4	0.0371	1.07242
255.0	55.52	3.461	5392.0	7125.0	143.0	27.87	47.71	389.7	11.5	0.0370	1.06963
260.0	53.57	3.339	5564.0	7361.0	143.9	27.83	46.60	396.1	11.6	0.0370	1.06713
265.0	51.80	3.229	5733.0	7592.0	144.7	27.82	45.69	402.1	11.7	0.0371	1.06486
270.0	50.18	3.128	5900.0	7818.0	145.6	27.84	44.94	407.9	11.8	0.0373	1.06279
275.0	48.69	3.035	6064.0	8041.0	146.4	27.88	44.31	413.5	11.9	0.0375	1.06088
280.0	47.31	2.949	6227.0	8262.0	147.2	27.94	43.79	418.9	12.0	0.0379	1.05912
285.0	46.03	2.869	6388.0	8480.0	148.0	28.02	43.36	424.2	12.1	0.0382	1.05749
290.0	44.83	2.794	6548.0	8695.0	148.7	28.12	43.00	429.2	12.2	0.0387	1.05597
295.0	43.71	2.725	6708.0	8910.0	149.5	28.23	42.71	434.1	12.3	0.0391	1.05455
300.0	42.66	2.659	6866.0	9123.0	150.2	28.36	42.47	438.8	12.5	0.0396	1.05321
310.0	40.74	2.539	7183.0	9545.0	151.6	28.65	42.13	447.9	12.7	0.0407	1.05077
320.0	39.02	2.432	7499.0	9966.0	152.9	28.98	41.95	456.6	13.0	0.0419	1.04859
330.0	37.46	2.335	7815.0	10380.0	154.2	29.35	41.88	464.8	13.2	0.0431	1.04663
340.0	36.05	2.247	8133.0	10800.0	155.4	29.76	41.91	472.7	13.5	0.0443	1.04484
350.0	34.75	2.166	8454.0	11220.0	156.7	30.19	42.02	480.3	13.7	0.0457	1.04321
360.0	33.56	2.092	8776.0	11640.0	157.8	30.65	42.20	487.5	14.0	0.0470	1.04171
370.0	32.47	2.024	9102.0	12070.0	159.0	31.14	42.44	494.6	14.3	0.0484	1.04033
380.0	31.45	1.960	9432.0	12490.0	160.1	31.64	42.72	501.4	14.5	0.0499	1.03905
390.0	30.50	1.901	9766.0	12920.0	161.2	32.16	43.04	508.0	14.8	0.0513	1.03785
400.0	29.61	1.846	10100.0	13350.0	162.3	32.69	43.40	514.4	15.0	0.0529	1.03674
410.0	28.78	1.794	10450.0	13790.0	163.4	33.23	43.79	520.7	15.3	0.0544	1.03570
420.0	28.00	1.745	10790.0	14230.0	164.5	33.78	44.20	526.8	15.5	0.0560	1.03472
440.0	26.58	1.657	11500.0	15120.0	166.6	34.91	45.08	538.6	16.0	0.0592	1.03294
460.0	25.30	1.577	12230.0	16030.0	168.6	36.05	46.01	549.9	16.5	0.0626	1.03134
480.0	24.15	1.505	12980.0	16960.0	170.6	37.19	46.98	560.9	17.0	0.0660	1.02991
500.0	23.11	1.441	13750.0	17910.0	172.5	38.30	47.95	571.5	17.5	0.0694	1.02861
520.0	22.16	1.382	14540.0	18880.0	174.4	39.39	48.91	581.9	18.0	0.0729	1.02742
540.0	21.30	1.327	15350.0	19870.0	176.3	40.44	49.84	592.1	18.5	0.0764	1.02634
560.0	20.50	1.278	16180.0	20870.0	178.1	41.42	50.72	602.1	18.9	0.0799	1.02534
580.0	19.76	1.232	17030.0	21900.0	179.9	42.32	51.54	611.9	19.4	0.0833	1.02443
600.0	19.08	1.189	17890.0	22940.0	181.6	43.13	52.27	621.6	19.9	0.0866	1.02357

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					6.50 MPa isobar						
92.33[a]	453.8	28.29	-5704.0	-5474.0	68.20	34.13	53.01	1564.0	211.0	0.227	1.68033
100.0	443.8	27.66	-5301.0	-5066.0	72.45	33.66	53.47	1499.0	169.0	0.214	1.66275
120.0	416.7	25.97	-4228.0	-3978.0	82.36	32.81	55.43	1315.0	106.0	0.182	1.61538
140.0	386.8	24.11	-3113.0	-2843.0	91.10	31.78	58.24	1120.0	73.4	0.153	1.56391
150.0	370.0	23.06	-2533.0	-2251.0	95.19	31.26	60.40	1018.0	62.1	0.139	1.53555
160.0	351.4	21.90	-1929.0	-1632.0	99.18	30.79	63.59	911.6	52.6	0.126	1.50446
170.0	330.0	20.57	-1289.0	-973.0	103.2	30.43	68.63	797.7	44.4	0.113	1.46927
175.0	317.8	19.81	-949.0	-620.8	105.2	30.31	72.42	736.8	40.6	0.107	1.44940
180.0	304.0	18.95	-589.2	-246.2	107.3	30.27	77.78	672.0	36.9	0.102	1.42730
185.0	288.0	17.95	-200.4	161.6	109.6	30.32	85.99	601.9	33.2	0.103	1.40193
186.0	284.5	17.73	-117.9	248.7	110.0	30.35	88.19	587.0	32.4	0.105	1.39632
188.0	276.9	17.26	53.5	430.1	111.0	30.43	93.46	556.3	30.9	0.120	1.38438
190.0	268.5	16.73	235.1	623.6	112.0	30.56	100.3	524.0	29.3	0.256	1.37128
192.0	259.0	16.14	430.3	832.9	113.1	30.73	109.5	490.0	27.6	0.157	1.35666
193.0	253.8	15.82	534.4	945.3	113.7	30.85	115.5	472.2	26.7	0.128	1.34861
194.0	248.1	15.47	643.9	1064.0	114.3	30.98	122.5	454.0	25.8	0.114	1.33996
195.0	241.9	15.08	759.9	1191.0	115.0	31.15	131.1	435.4	24.9	0.106	1.33058
196.0	235.2	14.66	883.7	1327.0	115.7	31.34	141.6	416.3	23.9	0.0986	1.32033
197.0	227.7	14.19	1017.0	1475.0	116.4	31.57	154.2	397.1	22.9	0.0928	1.30906
198.0	219.4	13.67	1161.0	1636.0	117.2	31.83	169.1	378.2	21.8	0.0875	1.29661
199.0	210.1	13.10	1317.0	1814.0	118.1	32.12	185.7	360.1	20.6	0.0825	1.28287
200.0	199.9	12.46	1486.0	2008.0	119.1	32.44	202.0	343.8	19.5	0.0778	1.26794
202.0	178.1	11.10	1849.0	2434.0	121.2	32.97	220.4	320.0	17.3	0.0695	1.23628
203.0	167.4	10.43	2032.0	2655.0	122.3	33.11	218.7	313.0	16.4	0.0661	1.22099
204.0	157.5	9.815	2207.0	2870.0	123.4	33.14	210.6	308.7	15.5	0.0631	1.20690
204.5	152.9	9.528	2291.0	2974.0	123.9	33.11	204.8	307.4	15.2	0.0618	1.20042
205.0	148.5	9.257	2372.0	3074.0	124.4	33.07	198.2	306.5	14.9	0.0605	1.19434
205.5	144.4	9.004	2450.0	3172.0	124.8	33.00	191.1	306.0	14.6	0.0594	1.18866
206.0	140.6	8.767	2524.0	3265.0	125.3	32.92	183.8	305.9	14.3	0.0583	1.18338
206.5	137.1	8.546	2595.0	3356.0	125.7	32.83	176.5	305.9	14.1	0.0573	1.17846
207.0	133.8	8.340	2663.0	3442.0	126.2	32.73	169.3	306.2	13.9	0.0564	1.17390
207.5	130.7	8.148	2727.0	3525.0	126.6	32.62	162.3	306.6	13.7	0.0555	1.16966
208.0	127.9	7.970	2789.0	3604.0	126.9	32.51	155.7	307.2	13.5	0.0547	1.16572
209.0	122.7	7.647	2904.0	3754.0	127.7	32.28	143.6	308.7	13.2	0.0532	1.15864
210.0	118.2	7.365	3009.0	3892.0	128.3	32.04	133.1	310.5	13.0	0.0519	1.15246
211.0	114.2	7.116	3107.0	4020.0	128.9	31.81	124.0	312.4	12.8	0.0507	1.14703
212.0	110.6	6.894	3198.0	4141.0	129.5	31.59	116.2	314.5	12.6	0.0497	1.14221
213.0	107.4	6.695	3282.0	4253.0	130.0	31.38	109.5	316.6	12.5	0.0487	1.13790
214.0	104.5	6.515	3362.0	4360.0	130.5	31.18	103.7	318.8	12.3	0.0479	1.13402
215.0	101.9	6.351	3438.0	4461.0	131.0	30.99	98.67	320.9	12.2	0.0471	1.13049
216.0	99.49	6.201	3509.0	4557.0	131.4	30.81	94.25	323.1	12.1	0.0463	1.12727
217.0	97.27	6.063	3578.0	4650.0	131.9	30.63	90.35	325.3	12.0	0.0457	1.12431
218.0	95.23	5.936	3643.0	4738.0	132.3	30.47	86.89	327.4	12.0	0.0451	1.12158
220.0	91.55	5.706	3767.0	4906.0	133.0	30.17	81.05	331.6	11.9	0.0440	1.11669
222.0	88.32	5.505	3883.0	5063.0	133.7	29.91	76.31	335.7	11.8	0.0431	1.11241
224.0	85.45	5.326	3991.0	5212.0	134.4	29.67	72.40	339.6	11.7	0.0424	1.10862
226.0	82.88	5.166	4095.0	5353.0	135.0	29.46	69.12	343.5	11.7	0.0417	1.10522
228.0	80.55	5.021	4194.0	5489.0	135.6	29.27	66.34	347.2	11.6	0.0411	1.10216
230.0	78.42	4.888	4289.0	5619.0	136.2	29.10	63.95	350.8	11.6	0.0407	1.09936
232.0	76.46	4.766	4381.0	5745.0	136.8	28.94	61.87	354.3	11.6	0.0402	1.09680
234.0	74.66	4.654	4470.0	5867.0	137.3	28.81	60.06	357.7	11.6	0.0399	1.09444
236.0	72.98	4.549	4556.0	5985.0	137.8	28.68	58.46	361.0	11.6	0.0395	1.09224
238.0	71.42	4.451	4640.0	6100.0	138.3	28.57	57.04	364.3	11.6	0.0393	1.09020
240.0	69.95	4.360	4723.0	6213.0	138.7	28.48	55.77	367.4	11.6	0.0390	1.08830
242.0	68.57	4.274	4803.0	6324.0	139.2	28.39	54.63	370.5	11.6	0.0388	1.08651
245.0	66.66	4.155	4921.0	6485.0	139.9	28.28	53.13	375.0	11.6	0.0385	1.08402
250.0	63.79	3.976	5111.0	6746.0	140.9	28.13	51.07	382.1	11.6	0.0382	1.08030
255.0	61.25	3.818	5294.0	6997.0	141.9	28.04	49.43	388.9	11.7	0.0380	1.07702
260.0	58.99	3.677	5473.0	7240.0	142.9	27.98	48.10	395.4	11.8	0.0380	1.07410
265.0	56.94	3.549	5647.0	7478.0	143.8	27.96	47.01	401.6	11.9	0.0380	1.07147

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
270.0	55.08	3.434	5818.0	7711.0	144.6	27.96	46.11	407.5	12.0	0.0381	1.06908
275.0	53.38	3.327	5986.0	7939.0	145.5	27.99	45.36	413.2	12.1	0.0383	1.06690
280.0	51.81	3.230	6152.0	8165.0	146.3	28.04	44.74	418.7	12.2	0.0386	1.06489
285.0	50.36	3.139	6316.0	8387.0	147.1	28.11	44.22	424.0	12.3	0.0389	1.06303
290.0	49.01	3.055	6479.0	8607.0	147.8	28.20	43.79	429.1	12.4	0.0393	1.06131
295.0	47.76	2.977	6641.0	8825.0	148.6	28.31	43.43	434.1	12.5	0.0397	1.05970
300.0	46.58	2.903	6802.0	9041.0	149.3	28.43	43.14	438.9	12.6	0.0402	1.05820
310.0	44.42	2.769	7123.0	9470.0	150.7	28.71	42.71	448.1	12.9	0.0412	1.05546
320.0	42.50	2.649	7443.0	9896.0	152.1	29.04	42.45	456.9	13.1	0.0424	1.05302
330.0	40.78	2.542	7762.0	10320.0	153.4	29.40	42.32	465.2	13.3	0.0435	1.05083
340.0	39.21	2.444	8083.0	10740.0	154.6	29.81	42.31	473.1	13.6	0.0448	1.04884
350.0	37.78	2.355	8406.0	11170.0	155.9	30.24	42.38	480.8	13.8	0.0461	1.04703
360.0	36.47	2.273	8731.0	11590.0	157.1	30.69	42.53	488.1	14.1	0.0474	1.04538
370.0	35.26	2.198	9059.0	12020.0	158.2	31.17	42.73	495.2	14.4	0.0488	1.04385
380.0	34.14	2.128	9391.0	12450.0	159.4	31.67	42.99	502.1	14.6	0.0502	1.04244
390.0	33.09	2.063	9726.0	12880.0	160.5	32.19	43.30	508.7	14.9	0.0517	1.04112
400.0	32.12	2.002	10070.0	13310.0	161.6	32.72	43.64	515.2	15.1	0.0532	1.03990
410.0	31.21	1.946	10410.0	13750.0	162.7	33.26	44.01	521.5	15.4	0.0547	1.03876
420.0	30.36	1.892	10760.0	14190.0	163.7	33.81	44.40	527.6	15.6	0.0563	1.03769
430.0	29.56	1.842	11110.0	14640.0	164.8	34.37	44.82	533.6	15.9	0.0579	1.03668
440.0	28.80	1.795	11470.0	15090.0	165.8	34.94	45.26	539.5	16.1	0.0595	1.03573
460.0	27.41	1.709	12200.0	16000.0	167.8	36.07	46.17	550.9	16.6	0.0629	1.03399
480.0	26.16	1.631	12950.0	16940.0	169.8	37.21	47.12	561.9	17.1	0.0663	1.03242
500.0	25.03	1.560	13720.0	17890.0	171.8	38.33	48.08	572.6	17.6	0.0697	1.03100
520.0	24.00	1.496	14510.0	18860.0	173.7	39.41	49.02	583.0	18.1	0.0732	1.02971
540.0	23.05	1.437	15320.0	19850.0	175.5	40.45	49.95	593.2	18.5	0.0767	1.02853
560.0	22.18	1.383	16160.0	20860.0	177.4	41.43	50.82	603.2	19.0	0.0801	1.02745
580.0	21.38	1.333	17000.0	21880.0	179.2	42.33	51.63	613.1	19.4	0.0835	1.02645
600.0	20.64	1.287	17870.0	22920.0	180.9	43.14	52.36	622.8	19.9	0.0868	1.02553
					7.00 MPa isobar						
92.46[a]	453.9	28.30	-5701.0	-5454.0	68.23	34.13	52.98	1566.0	211.0	0.227	1.68055
100.0	444.2	27.69	-5306.0	-5053.0	72.39	33.68	53.42	1503.0	170.0	0.214	1.66332
120.0	417.2	26.01	-4235.0	-3966.0	82.30	32.83	55.34	1320.0	107.0	0.183	1.61618
140.0	387.5	24.15	-3124.0	-2835.0	91.01	31.80	58.04	1127.0	73.9	0.154	1.56510
150.0	370.9	23.12	-2547.0	-2244.0	95.08	31.27	60.11	1027.0	62.6	0.140	1.53706
160.0	352.6	21.98	-1948.0	-1629.0	99.05	30.80	63.09	921.7	53.2	0.127	1.50646
170.0	331.7	20.68	-1316.0	-977.3	103.0	30.43	67.71	810.6	45.1	0.114	1.47207
175.0	319.9	19.94	-981.7	-630.6	105.0	30.30	71.09	751.7	41.3	0.108	1.45283
180.0	306.7	19.12	-630.4	-264.3	107.1	30.23	75.72	689.6	37.7	0.103	1.43165
185.0	291.7	18.18	-255.0	130.0	109.2	30.25	82.44	623.5	34.0	0.103	1.40775
190.0	273.9	17.07	156.7	566.6	111.6	30.41	93.14	551.7	30.4	0.242	1.37978
192.0	265.7	16.56	336.2	758.9	112.6	30.52	99.41	521.1	28.8	0.153	1.36692
194.0	256.4	15.99	527.6	965.5	113.6	30.69	107.5	489.3	27.3	0.115	1.35272
196.0	246.0	15.34	734.4	1191.0	114.8	30.92	118.3	456.4	25.6	0.101	1.33680
197.0	240.3	14.98	844.9	1312.0	115.4	31.06	124.9	439.7	24.7	0.0964	1.32805
198.0	234.1	14.59	961.2	1441.0	116.1	31.22	132.5	422.9	23.8	0.0920	1.31867
199.0	227.4	14.17	1084.0	1578.0	116.8	31.40	141.1	406.3	22.9	0.0879	1.30860
200.0	220.2	13.72	1213.0	1723.0	117.5	31.60	150.6	390.2	22.0	0.0840	1.29780
201.0	212.4	13.24	1350.0	1879.0	118.3	31.82	160.4	374.9	21.0	0.0803	1.28627
202.0	204.1	12.72	1494.0	2044.0	119.1	32.04	169.7	361.0	20.1	0.0767	1.27408
204.0	186.7	11.63	1796.0	2398.0	120.8	32.45	182.4	338.8	18.3	0.0701	1.24861
206.0	169.4	10.56	2102.0	2765.0	122.6	32.67	182.3	325.4	16.7	0.0645	1.22383
207.0	161.4	10.06	2249.0	2945.0	123.5	32.68	177.7	321.4	16.0	0.0621	1.21244
208.0	154.0	9.596	2390.0	3120.0	124.3	32.63	171.0	319.0	15.5	0.0601	1.20197
209.0	147.2	9.173	2524.0	3287.0	125.1	32.54	162.8	317.7	15.0	0.0582	1.19246
210.0	141.0	8.791	2649.0	3445.0	125.9	32.40	154.0	317.3	14.5	0.0566	1.18391
211.0	135.5	8.447	2766.0	3595.0	126.6	32.24	145.1	317.6	14.2	0.0551	1.17626
212.0	130.6	8.138	2875.0	3735.0	127.3	32.06	136.7	318.4	13.9	0.0538	1.16943
213.0	126.1	7.860	2978.0	3868.0	127.9	31.88	128.8	319.5	13.6	0.0526	1.16331
214.0	122.1	7.610	3073.0	3993.0	128.5	31.69	121.6	320.8	13.4	0.0516	1.15782
215.0	118.5	7.383	3164.0	4112.0	129.0	31.50	115.2	322.4	13.2	0.0506	1.15287

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
216.0	115.2	7.178	3249.0	4224.0	129.5	31.32	109.4	324.1	13.0	0.0497	1.14838
217.0	112.1	6.990	3329.0	4331.0	130.0	31.14	104.2	325.9	12.9	0.0489	1.14430
218.0	109.4	6.817	3406.0	4432.0	130.5	30.97	99.59	327.7	12.8	0.0482	1.14056
219.0	106.8	6.659	3479.0	4530.0	131.0	30.81	95.46	329.6	12.7	0.0475	1.13713
220.0	104.5	6.512	3548.0	4623.0	131.4	30.65	91.76	331.4	12.6	0.0469	1.13396
222.0	100.2	6.248	3680.0	4800.0	132.2	30.36	85.43	335.3	12.4	0.0458	1.12828
224.0	96.54	6.017	3803.0	4966.0	132.9	30.09	80.24	339.0	12.3	0.0448	1.12334
226.0	93.26	5.813	3918.0	5122.0	133.6	29.85	75.93	342.8	12.2	0.0440	1.11897
228.0	90.33	5.630	4027.0	5270.0	134.3	29.64	72.31	346.4	12.1	0.0433	1.11508
230.0	87.68	5.465	4131.0	5412.0	134.9	29.44	69.23	350.0	12.1	0.0427	1.11157
232.0	85.27	5.315	4230.0	5547.0	135.5	29.27	66.58	353.5	12.0	0.0421	1.10838
234.0	83.06	5.177	4326.0	5678.0	136.0	29.11	64.28	356.9	12.0	0.0417	1.10547
236.0	81.03	5.051	4419.0	5805.0	136.6	28.97	62.28	360.3	11.9	0.0412	1.10280
238.0	79.14	4.933	4508.0	5927.0	137.1	28.84	60.51	363.5	11.9	0.0409	1.10032
240.0	77.39	4.824	4596.0	6047.0	137.6	28.73	58.94	366.7	11.9	0.0406	1.09802
242.0	75.75	4.722	4681.0	6163.0	138.1	28.63	57.54	369.8	11.9	0.0403	1.09588
244.0	74.22	4.626	4764.0	6277.0	138.5	28.54	56.29	372.9	11.9	0.0400	1.09387
246.0	72.77	4.536	4845.0	6388.0	139.0	28.46	55.16	375.9	11.9	0.0398	1.09198
250.0	70.12	4.371	5004.0	6605.0	139.9	28.33	53.22	381.6	11.9	0.0394	1.08852
255.0	67.18	4.187	5194.0	6866.0	140.9	28.21	51.25	388.5	12.0	0.0391	1.08470
260.0	64.56	4.024	5379.0	7118.0	141.9	28.13	49.67	395.1	12.0	0.0389	1.08131
265.0	62.22	3.879	5558.0	7363.0	142.8	28.09	48.38	401.3	12.1	0.0389	1.07828
270.0	60.11	3.747	5734.0	7602.0	143.7	28.08	47.32	407.3	12.2	0.0389	1.07555
275.0	58.18	3.626	5906.0	7837.0	144.6	28.10	46.44	413.1	12.3	0.0390	1.07306
280.0	56.41	3.516	6076.0	8067.0	145.4	28.14	45.71	418.7	12.4	0.0393	1.07079
285.0	54.77	3.414	6244.0	8294.0	146.2	28.21	45.10	424.0	12.5	0.0396	1.06869
290.0	53.26	3.320	6410.0	8518.0	147.0	28.29	44.59	429.2	12.6	0.0399	1.06675
295.0	51.85	3.232	6574.0	8740.0	147.7	28.39	44.17	434.2	12.7	0.0403	1.06494
300.0	50.54	3.150	6738.0	8960.0	148.5	28.50	43.81	439.1	12.8	0.0408	1.06326
310.0	48.15	3.001	7063.0	9395.0	149.9	28.77	43.29	448.4	13.0	0.0418	1.06021
320.0	46.02	2.869	7386.0	9827.0	151.3	29.09	42.96	457.3	13.2	0.0429	1.05750
330.0	44.11	2.750	7709.0	10260.0	152.6	29.45	42.77	465.7	13.5	0.0440	1.05507
340.0	42.39	2.642	8033.0	10680.0	153.9	29.85	42.71	473.7	13.7	0.0452	1.05288
350.0	40.82	2.544	8358.0	11110.0	155.1	30.28	42.74	481.4	14.0	0.0465	1.05089
360.0	39.38	2.455	8686.0	11540.0	156.3	30.73	42.85	488.8	14.2	0.0478	1.04906
370.0	38.06	2.372	9016.0	11970.0	157.5	31.21	43.03	495.9	14.5	0.0492	1.04739
380.0	36.83	2.296	9349.0	12400.0	158.6	31.71	43.27	502.8	14.7	0.0506	1.04584
390.0	35.70	2.225	9686.0	12830.0	159.8	32.22	43.55	509.5	15.0	0.0521	1.04441
400.0	34.64	2.159	10030.0	13270.0	160.9	32.75	43.87	516.0	15.2	0.0536	1.04307
410.0	33.65	2.097	10370.0	13710.0	162.0	33.29	44.22	522.3	15.4	0.0551	1.04182
420.0	32.72	2.040	10720.0	14150.0	163.0	33.84	44.61	528.5	15.7	0.0566	1.04066
430.0	31.85	1.985	11080.0	14600.0	164.1	34.40	45.01	534.5	15.9	0.0582	1.03956
440.0	31.03	1.934	11430.0	15050.0	165.1	34.96	45.44	540.4	16.2	0.0598	1.03853
460.0	29.52	1.840	12170.0	15970.0	167.2	36.09	46.33	551.9	16.7	0.0632	1.03663
480.0	28.16	1.756	12920.0	16910.0	169.2	37.23	47.26	562.9	17.2	0.0665	1.03493
500.0	26.94	1.679	13690.0	17860.0	171.1	38.35	48.20	573.7	17.6	0.0700	1.03340
520.0	25.82	1.610	14490.0	18840.0	173.0	39.43	49.14	584.1	18.1	0.0734	1.03200
540.0	24.80	1.546	15300.0	19830.0	174.9	40.47	50.05	594.3	18.6	0.0769	1.03073
560.0	23.87	1.488	16130.0	20840.0	176.7	41.45	50.92	604.4	19.0	0.0803	1.02955
580.0	23.00	1.434	16980.0	21860.0	178.5	42.35	51.72	614.2	19.5	0.0837	1.02848
600.0	22.20	1.384	17850.0	22910.0	180.3	43.16	52.44	624.0	19.9	0.0870	1.02748
					7.50 MPa isobar						
92.59[a]	454.1	28.30	-5699.0	-5434.0	68.25	34.14	52.95	1569.0	211.0	0.227	1.68077
100.0	444.5	27.71	-5311.0	-5040.0	72.34	33.69	53.38	1507.0	171.0	0.215	1.66389
120.0	417.7	26.04	-4243.0	-3955.0	82.23	32.85	55.25	1325.0	107.0	0.183	1.61697
140.0	388.2	24.20	-3136.0	-2826.0	90.93	31.81	57.86	1134.0	74.5	0.155	1.56628
150.0	371.8	23.18	-2561.0	-2238.0	94.98	31.29	59.82	1035.0	63.1	0.141	1.53855
160.0	353.8	22.05	-1967.0	-1626.0	98.93	30.81	62.62	931.5	53.7	0.128	1.50840
170.0	333.4	20.78	-1341.0	-980.6	102.8	30.43	66.88	822.9	45.7	0.115	1.47475
175.0	321.9	20.07	-1013.0	-638.9	104.8	30.29	69.92	765.8	41.9	0.109	1.45608
180.0	309.3	19.28	-668.8	-279.8	106.8	30.21	73.96	706.2	38.4	0.104	1.43570

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
185.0	295.1	18.39	-304.5	103.3	108.9	30.20	79.59	643.3	34.9	0.104	1.41302
190.0	278.6	17.37	88.8	520.7	111.2	30.29	87.98	576.3	31.4	0.229	1.38708
192.0	271.2	16.90	257.4	701.1	112.1	30.37	92.59	548.2	29.9	0.150	1.37544
194.0	263.0	16.40	434.3	891.7	113.1	30.49	98.24	519.3	28.5	0.115	1.36287
196.0	254.1	15.84	621.5	1095.0	114.1	30.64	105.3	489.7	27.0	0.103	1.34914
198.0	244.2	15.22	821.3	1314.0	115.3	30.84	114.1	459.6	25.4	0.0948	1.33402
200.0	233.1	14.53	1036.0	1553.0	116.5	31.09	124.8	429.7	23.8	0.0880	1.31723
201.0	227.1	14.16	1150.0	1680.0	117.1	31.24	130.9	415.2	23.0	0.0849	1.30815
202.0	220.7	13.76	1269.0	1814.0	117.8	31.40	137.2	401.2	22.2	0.0818	1.29859
204.0	206.9	12.90	1520.0	2101.0	119.2	31.73	149.3	375.8	20.5	0.0759	1.27819
206.0	192.3	11.99	1783.0	2409.0	120.7	32.04	157.8	355.6	19.0	0.0704	1.25677
208.0	177.6	11.07	2051.0	2728.0	122.2	32.24	159.8	341.7	17.6	0.0656	1.23562
209.0	170.6	10.64	2182.0	2887.0	123.0	32.28	158.2	336.9	17.0	0.0635	1.22557
210.0	163.9	10.22	2310.0	3044.0	123.7	32.28	155.1	333.4	16.4	0.0616	1.21605
211.0	157.6	9.825	2434.0	3197.0	124.5	32.24	150.8	331.0	15.9	0.0598	1.20714
212.0	151.8	9.459	2552.0	3345.0	125.2	32.16	145.6	329.5	15.5	0.0582	1.19887
213.0	146.3	9.120	2666.0	3488.0	125.8	32.06	139.9	328.7	15.1	0.0568	1.19126
214.0	141.3	8.808	2773.0	3625.0	126.5	31.94	133.9	328.4	14.8	0.0555	1.18429
215.0	136.7	8.521	2876.0	3756.0	127.1	31.80	128.0	328.7	14.5	0.0544	1.17790
216.0	132.5	8.257	2973.0	3881.0	127.7	31.66	122.3	329.3	14.2	0.0533	1.17207
217.0	128.6	8.016	3065.0	4000.0	128.2	31.50	116.8	330.2	14.0	0.0523	1.16674
218.0	125.0	7.794	3152.0	4115.0	128.7	31.35	111.7	331.3	13.8	0.0514	1.16186
219.0	121.8	7.589	3236.0	4224.0	129.2	31.19	107.0	332.5	13.6	0.0506	1.15737
220.0	118.7	7.401	3315.0	4329.0	129.7	31.04	102.6	333.9	13.5	0.0499	1.15325
221.0	115.9	7.226	3391.0	4429.0	130.2	30.89	98.65	335.4	13.3	0.0492	1.14943
222.0	113.3	7.064	3464.0	4526.0	130.6	30.75	95.01	337.0	13.2	0.0485	1.14590
224.0	108.6	6.771	3602.0	4710.0	131.4	30.47	88.63	340.2	13.0	0.0474	1.13956
226.0	104.5	6.515	3730.0	4881.0	132.2	30.22	83.30	343.6	12.8	0.0464	1.13403
228.0	100.9	6.288	3851.0	5043.0	132.9	29.99	78.80	347.0	12.7	0.0456	1.12913
230.0	97.61	6.084	3964.0	5197.0	133.6	29.77	74.97	350.4	12.6	0.0448	1.12477
232.0	94.66	5.901	4073.0	5344.0	134.2	29.58	71.70	353.8	12.5	0.0441	1.12084
234.0	91.99	5.734	4176.0	5484.0	134.8	29.41	68.87	357.1	12.4	0.0436	1.11729
236.0	89.54	5.581	4276.0	5619.0	135.4	29.25	66.41	360.4	12.4	0.0430	1.11404
238.0	87.29	5.441	4371.0	5750.0	135.9	29.11	64.25	363.6	12.3	0.0426	1.11105
240.0	85.20	5.311	4464.0	5877.0	136.5	28.98	62.35	366.7	12.3	0.0422	1.10830
242.0	83.27	5.190	4555.0	6000.0	137.0	28.87	60.66	369.8	12.3	0.0418	1.10575
244.0	81.46	5.078	4642.0	6119.0	137.5	28.77	59.16	372.9	12.3	0.0415	1.10337
246.0	79.77	4.972	4728.0	6236.0	138.0	28.67	57.81	375.8	12.3	0.0412	1.10115
248.0	78.18	4.873	4812.0	6351.0	138.4	28.59	56.59	378.7	12.3	0.0409	1.09906
250.0	76.69	4.780	4894.0	6463.0	138.9	28.52	55.49	381.6	12.3	0.0407	1.09710
255.0	73.29	4.568	5092.0	6734.0	139.9	28.38	53.17	388.5	12.3	0.0403	1.09266
260.0	70.30	4.382	5284.0	6995.0	141.0	28.28	51.31	395.1	12.3	0.0400	1.08876
265.0	67.63	4.216	5469.0	7248.0	141.9	28.23	49.81	401.4	12.4	0.0398	1.08530
270.0	65.24	4.066	5649.0	7494.0	142.8	28.20	48.58	407.5	12.4	0.0398	1.08219
275.0	63.07	3.931	5826.0	7734.0	143.7	28.21	47.56	413.3	12.5	0.0398	1.07938
280.0	61.08	3.807	6000.0	7970.0	144.6	28.24	46.71	418.9	12.6	0.0400	1.07681
285.0	59.26	3.694	6171.0	8201.0	145.4	28.30	46.00	424.3	12.7	0.0403	1.07446
290.0	57.57	3.588	6340.0	8430.0	146.2	28.37	45.41	429.6	12.7	0.0406	1.07229
295.0	56.00	3.491	6507.0	8656.0	147.0	28.46	44.92	434.6	12.8	0.0410	1.07027
300.0	54.55	3.400	6673.0	8879.0	147.7	28.57	44.50	439.5	12.9	0.0414	1.06840
305.0	53.18	3.315	6838.0	9101.0	148.4	28.70	44.16	444.3	13.1	0.0418	1.06665
310.0	51.90	3.235	7003.0	9321.0	149.2	28.84	43.88	448.9	13.2	0.0423	1.06501
320.0	49.56	3.089	7330.0	9757.0	150.5	29.15	43.47	457.8	13.4	0.0434	1.06202
330.0	47.47	2.959	7656.0	10190.0	151.9	29.50	43.23	466.3	13.6	0.0445	1.05935
340.0	45.58	2.841	7983.0	10620.0	153.2	29.90	43.11	474.4	13.8	0.0457	1.05695
350.0	43.87	2.735	8311.0	11050.0	154.4	30.32	43.10	482.1	14.1	0.0469	1.05476
360.0	42.30	2.637	8640.0	11480.0	155.6	30.77	43.18	489.6	14.3	0.0482	1.05277
370.0	40.86	2.547	8973.0	11920.0	156.8	31.24	43.33	496.7	14.6	0.0496	1.05095
380.0	39.53	2.464	9308.0	12350.0	158.0	31.74	43.54	503.7	14.8	0.0510	1.04926
390.0	38.30	2.387	9647.0	12790.0	159.1	32.25	43.80	510.4	15.0	0.0524	1.04770
400.0	37.15	2.316	9989.0	13230.0	160.2	32.78	44.10	516.9	15.3	0.0539	1.04625
410.0	36.08	2.249	10340.0	13670.0	161.3	33.32	44.44	523.3	15.5	0.0554	1.04490

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
420.0	35.08	2.187	10690.0	14120.0	162.4	33.87	44.81	529.5	15.8	0.0570	1.04363
430.0	34.14	2.128	11040.0	14570.0	163.4	34.42	45.20	535.5	16.0	0.0585	1.04245
440.0	33.25	2.073	11400.0	15020.0	164.5	34.98	45.61	541.4	16.3	0.0602	1.04133
460.0	31.62	1.971	12140.0	15940.0	166.5	36.12	46.49	552.9	16.7	0.0634	1.03928
480.0	30.17	1.880	12890.0	16880.0	168.5	37.25	47.40	564.0	17.2	0.0668	1.03745
500.0	28.85	1.798	13670.0	17840.0	170.5	38.37	48.33	574.8	17.7	0.0702	1.03579
520.0	27.65	1.723	14460.0	18810.0	172.4	39.45	49.25	585.3	18.2	0.0737	1.03429
540.0	26.55	1.655	15280.0	19810.0	174.3	40.49	50.15	595.5	18.6	0.0771	1.03292
560.0	25.55	1.592	16110.0	20820.0	176.1	41.47	51.01	605.6	19.1	0.0806	1.03166
580.0	24.62	1.535	16960.0	21850.0	177.9	42.37	51.81	615.4	19.5	0.0839	1.03050
600.0	23.76	1.481	17830.0	22890.0	179.7	43.17	52.52	625.2	20.0	0.0872	1.02942
					8.00 MPa isobar						
92.71[a]	454.2	28.31	-5697.0	-5415.0	68.27	34.15	52.93	1571.0	212.0	0.227	1.68100
100.0	444.9	27.73	-5316.0	-5027.0	72.29	33.71	53.34	1510.0	172.0	0.215	1.66445
120.0	418.2	26.06	-4250.0	-3943.0	82.17	32.87	55.17	1330.0	108.0	0.184	1.61776
140.0	388.9	24.24	-3147.0	-2817.0	90.85	31.83	57.68	1141.0	75.0	0.155	1.56743
150.0	372.7	23.23	-2575.0	-2231.0	94.89	31.30	59.55	1043.0	63.7	0.142	1.54000
160.0	354.9	22.12	-1985.0	-1623.0	98.81	30.82	62.19	941.1	54.3	0.129	1.51028
170.0	335.0	20.88	-1366.0	-983.0	102.7	30.43	66.12	834.9	46.2	0.116	1.47733
180.0	311.7	19.43	-704.8	-293.0	106.6	30.19	72.43	721.8	39.0	0.105	1.43949
185.0	298.1	18.58	-350.0	80.5	108.7	30.15	77.24	661.7	35.6	0.104	1.41785
190.0	282.7	17.62	28.7	482.7	110.8	30.20	84.04	598.6	32.2	0.218	1.39352
195.0	264.7	16.50	441.6	926.5	113.1	30.38	94.23	532.1	28.8	0.108	1.36536
196.0	260.6	16.25	529.6	1022.0	113.6	30.44	96.85	518.4	28.1	0.104	1.35912
198.0	252.0	15.71	712.4	1222.0	114.6	30.58	102.9	490.9	26.7	0.0966	1.34590
200.0	242.6	15.12	905.3	1434.0	115.7	30.76	110.0	463.4	25.3	0.0908	1.33156
202.0	232.3	14.48	1110.0	1662.0	116.8	30.97	118.2	436.6	23.8	0.0854	1.31598
204.0	221.1	13.78	1327.0	1907.0	118.0	31.21	126.9	411.4	22.4	0.0803	1.29911
206.0	208.9	13.02	1555.0	2170.0	119.3	31.47	135.1	389.0	20.9	0.0753	1.28114
208.0	196.3	12.23	1792.0	2446.0	120.7	31.70	140.9	370.7	19.5	0.0707	1.26257
210.0	183.6	11.44	2032.0	2731.0	122.0	31.87	143.0	357.0	18.3	0.0665	1.24415
212.0	171.4	10.69	2267.0	3016.0	123.4	31.93	141.0	347.9	17.2	0.0628	1.22671
213.0	165.7	10.33	2381.0	3155.0	124.0	31.92	138.7	344.8	16.7	0.0612	1.21855
214.0	160.2	9.988	2492.0	3293.0	124.7	31.88	135.6	342.4	16.3	0.0597	1.21082
215.0	155.1	9.667	2599.0	3426.0	125.3	31.82	132.0	340.8	15.9	0.0583	1.20356
216.0	150.3	9.365	2702.0	3557.0	125.9	31.74	128.0	339.8	15.5	0.0571	1.19677
217.0	145.7	9.083	2802.0	3682.0	126.5	31.64	123.8	339.3	15.2	0.0559	1.19044
218.0	141.5	8.820	2897.0	3804.0	127.0	31.53	119.6	339.2	15.0	0.0549	1.18456
219.0	137.6	8.575	2989.0	3922.0	127.6	31.41	115.3	339.4	14.7	0.0539	1.17911
220.0	133.9	8.347	3076.0	4035.0	128.1	31.29	111.2	339.9	14.5	0.0530	1.17404
221.0	130.5	8.134	3161.0	4144.0	128.6	31.16	107.2	340.6	14.3	0.0522	1.16935
222.0	127.3	7.936	3241.0	4249.0	129.1	31.03	103.4	341.6	14.1	0.0515	1.16498
223.0	124.4	7.751	3319.0	4351.0	129.5	30.90	99.85	342.6	14.0	0.0508	1.16092
224.0	121.6	7.578	3394.0	4449.0	130.0	30.77	96.52	343.8	13.8	0.0501	1.15713
226.0	116.6	7.265	3535.0	4636.0	130.8	30.52	90.51	346.4	13.6	0.0489	1.15029
228.0	112.1	6.988	3667.0	4812.0	131.6	30.29	85.33	349.2	13.4	0.0479	1.14427
230.0	108.2	6.742	3791.0	4978.0	132.3	30.07	80.86	352.2	13.2	0.0470	1.13894
232.0	104.6	6.521	3909.0	5136.0	133.0	29.87	77.00	355.2	13.1	0.0462	1.13417
234.0	101.4	6.321	4021.0	5286.0	133.6	29.68	73.65	358.3	13.0	0.0455	1.12987
236.0	98.50	6.140	4127.0	5430.0	134.2	29.51	70.73	361.4	12.9	0.0449	1.12597
238.0	95.83	5.974	4230.0	5569.0	134.8	29.36	68.18	364.5	12.8	0.0443	1.12241
240.0	93.38	5.821	4329.0	5703.0	135.4	29.22	65.93	367.5	12.7	0.0438	1.11914
242.0	91.11	5.679	4425.0	5833.0	135.9	29.10	63.94	370.5	12.7	0.0434	1.11613
244.0	89.01	5.548	4517.0	5959.0	136.4	28.98	62.17	373.5	12.7	0.0430	1.11333
246.0	87.04	5.425	4607.0	6082.0	136.9	28.88	60.58	376.4	12.6	0.0426	1.11074
248.0	85.20	5.311	4695.0	6202.0	137.4	28.79	59.16	379.3	12.6	0.0423	1.10831
250.0	83.48	5.203	4781.0	6319.0	137.9	28.71	57.87	382.1	12.6	0.0420	1.10603
252.0	81.85	5.102	4865.0	6433.0	138.3	28.64	56.71	384.9	12.6	0.0418	1.10389
255.0	79.59	4.961	4988.0	6601.0	139.0	28.55	55.17	389.0	12.6	0.0415	1.10091
260.0	76.18	4.749	5187.0	6871.0	140.1	28.43	53.02	395.6	12.6	0.0411	1.09645
265.0	73.17	4.561	5378.0	7132.0	141.0	28.36	51.29	401.9	12.6	0.0408	1.09251

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
270.0	70.48	4.393	5564.0	7385.0	142.0	28.32	49.87	408.0	12.7	0.0407	1.08900
275.0	68.04	4.241	5745.0	7631.0	142.9	28.32	48.70	413.8	12.7	0.0407	1.08584
280.0	65.83	4.103	5922.0	7872.0	143.8	28.34	47.73	419.4	12.8	0.0408	1.08296
285.0	63.80	3.977	6097.0	8109.0	144.6	28.39	46.92	424.9	12.9	0.0410	1.08034
290.0	61.93	3.861	6269.0	8342.0	145.4	28.45	46.25	430.1	12.9	0.0412	1.07792
295.0	60.21	3.753	6440.0	8571.0	146.2	28.54	45.68	435.2	13.0	0.0416	1.07569
300.0	58.60	3.653	6608.0	8798.0	147.0	28.65	45.20	440.2	13.1	0.0420	1.07362
305.0	57.10	3.559	6776.0	9023.0	147.7	28.76	44.81	444.9	13.2	0.0424	1.07169
310.0	55.70	3.472	6942.0	9247.0	148.4	28.90	44.48	449.6	13.3	0.0429	1.06988
320.0	53.13	3.312	7273.0	9689.0	149.8	29.20	43.99	458.6	13.5	0.0439	1.06660
330.0	50.85	3.170	7603.0	10130.0	151.2	29.55	43.68	467.1	13.7	0.0450	1.06367
340.0	48.80	3.042	7933.0	10560.0	152.5	29.94	43.52	475.2	14.0	0.0462	1.06105
350.0	46.93	2.925	8263.0	11000.0	153.7	30.36	43.47	483.0	14.2	0.0474	1.05867
360.0	45.23	2.820	8595.0	11430.0	155.0	30.81	43.51	490.4	14.4	0.0487	1.05650
370.0	43.68	2.722	8930.0	11870.0	156.2	31.28	43.63	497.6	14.7	0.0500	1.05452
380.0	42.24	2.633	9267.0	12310.0	157.3	31.77	43.81	504.6	14.9	0.0514	1.05270
390.0	40.91	2.550	9607.0	12740.0	158.5	32.28	44.05	511.4	15.1	0.0528	1.05101
400.0	39.67	2.473	9951.0	13190.0	159.6	32.81	44.33	517.9	15.4	0.0543	1.04944
410.0	38.52	2.401	10300.0	13630.0	160.7	33.34	44.65	524.3	15.6	0.0558	1.04798
420.0	37.44	2.334	10650.0	14080.0	161.8	33.89	45.01	530.5	15.9	0.0573	1.04662
430.0	36.43	2.271	11010.0	14530.0	162.8	34.45	45.39	536.6	16.1	0.0589	1.04534
440.0	35.47	2.211	11370.0	14990.0	163.9	35.01	45.79	542.5	16.3	0.0605	1.04413
460.0	33.73	2.102	12110.0	15910.0	165.9	36.14	46.64	554.0	16.8	0.0637	1.04193
480.0	32.16	2.005	12860.0	16850.0	167.9	37.27	47.54	565.2	17.3	0.0671	1.03996
500.0	30.75	1.917	13640.0	17810.0	169.9	38.39	48.45	575.9	17.8	0.0705	1.03819
520.0	29.47	1.837	14440.0	18790.0	171.8	39.47	49.37	586.4	18.2	0.0739	1.03657
540.0	28.30	1.764	15250.0	19790.0	173.7	40.51	50.26	596.7	18.7	0.0774	1.03510
560.0	27.22	1.697	16090.0	20800.0	175.5	41.48	51.11	606.8	19.1	0.0808	1.03376
580.0	26.23	1.635	16940.0	21830.0	177.3	42.38	51.89	616.7	19.6	0.0842	1.03252
600.0	25.32	1.578	17810.0	22880.0	179.1	43.19	52.60	626.5	20.0	0.0874	1.03137
					9.00 MPa isobar						
92.96[a]	454.6	28.33	-5693.0	-5375.0	68.31	34.16	52.87	1575.0	213.0	0.228	1.68144
100.0	445.6	27.77	-5326.0	-5002.0	72.18	33.74	53.25	1518.0	174.0	0.216	1.66557
120.0	419.1	26.12	-4265.0	-3920.0	82.04	32.91	55.00	1340.0	109.0	0.185	1.61930
140.0	390.3	24.33	-3168.0	-2798.0	90.68	31.87	57.34	1154.0	76.1	0.157	1.56969
150.0	374.4	23.34	-2602.0	-2217.0	94.69	31.33	59.04	1058.0	64.7	0.143	1.54282
160.0	357.2	22.26	-2020.0	-1615.0	98.57	30.85	61.39	959.5	55.3	0.130	1.51391
170.0	338.0	21.07	-1413.0	-985.7	102.4	30.44	64.77	857.6	47.4	0.118	1.48219
180.0	316.0	19.70	-771.1	-314.2	106.2	30.16	69.91	750.9	40.3	0.107	1.44644
185.0	303.6	18.92	-431.5	44.1	108.2	30.09	73.56	695.3	37.0	0.105	1.42646
190.0	289.8	18.06	-75.0	423.3	110.2	30.08	78.36	638.0	33.9	0.197	1.40455
195.0	274.2	17.09	303.9	830.5	112.3	30.15	84.83	579.0	30.7	0.108	1.38015
196.0	270.8	16.88	383.0	916.1	112.8	30.18	86.39	567.0	30.1	0.105	1.37490
198.0	263.8	16.44	544.9	1092.0	113.7	30.25	89.80	543.0	28.8	0.0989	1.36399
200.0	256.3	15.98	712.3	1276.0	114.6	30.34	93.66	519.1	27.6	0.0943	1.35247
202.0	248.4	15.48	885.8	1467.0	115.5	30.45	97.96	495.5	26.3	0.0901	1.34030
204.0	239.9	14.95	1066.0	1668.0	116.5	30.58	102.6	472.5	25.1	0.0861	1.32742
206.0	230.9	14.39	1253.0	1878.0	117.5	30.73	107.5	450.6	23.8	0.0822	1.31386
208.0	221.5	13.80	1446.0	2098.0	118.6	30.89	112.2	430.3	22.6	0.0783	1.29968
210.0	211.6	13.19	1644.0	2326.0	119.7	31.05	116.3	412.2	21.5	0.0746	1.28506
215.0	186.5	11.63	2148.0	2922.0	122.5	31.32	120.5	379.5	18.8	0.0662	1.24840
216.0	181.7	11.32	2248.0	3043.0	123.1	31.34	120.1	375.1	18.4	0.0647	1.24140
218.0	172.3	10.74	2443.0	3281.0	124.2	31.34	118.0	368.4	17.6	0.0620	1.22802
220.0	163.6	10.20	2632.0	3514.0	125.2	31.27	114.6	363.8	16.9	0.0597	1.21562
222.0	155.6	9.701	2811.0	3739.0	126.2	31.16	110.3	361.1	16.3	0.0576	1.20432
224.0	148.4	9.247	2981.0	3955.0	127.2	31.02	105.4	359.9	15.8	0.0558	1.19412
226.0	141.8	8.838	3142.0	4160.0	128.1	30.85	100.3	359.7	15.3	0.0542	1.18497
228.0	135.9	8.470	3294.0	4356.0	129.0	30.67	95.41	360.3	15.0	0.0529	1.17678
230.0	130.6	8.139	3437.0	4542.0	129.8	30.48	90.76	361.5	14.7	0.0517	1.16946
232.0	125.8	7.841	3572.0	4719.0	130.6	30.29	86.46	363.2	14.4	0.0506	1.16289
234.0	121.5	7.571	3700.0	4888.0	131.3	30.11	82.56	365.2	14.2	0.0497	1.15697

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
236.0	117.5	7.326	3821.0	5050.0	132.0	29.94	79.05	367.4	14.0	0.0488	1.15162
238.0	114.0	7.103	3938.0	5205.0	132.6	29.78	75.89	369.7	13.9	0.0480	1.14677
240.0	110.7	6.899	4049.0	5354.0	133.3	29.63	73.07	372.2	13.8	0.0474	1.14234
242.0	107.7	6.711	4156.0	5497.0	133.9	29.50	70.55	374.7	13.7	0.0468	1.13828
244.0	104.9	6.538	4260.0	5636.0	134.4	29.37	68.29	377.3	13.6	0.0462	1.13454
246.0	102.3	6.378	4359.0	5771.0	135.0	29.25	66.25	379.9	13.5	0.0457	1.13108
248.0	99.92	6.228	4456.0	5901.0	135.5	29.15	64.43	382.5	13.4	0.0452	1.12787
250.0	97.68	6.089	4550.0	6028.0	136.0	29.05	62.78	385.1	13.4	0.0448	1.12488
252.0	95.59	5.958	4642.0	6152.0	136.5	28.97	61.28	387.7	13.3	0.0445	1.12209
254.0	93.62	5.836	4731.0	6274.0	137.0	28.89	59.93	390.3	13.3	0.0441	1.11947
256.0	91.77	5.720	4819.0	6392.0	137.5	28.82	58.70	392.9	13.3	0.0438	1.11701
260.0	88.37	5.508	4989.0	6623.0	138.3	28.71	56.54	397.9	13.2	0.0433	1.11250
265.0	84.59	5.273	5193.0	6900.0	139.4	28.61	54.33	404.1	13.2	0.0429	1.10751
270.0	81.24	5.064	5389.0	7167.0	140.4	28.55	52.53	410.0	13.2	0.0425	1.10310
275.0	78.25	4.877	5580.0	7425.0	141.4	28.53	51.05	415.8	13.2	0.0424	1.09916
280.0	75.54	4.708	5766.0	7678.0	142.3	28.53	49.83	421.4	13.2	0.0424	1.09562
285.0	73.07	4.555	5948.0	7924.0	143.1	28.56	48.80	426.8	13.3	0.0425	1.09240
290.0	70.82	4.414	6127.0	8166.0	144.0	28.62	47.95	432.0	13.4	0.0426	1.08945
295.0	68.74	4.285	6303.0	8404.0	144.8	28.69	47.22	437.1	13.4	0.0429	1.08675
300.0	66.82	4.165	6477.0	8638.0	145.6	28.78	46.62	442.0	13.5	0.0433	1.08425
305.0	65.03	4.054	6650.0	8870.0	146.3	28.89	46.11	446.8	13.6	0.0436	1.08194
310.0	63.37	3.950	6821.0	9100.0	147.1	29.02	45.68	451.5	13.7	0.0441	1.07978
320.0	60.34	3.761	7160.0	9553.0	148.5	29.31	45.03	460.5	13.8	0.0450	1.07587
330.0	57.66	3.594	7497.0	10000.0	149.9	29.65	44.59	469.0	14.0	0.0460	1.07241
340.0	55.26	3.444	7832.0	10450.0	151.2	30.03	44.32	477.2	14.2	0.0471	1.06933
350.0	53.09	3.309	8168.0	10890.0	152.5	30.44	44.19	485.0	14.4	0.0483	1.06655
360.0	51.12	3.186	8505.0	11330.0	153.8	30.88	44.16	492.5	14.7	0.0495	1.06402
370.0	49.32	3.074	8843.0	11770.0	155.0	31.35	44.22	499.8	14.9	0.0508	1.06172
380.0	47.66	2.971	9184.0	12210.0	156.1	31.83	44.35	506.8	15.1	0.0522	1.05960
390.0	46.13	2.875	9528.0	12660.0	157.3	32.34	44.55	513.5	15.3	0.0536	1.05765
400.0	44.71	2.787	9876.0	13110.0	158.4	32.86	44.79	520.1	15.6	0.0550	1.05584
410.0	43.39	2.705	10230.0	13550.0	159.5	33.40	45.08	526.5	15.8	0.0565	1.05416
420.0	42.15	2.628	10580.0	14010.0	160.6	33.94	45.40	532.8	16.0	0.0580	1.05260
430.0	41.00	2.556	10940.0	14460.0	161.7	34.50	45.76	538.9	16.3	0.0595	1.05113
440.0	39.91	2.488	11300.0	14920.0	162.8	35.06	46.14	544.8	16.5	0.0611	1.04975
460.0	37.93	2.364	12050.0	15850.0	164.8	36.18	46.95	556.4	17.0	0.0643	1.04724
480.0	36.15	2.253	12810.0	16800.0	166.8	37.31	47.81	567.6	17.4	0.0677	1.04499
500.0	34.55	2.153	13590.0	17770.0	168.8	38.42	48.70	578.4	17.9	0.0710	1.04297
520.0	33.10	2.063	14390.0	18750.0	170.7	39.51	49.59	588.9	18.3	0.0744	1.04114
540.0	31.77	1.980	15200.0	19750.0	172.6	40.54	50.46	599.2	18.8	0.0779	1.03947
560.0	30.56	1.905	16040.0	20770.0	174.5	41.52	51.29	609.3	19.2	0.0813	1.03795
580.0	29.44	1.835	16900.0	21800.0	176.3	42.42	52.06	619.2	19.7	0.0846	1.03654
600.0	28.41	1.771	17770.0	22850.0	178.1	43.22	52.76	629.0	20.1	0.0878	1.03525
					10.00 MPa isobar						
93.21[a]	454.9	28.35	-5688.0	-5336.0	68.36	34.17	52.82	1580.0	213.0	0.228	1.68188
100.0	446.2	27.82	-5336.0	-4976.0	72.08	33.78	53.17	1525.0	175.0	0.217	1.66668
120.0	420.0	26.18	-4279.0	-3897.0	81.92	32.94	54.84	1349.0	111.0	0.186	1.62082
140.0	391.6	24.41	-3189.0	-2780.0	90.52	31.90	57.02	1167.0	77.2	0.158	1.57189
150.0	376.1	23.44	-2629.0	-2202.0	94.51	31.37	58.57	1073.0	65.7	0.145	1.54553
160.0	359.3	22.39	-2053.0	-1606.0	98.35	30.87	60.68	977.2	56.4	0.132	1.51735
170.0	340.8	21.24	-1456.0	-985.7	102.1	30.45	63.62	878.9	48.5	0.120	1.48672
180.0	319.9	19.94	-831.0	-329.5	105.9	30.14	67.89	777.5	41.5	0.109	1.45271
185.0	308.3	19.22	-503.4	16.9	107.8	30.04	70.78	725.4	38.3	0.107	1.43401
190.0	295.7	18.43	-163.1	379.5	109.7	29.99	74.38	672.3	35.3	0.181	1.41387
195.0	281.8	17.56	193.0	762.3	111.7	30.01	78.94	618.5	32.3	0.108	1.39196
200.0	266.4	16.60	568.6	1171.0	113.8	30.09	84.69	564.6	29.4	0.0965	1.36789
202.0	259.7	16.19	725.1	1343.0	114.6	30.15	87.37	543.3	28.3	0.0931	1.35757
204.0	252.7	15.75	885.5	1520.0	115.5	30.22	90.23	522.4	27.2	0.0899	1.34683
206.0	245.4	15.29	1050.0	1704.0	116.4	30.31	93.23	502.1	26.1	0.0867	1.33566
208.0	237.7	14.82	1219.0	1893.0	117.3	30.40	96.29	482.6	25.0	0.0835	1.32408
210.0	229.8	14.32	1391.0	2089.0	118.2	30.50	99.26	464.3	23.9	0.0803	1.31213

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
215.0	209.1	13.03	1834.0	2601.0	120.6	30.75	105.0	425.7	21.4	0.0727	1.28127
220.0	188.3	11.74	2279.0	3132.0	123.1	30.89	106.2	399.5	19.3	0.0660	1.25090
222.0	180.4	11.24	2454.0	3343.0	124.0	30.89	105.2	392.5	18.5	0.0637	1.23948
224.0	172.8	10.77	2623.0	3552.0	125.0	30.85	103.3	387.3	17.9	0.0616	1.22867
226.0	165.7	10.33	2788.0	3756.0	125.9	30.79	100.9	383.5	17.3	0.0598	1.21855
228.0	159.1	9.915	2946.0	3955.0	126.8	30.70	97.95	381.0	16.8	0.0581	1.20915
230.0	152.9	9.531	3098.0	4148.0	127.6	30.58	94.76	379.5	16.4	0.0566	1.20049
232.0	147.2	9.177	3244.0	4334.0	128.4	30.46	91.43	378.9	16.0	0.0552	1.19254
234.0	142.0	8.851	3384.0	4513.0	129.2	30.33	88.10	378.9	15.7	0.0540	1.18526
236.0	137.2	8.552	3517.0	4686.0	129.9	30.19	84.87	379.5	15.4	0.0529	1.17859
238.0	132.8	8.276	3645.0	4853.0	130.6	30.05	81.78	380.5	15.2	0.0520	1.17249
240.0	128.7	8.023	3767.0	5014.0	131.3	29.92	78.89	381.8	15.0	0.0511	1.16689
242.0	125.0	7.789	3885.0	5169.0	131.9	29.79	76.20	383.4	14.8	0.0503	1.16175
244.0	121.5	7.573	3998.0	5318.0	132.5	29.66	73.71	385.2	14.6	0.0496	1.15701
246.0	118.3	7.372	4107.0	5464.0	133.1	29.55	71.43	387.1	14.5	0.0489	1.15264
248.0	115.3	7.186	4213.0	5604.0	133.7	29.44	69.34	389.1	14.4	0.0483	1.14858
250.0	112.5	7.013	4315.0	5741.0	134.3	29.34	67.43	391.2	14.3	0.0478	1.14481
252.0	109.9	6.851	4414.0	5874.0	134.8	29.25	65.68	393.4	14.2	0.0473	1.14130
254.0	107.5	6.699	4511.0	6004.0	135.3	29.17	64.08	395.6	14.1	0.0468	1.13802
256.0	105.2	6.557	4605.0	6131.0	135.8	29.09	62.62	397.9	14.0	0.0464	1.13494
258.0	103.0	6.423	4697.0	6254.0	136.3	29.02	61.28	400.1	14.0	0.0461	1.13205
260.0	101.0	6.296	4787.0	6376.0	136.7	28.96	60.05	402.4	13.9	0.0457	1.12933
265.0	96.39	6.008	5005.0	6669.0	137.9	28.84	57.39	408.1	13.8	0.0450	1.12317
270.0	92.33	5.755	5213.0	6950.0	138.9	28.77	55.21	413.7	13.8	0.0445	1.11776
275.0	88.72	5.530	5414.0	7222.0	139.9	28.72	53.42	419.2	13.8	0.0442	1.11297
280.0	85.48	5.328	5608.0	7485.0	140.9	28.71	51.94	424.6	13.8	0.0441	1.10869
285.0	82.55	5.145	5798.0	7742.0	141.8	28.73	50.70	429.8	13.8	0.0440	1.10482
290.0	79.87	4.979	5984.0	7993.0	142.6	28.77	49.66	434.9	13.8	0.0441	1.10130
295.0	77.42	4.826	6166.0	8239.0	143.5	28.83	48.78	439.9	13.8	0.0443	1.09809
300.0	75.16	4.685	6346.0	8481.0	144.3	28.91	48.04	444.8	13.9	0.0446	1.09513
305.0	73.07	4.555	6524.0	8719.0	145.1	29.02	47.41	449.5	14.0	0.0449	1.09240
310.0	71.13	4.434	6699.0	8955.0	145.8	29.13	46.88	454.2	14.0	0.0453	1.08987
315.0	69.32	4.321	6874.0	9188.0	146.6	29.27	46.44	458.7	14.1	0.0457	1.08750
320.0	67.62	4.215	7047.0	9419.0	147.3	29.41	46.06	463.1	14.2	0.0461	1.08530
330.0	64.52	4.022	7390.0	9877.0	148.7	29.74	45.50	471.6	14.3	0.0471	1.08128
340.0	61.76	3.849	7732.0	10330.0	150.1	30.11	45.12	479.7	14.5	0.0481	1.07770
350.0	59.27	3.695	8073.0	10780.0	151.4	30.51	44.90	487.5	14.7	0.0492	1.07450
360.0	57.02	3.554	8415.0	11230.0	152.7	30.95	44.80	495.0	14.9	0.0504	1.07160
370.0	54.97	3.426	8758.0	11680.0	153.9	31.41	44.80	502.3	15.1	0.0517	1.06896
380.0	53.09	3.309	9103.0	12120.0	155.1	31.90	44.89	509.3	15.3	0.0530	1.06655
390.0	51.35	3.201	9450.0	12570.0	156.2	32.40	45.04	516.0	15.5	0.0543	1.06433
400.0	49.75	3.101	9801.0	13030.0	157.4	32.92	45.25	522.6	15.8	0.0557	1.06227
410.0	48.25	3.008	10150.0	13480.0	158.5	33.45	45.50	529.0	16.0	0.0572	1.06037
420.0	46.86	2.921	10510.0	13940.0	159.6	33.99	45.79	535.3	16.2	0.0587	1.05859
430.0	45.56	2.840	10870.0	14400.0	160.7	34.55	46.12	541.4	16.4	0.0602	1.05693
440.0	44.34	2.764	11240.0	14860.0	161.8	35.10	46.48	547.4	16.7	0.0617	1.05538
460.0	42.11	2.625	11990.0	15800.0	163.8	36.23	47.25	559.0	17.1	0.0649	1.05254
480.0	40.12	2.501	12750.0	16750.0	165.9	37.35	48.08	570.1	17.6	0.0682	1.05002
500.0	38.33	2.389	13530.0	17720.0	167.8	38.46	48.94	581.0	18.0	0.0716	1.04775
520.0	36.71	2.288	14340.0	18710.0	169.8	39.54	49.81	591.5	18.5	0.0750	1.04570
540.0	35.23	2.196	15160.0	19710.0	171.7	40.58	50.66	601.8	18.9	0.0784	1.04383
560.0	33.88	2.112	16000.0	20730.0	173.5	41.55	51.48	611.9	19.3	0.0817	1.04213
580.0	32.63	2.034	16850.0	21770.0	175.4	42.45	52.23	621.8	19.8	0.0851	1.04056
600.0	31.49	1.963	17730.0	22820.0	177.1	43.25	52.91	631.7	20.2	0.0883	1.03912
					12.00 MPa isobar						
93.71[a]	455.5	28.39	-5680.0	-5257.0	68.45	34.20	52.71	1588.0	215.0	0.229	1.68274
100.0	447.6	27.90	-5355.0	-4925.0	71.88	33.84	53.02	1539.0	179.0	0.219	1.66884
120.0	421.8	26.29	-4306.0	-3850.0	81.67	33.01	54.55	1368.0	113.0	0.188	1.62377
140.0	394.2	24.57	-3229.0	-2741.0	90.22	31.97	56.44	1191.0	79.2	0.160	1.57609
160.0	363.2	22.64	-2115.0	-1585.0	97.93	30.93	59.45	1010.0	58.4	0.135	1.52379

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
170.0	345.9	21.56	-1536.0	-979.3	101.6	30.49	61.74	918.4	50.5	0.123	1.49498
180.0	326.8	20.37	-936.4	-347.2	105.2	30.14	64.84	825.1	43.7	0.112	1.46370
190.0	305.4	19.04	-309.2	321.2	108.8	29.91	69.08	731.1	37.8	0.157	1.42922
200.0	281.0	17.52	354.3	1039.0	112.5	29.83	74.85	637.8	32.4	0.0995	1.39063
205.0	267.5	16.67	702.5	1422.0	114.4	29.86	78.35	592.7	29.9	0.0934	1.36952
210.0	252.9	15.77	1062.0	1833.0	116.3	29.94	82.09	550.0	27.5	0.0876	1.34717
215.0	237.5	14.81	1433.0	2243.0	118.3	30.04	85.68	511.4	25.3	0.0818	1.32376
220.0	221.6	13.81	1810.0	2679.0	120.3	30.15	88.42	478.6	23.3	0.0761	1.29979
225.0	205.5	12.81	2188.0	3125.0	122.3	30.23	89.60	453.0	21.5	0.0708	1.27606
230.0	190.1	11.85	2559.0	3571.0	124.3	30.24	88.81	434.9	19.9	0.0661	1.25354
232.0	184.2	11.48	2703.0	3748.0	125.0	30.22	87.96	429.5	19.4	0.0644	1.24505
234.0	178.6	11.13	2845.0	3923.0	125.8	30.19	86.85	425.1	18.9	0.0628	1.23691
236.0	173.2	10.79	2984.0	4095.0	126.5	30.14	85.52	421.7	18.5	0.0614	1.22916
238.0	168.0	10.47	3119.0	4265.0	127.2	30.09	84.00	418.9	18.1	0.0601	1.22180
240.0	163.1	10.17	3251.0	4431.0	127.9	30.02	82.36	416.9	17.7	0.0589	1.21484
242.0	158.5	9.877	3379.0	4594.0	128.6	29.96	80.63	415.5	17.4	0.0577	1.20827
244.0	154.1	9.603	3504.0	4754.0	129.3	29.88	78.84	414.6	17.1	0.0567	1.20209
246.0	149.9	9.344	3626.0	4910.0	129.9	29.81	77.05	414.1	16.8	0.0557	1.19627
248.0	146.0	9.101	3743.0	5062.0	130.5	29.73	75.27	414.1	16.6	0.0549	1.19081
250.0	142.3	8.871	3858.0	5211.0	131.1	29.66	73.53	414.3	16.4	0.0540	1.18568
252.0	138.8	8.654	3970.0	5356.0	131.7	29.58	71.84	414.8	16.2	0.0533	1.18086
254.0	135.6	8.450	4078.0	5498.0	132.3	29.51	70.23	415.6	16.0	0.0526	1.17633
256.0	132.5	8.257	4184.0	5637.0	132.8	29.44	68.68	416.5	15.9	0.0520	1.17207
258.0	129.6	8.075	4287.0	5773.0	133.3	29.38	67.22	417.6	15.7	0.0514	1.16805
260.0	126.8	7.903	4388.0	5906.0	133.9	29.32	65.84	418.9	15.6	0.0509	1.16426
262.0	124.2	7.741	4486.0	6036.0	134.3	29.27	64.53	420.3	15.5	0.0504	1.16069
265.0	120.5	7.512	4630.0	6227.0	135.1	29.20	62.73	422.5	15.4	0.0497	1.15569
270.0	115.0	7.168	4860.0	6534.0	136.2	29.11	60.08	426.5	15.2	0.0488	1.14819
275.0	110.1	6.864	5081.0	6829.0	137.3	29.05	57.83	430.8	15.0	0.0482	1.14158
280.0	105.8	6.592	5293.0	7113.0	138.3	29.02	55.93	435.2	14.9	0.0477	1.13571
285.0	101.8	6.348	5498.0	7389.0	139.3	29.02	54.32	439.7	14.9	0.0474	1.13044
290.0	98.28	6.126	5698.0	7657.0	140.2	29.04	52.95	444.2	14.8	0.0473	1.12569
295.0	95.05	5.924	5893.0	7918.0	141.1	29.09	51.79	448.7	14.8	0.0473	1.12138
300.0	92.08	5.739	6084.0	8175.0	142.0	29.15	50.80	453.1	14.8	0.0474	1.11743
305.0	89.35	5.569	6272.0	8427.0	142.8	29.24	49.95	457.5	14.8	0.0476	1.11381
310.0	86.82	5.412	6457.0	8675.0	143.6	29.35	49.23	461.9	14.8	0.0479	1.11046
315.0	84.47	5.265	6640.0	8919.0	144.4	29.47	48.61	466.1	14.9	0.0482	1.10736
320.0	82.28	5.129	6821.0	9161.0	145.2	29.60	48.09	470.3	14.9	0.0485	1.10448
325.0	80.23	5.001	7001.0	9400.0	145.9	29.75	47.64	474.4	15.0	0.0489	1.10179
330.0	78.31	4.881	7179.0	9637.0	146.6	29.91	47.26	478.5	15.0	0.0493	1.09926
340.0	74.80	4.663	7533.0	10110.0	148.0	30.26	46.68	486.4	15.1	0.0502	1.09467
350.0	71.66	4.467	7885.0	10570.0	149.4	30.66	46.29	494.0	15.3	0.0512	1.09057
360.0	68.83	4.291	8236.0	11030.0	150.7	31.08	46.06	501.3	15.5	0.0522	1.08688
370.0	66.27	4.130	8588.0	11490.0	152.0	31.54	45.94	508.4	15.6	0.0534	1.08355
380.0	63.92	3.984	8941.0	11950.0	153.2	32.01	45.92	515.3	15.8	0.0546	1.08051
390.0	61.77	3.850	9295.0	12410.0	154.4	32.51	45.99	522.0	16.0	0.0559	1.07773
400.0	59.78	3.726	9652.0	12870.0	155.5	33.02	46.12	528.5	16.2	0.0572	1.07516
410.0	57.94	3.612	10010.0	13330.0	156.7	33.55	46.31	534.9	16.4	0.0586	1.07279
420.0	56.23	3.505	10380.0	13800.0	157.8	34.09	46.55	541.1	16.6	0.0601	1.07059
430.0	54.63	3.406	10740.0	14270.0	158.9	34.64	46.83	547.2	16.8	0.0615	1.06854
440.0	53.14	3.312	11110.0	14740.0	160.0	35.19	47.14	553.1	17.0	0.0630	1.06662
450.0	51.74	3.225	11490.0	15210.0	161.0	35.75	47.48	558.9	17.2	0.0646	1.06483
460.0	50.42	3.143	11870.0	15690.0	162.1	36.31	47.84	564.6	17.4	0.0662	1.06314
480.0	48.00	2.992	12640.0	16650.0	164.1	37.43	48.61	575.8	17.9	0.0694	1.06004
500.0	45.83	2.856	13430.0	17630.0	166.1	38.54	49.41	586.6	18.3	0.0727	1.05727
520.0	43.87	2.734	14240.0	18630.0	168.1	39.61	50.24	597.1	18.7	0.0760	1.05478
540.0	42.08	2.623	15060.0	19640.0	170.0	40.65	51.05	607.4	19.1	0.0794	1.05251
560.0	40.45	2.522	15910.0	20670.0	171.9	41.62	51.83	617.5	19.6	0.0827	1.05045
580.0	38.96	2.428	16770.0	21710.0	173.7	42.51	52.56	627.4	20.0	0.0860	1.04855
600.0	37.58	2.342	17650.0	22770.0	175.5	43.31	53.21	637.2	20.4	0.0892	1.04680

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					14.00 MPa isobar						
94.21[a]	456.1	28.43	-5671.0	-5178.0	68.53	34.22	52.62	1597.0	216.0	0.230	1.68360
120.0	423.6	26.40	-4332.0	-3802.0	81.44	33.07	54.28	1386.0	116.0	0.190	1.62661
140.0	396.6	24.72	-3267.0	-2701.0	89.92	32.03	55.93	1215.0	81.3	0.163	1.58008
160.0	366.8	22.86	-2171.0	-1559.0	97.54	30.98	58.43	1041.0	60.2	0.138	1.52970
170.0	350.4	21.84	-1607.0	-966.2	101.1	30.53	60.25	954.3	52.4	0.126	1.50238
180.0	332.7	20.74	-1028.0	-352.4	104.6	30.15	62.60	867.3	45.8	0.116	1.47320
190.0	313.3	19.53	-428.9	288.1	108.1	29.87	65.61	781.0	40.0	0.142	1.44174
200.0	291.8	18.19	192.8	962.4	111.6	29.71	69.37	696.8	34.8	0.102	1.40761
205.0	280.3	17.47	513.2	1314.0	113.3	29.67	71.49	656.4	32.5	0.0968	1.38947
210.0	268.2	16.72	840.1	1677.0	115.1	29.67	73.72	617.8	30.3	0.0922	1.37063
215.0	255.6	15.93	1173.0	2052.0	116.8	29.70	75.90	581.8	28.2	0.0875	1.35117
220.0	242.6	15.12	1510.0	2436.0	118.6	29.74	77.83	549.2	26.3	0.0829	1.33129
230.0	216.1	13.47	2188.0	3227.0	122.1	29.82	79.91	497.6	23.0	0.0739	1.29158
235.0	203.2	12.67	2521.0	3627.0	123.8	29.83	79.66	479.3	21.6	0.0698	1.27261
240.0	191.0	11.90	2846.0	4022.0	125.5	29.81	78.49	465.7	20.5	0.0662	1.25477
245.0	179.6	11.20	3160.0	4410.0	127.1	29.75	76.56	456.3	19.5	0.0631	1.23835
250.0	169.2	10.55	3460.0	4787.0	128.6	29.67	74.09	450.3	18.7	0.0604	1.22350
255.0	159.8	9.963	3746.0	5151.0	130.0	29.57	71.34	447.0	18.0	0.0581	1.21021
260.0	151.4	9.440	4017.0	5500.0	131.4	29.47	68.54	445.7	17.5	0.0562	1.19841
265.0	144.0	8.973	4276.0	5836.0	132.7	29.39	65.84	445.9	17.1	0.0547	1.18795
270.0	137.3	8.556	4523.0	6159.0	133.9	29.31	63.33	447.2	16.7	0.0534	1.17867
275.0	131.3	8.183	4759.0	6470.0	135.0	29.26	61.07	449.3	16.5	0.0524	1.17041
280.0	125.9	7.848	4986.0	6770.0	136.1	29.24	59.07	451.9	16.3	0.0517	1.16303
285.0	121.0	7.545	5206.0	7061.0	137.1	29.23	57.30	455.0	16.1	0.0511	1.15640
290.0	116.6	7.271	5418.0	7344.0	138.1	29.25	55.76	458.3	16.0	0.0508	1.15042
295.0	112.6	7.021	5625.0	7619.0	139.1	29.29	54.42	461.8	15.9	0.0506	1.14499
300.0	109.0	6.793	5827.0	7888.0	140.0	29.35	53.25	465.5	15.8	0.0505	1.14004
305.0	105.6	6.582	6025.0	8152.0	140.8	29.43	52.24	469.2	15.8	0.0505	1.13550
310.0	102.5	6.388	6219.0	8411.0	141.7	29.53	51.37	472.9	15.7	0.0506	1.13132
315.0	99.60	6.208	6411.0	8666.0	142.5	29.64	50.61	476.6	15.7	0.0508	1.12745
320.0	96.92	6.041	6600.0	8917.0	143.3	29.77	49.96	480.4	15.7	0.0510	1.12387
325.0	94.41	5.885	6786.0	9165.0	144.1	29.91	49.39	484.1	15.7	0.0513	1.12053
330.0	92.07	5.739	6971.0	9411.0	144.8	30.06	48.91	487.8	15.8	0.0516	1.11741
340.0	87.79	5.472	7338.0	9896.0	146.3	30.41	48.15	495.2	15.8	0.0523	1.11175
350.0	83.99	5.235	7701.0	10370.0	147.6	30.79	47.60	502.3	15.9	0.0532	1.10673
360.0	80.57	5.022	8061.0	10850.0	149.0	31.21	47.24	509.3	16.0	0.0542	1.10223
370.0	77.48	4.830	8421.0	11320.0	150.3	31.65	47.01	516.1	16.2	0.0552	1.09818
380.0	74.67	4.654	8782.0	11790.0	151.5	32.12	46.90	522.8	16.3	0.0563	1.09450
390.0	72.10	4.494	9143.0	12260.0	152.7	32.61	46.89	529.3	16.5	0.0575	1.09114
400.0	69.73	4.346	9506.0	12730.0	153.9	33.12	46.95	535.6	16.6	0.0588	1.08805
410.0	67.54	4.210	9872.0	13200.0	155.1	33.65	47.08	541.8	16.8	0.0601	1.08520
420.0	65.50	4.083	10240.0	13670.0	156.2	34.18	47.27	547.9	17.0	0.0615	1.08257
430.0	63.61	3.965	10610.0	14140.0	157.3	34.72	47.50	553.8	17.2	0.0629	1.08012
440.0	61.84	3.855	10990.0	14620.0	158.4	35.28	47.77	559.7	17.4	0.0644	1.07783
450.0	60.19	3.752	11370.0	15100.0	159.5	35.83	48.07	565.4	17.6	0.0659	1.07569
460.0	58.63	3.655	11750.0	15580.0	160.6	36.39	48.39	571.0	17.8	0.0674	1.07368
480.0	55.78	3.477	12530.0	16560.0	162.6	37.51	49.10	582.1	18.2	0.0706	1.07001
500.0	53.23	3.318	13330.0	17550.0	164.7	38.61	49.86	592.8	18.6	0.0738	1.06674
520.0	50.93	3.175	14140.0	18550.0	166.6	39.68	50.64	603.2	19.0	0.0771	1.06379
540.0	48.85	3.045	14970.0	19570.0	168.6	40.71	51.42	613.4	19.4	0.0804	1.06113
560.0	46.94	2.926	15820.0	20610.0	170.5	41.68	52.17	623.4	19.8	0.0837	1.05870
580.0	45.20	2.817	16690.0	21660.0	172.3	42.57	52.87	633.3	20.2	0.0869	1.05647
600.0	43.59	2.717	17570.0	22720.0	174.1	43.37	53.50	643.1	20.6	0.0901	1.05443
					16.00 MPa isobar						
94.71[a]	456.6	28.46	-5662.0	-5100.0	68.62	34.24	52.53	1606.0	217.0	0.230	1.68444
120.0	425.2	26.51	-4358.0	-3754.0	81.21	33.14	54.03	1404.0	118.0	0.192	1.62935
140.0	398.9	24.86	-3303.0	-2659.0	89.64	32.10	55.47	1237.0	83.3	0.165	1.58388
160.0	370.2	23.07	-2224.0	-1531.0	97.18	31.04	57.57	1070.0	62.1	0.141	1.53518

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
180.0	337.9	21.06	-1108.0	-348.6	104.1	30.18	60.88	905.3	47.6	0.119	1.48160
190.0	319.9	19.94	-531.2	271.1	107.5	29.87	63.13	824.8	41.9	0.133	1.45240
200.0	300.6	18.74	61.4	915.4	110.8	29.65	65.78	747.1	37.0	0.104	1.42135
210.0	279.7	17.44	670.0	1588.0	114.1	29.54	68.70	674.2	32.6	0.0957	1.38846
220.0	257.6	16.05	1292.0	2289.0	117.3	29.52	71.47	609.5	28.8	0.0878	1.35409
240.0	212.2	13.23	2540.0	3750.0	123.7	29.57	73.47	517.9	22.9	0.0726	1.28581
245.0	201.6	12.56	2842.0	4116.0	125.2	29.56	72.79	504.1	21.9	0.0693	1.27013
250.0	191.4	11.93	3136.0	4477.0	126.7	29.54	71.64	493.4	20.9	0.0664	1.25540
255.0	182.0	11.34	3421.0	4832.0	128.1	29.51	70.13	485.6	20.1	0.0638	1.24175
260.0	173.3	10.80	3696.0	5178.0	129.4	29.47	68.38	480.2	19.5	0.0616	1.22922
265.0	165.2	10.30	3961.0	5515.0	130.7	29.43	66.48	476.8	18.9	0.0597	1.21778
270.0	157.9	9.840	4217.0	5843.0	131.9	29.40	64.56	474.9	18.4	0.0581	1.20740
275.0	151.2	9.422	4463.0	6161.0	133.1	29.38	62.68	474.2	18.0	0.0568	1.19799
280.0	145.1	9.042	4700.0	6470.0	134.2	29.37	60.90	474.5	17.7	0.0557	1.18946
285.0	139.5	8.694	4930.0	6770.0	135.3	29.37	59.25	475.6	17.5	0.0549	1.18172
290.0	134.4	8.377	5152.0	7062.0	136.3	29.40	57.74	477.3	17.2	0.0544	1.17468
295.0	129.7	8.086	5369.0	7348.0	137.2	29.44	56.39	479.3	17.1	0.0540	1.16826
300.0	125.4	7.819	5580.0	7626.0	138.2	29.50	55.17	481.8	16.9	0.0537	1.16239
305.0	121.5	7.573	5787.0	7900.0	139.1	29.58	54.10	484.4	16.8	0.0536	1.15699
310.0	117.8	7.345	5989.0	8168.0	140.0	29.67	53.15	487.3	16.7	0.0535	1.15202
315.0	114.4	7.134	6188.0	8431.0	140.8	29.78	52.31	490.2	16.7	0.0536	1.14742
320.0	111.3	6.937	6384.0	8691.0	141.6	29.91	51.58	493.3	16.6	0.0537	1.14316
325.0	108.4	6.754	6578.0	8947.0	142.4	30.05	50.93	496.4	16.6	0.0538	1.13919
330.0	105.6	6.582	6770.0	9200.0	143.2	30.20	50.37	499.6	16.6	0.0541	1.13549
340.0	100.6	6.270	7147.0	9699.0	144.7	30.53	49.47	506.1	16.6	0.0546	1.12877
350.0	96.14	5.992	7520.0	10190.0	146.1	30.91	48.80	512.5	16.6	0.0553	1.12282
360.0	92.15	5.744	7890.0	10680.0	147.5	31.32	48.33	519.0	16.7	0.0561	1.11751
370.0	88.54	5.519	8259.0	11160.0	148.8	31.76	48.01	525.3	16.8	0.0571	1.11274
380.0	85.27	5.315	8626.0	11640.0	150.1	32.22	47.82	531.6	16.9	0.0581	1.10842
390.0	82.28	5.129	8994.0	12110.0	151.3	32.71	47.73	537.8	17.0	0.0592	1.10447
400.0	79.53	4.957	9364.0	12590.0	152.5	33.21	47.73	543.8	17.1	0.0604	1.10086
410.0	77.00	4.799	9735.0	13070.0	153.7	33.73	47.81	549.8	17.3	0.0617	1.09754
420.0	74.65	4.653	10110.0	13550.0	154.8	34.27	47.94	555.6	17.4	0.0630	1.09446
430.0	72.46	4.517	10490.0	14030.0	156.0	34.81	48.13	561.4	17.6	0.0644	1.09161
440.0	70.42	4.390	10870.0	14510.0	157.1	35.36	48.36	567.1	17.8	0.0658	1.08895
450.0	68.51	4.271	11250.0	15000.0	158.2	35.91	48.62	572.7	18.0	0.0672	1.08647
460.0	66.72	4.159	11640.0	15480.0	159.2	36.47	48.92	578.2	18.1	0.0687	1.08414
480.0	63.45	3.955	12420.0	16470.0	161.3	37.58	49.57	589.0	18.5	0.0718	1.07990
500.0	60.52	3.773	13230.0	17470.0	163.4	38.68	50.29	599.5	18.9	0.0749	1.07612
520.0	57.89	3.609	14050.0	18480.0	165.4	39.75	51.03	609.8	19.3	0.0781	1.07273
540.0	55.51	3.460	14880.0	19510.0	167.3	40.77	51.77	619.9	19.7	0.0814	1.06966
560.0	53.33	3.324	15740.0	20550.0	169.2	41.74	52.49	629.8	20.1	0.0846	1.06687
580.0	51.34	3.200	16610.0	21610.0	171.1	42.63	53.17	639.6	20.5	0.0878	1.06432
600.0	49.51	3.086	17490.0	22680.0	172.9	43.42	53.78	649.3	20.9	0.0910	1.06197
					18.00 MPa isobar						
95.20[a]	457.2	28.50	-5653.0	-5022.0	68.71	34.26	52.44	1615.0	219.0	0.231	1.68527
120.0	426.9	26.61	-4382.0	-3705.0	80.99	33.20	53.80	1421.0	121.0	0.194	1.63201
140.0	401.1	25.00	-3337.0	-2617.0	89.37	32.16	55.07	1259.0	85.2	0.168	1.58750
160.0	373.3	23.27	-2273.0	-1499.0	96.83	31.10	56.83	1098.0	63.8	0.143	1.54030
180.0	342.6	21.35	-1181.0	-337.9	103.7	30.22	59.50	940.2	49.4	0.122	1.48915
190.0	325.8	20.31	-620.9	265.6	106.9	29.89	61.24	864.1	43.7	0.129	1.46173
200.0	307.9	19.19	-50.1	887.7	110.1	29.64	63.22	791.3	38.9	0.107	1.43297
210.0	289.0	18.02	531.2	1530.0	113.3	29.48	65.31	723.1	34.6	0.0987	1.40295
220.0	269.2	16.78	1121.0	2194.0	116.3	29.40	67.29	661.7	30.9	0.0916	1.37199
240.0	228.7	14.25	2302.0	3565.0	122.3	29.40	69.26	568.1	25.1	0.0779	1.31020
250.0	209.4	13.05	2876.0	4256.0	125.1	29.41	68.58	538.2	23.0	0.0717	1.28156
255.0	200.3	12.49	3155.0	4597.0	126.5	29.41	67.80	527.3	22.1	0.0690	1.26826
260.0	191.7	11.95	3427.0	4933.0	127.8	29.41	66.78	518.7	21.4	0.0666	1.25575
265.0	183.6	11.45	3692.0	5264.0	129.0	29.41	65.58	512.1	20.7	0.0644	1.24408
270.0	176.1	10.98	3949.0	5589.0	130.3	29.41	64.26	507.2	20.1	0.0626	1.23325
275.0	169.1	10.54	4199.0	5907.0	131.4	29.41	62.87	503.9	19.6	0.0611	1.22324

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
280.0	162.6	10.13	4441.0	6217.0	132.5	29.43	61.48	501.8	19.2	0.0598	1.21402
285.0	156.6	9.759	4677.0	6521.0	133.6	29.45	60.11	500.7	18.9	0.0588	1.20554
290.0	151.0	9.412	4906.0	6819.0	134.7	29.49	58.81	500.4	18.6	0.0580	1.19774
295.0	145.9	9.092	5130.0	7110.0	135.7	29.55	57.58	500.8	18.3	0.0574	1.19055
300.0	141.1	8.795	5348.0	7395.0	136.6	29.61	56.45	501.7	18.1	0.0570	1.18393
305.0	136.7	8.519	5561.0	7674.0	137.5	29.69	55.41	503.1	17.9	0.0567	1.17782
310.0	132.6	8.264	5771.0	7949.0	138.4	29.79	54.47	504.8	17.8	0.0565	1.17216
315.0	128.8	8.026	5976.0	8219.0	139.3	29.90	53.62	506.7	17.6	0.0564	1.16691
320.0	125.2	7.804	6179.0	8485.0	140.1	30.02	52.86	508.9	17.6	0.0564	1.16204
325.0	121.9	7.596	6378.0	8748.0	140.9	30.16	52.19	511.3	17.5	0.0565	1.15749
330.0	118.7	7.402	6575.0	9007.0	141.7	30.31	51.59	513.8	17.4	0.0566	1.15324
340.0	113.1	7.047	6964.0	9518.0	143.3	30.64	50.60	519.1	17.3	0.0569	1.14552
350.0	108.0	6.732	7346.0	10020.0	144.7	31.01	49.85	524.6	17.3	0.0575	1.13870
360.0	103.5	6.449	7725.0	10520.0	146.1	31.42	49.29	530.3	17.3	0.0582	1.13261
370.0	99.37	6.194	8100.0	11010.0	147.5	31.85	48.90	536.0	17.4	0.0590	1.12713
380.0	95.66	5.962	8475.0	11490.0	148.8	32.31	48.64	541.7	17.5	0.0600	1.12217
390.0	92.26	5.751	8850.0	11980.0	150.0	32.80	48.50	547.4	17.5	0.0610	1.11766
400.0	89.15	5.557	9225.0	12460.0	151.2	33.30	48.45	553.1	17.7	0.0621	1.11354
410.0	86.28	5.378	9602.0	12950.0	152.4	33.82	48.47	558.7	17.8	0.0633	1.10974
420.0	83.62	5.212	9981.0	13430.0	153.6	34.35	48.57	564.3	17.9	0.0645	1.10623
430.0	81.15	5.058	10360.0	13920.0	154.8	34.88	48.71	569.8	18.0	0.0658	1.10298
440.0	78.85	4.915	10750.0	14410.0	155.9	35.43	48.91	575.3	18.2	0.0672	1.09996
450.0	76.70	4.781	11130.0	14900.0	157.0	35.98	49.14	580.7	18.4	0.0686	1.09714
460.0	74.68	4.655	11520.0	15390.0	158.1	36.54	49.41	586.0	18.5	0.0700	1.09450
470.0	72.78	4.536	11920.0	15890.0	159.1	37.09	49.70	591.3	18.7	0.0715	1.09202
480.0	70.99	4.425	12320.0	16390.0	160.2	37.65	50.01	596.5	18.9	0.0730	1.08968
500.0	67.70	4.220	13130.0	17390.0	162.2	38.74	50.69	606.8	19.2	0.0761	1.08540
520.0	64.74	4.035	13950.0	18410.0	164.2	39.81	51.39	616.8	19.6	0.0792	1.08157
540.0	62.06	3.868	14800.0	19450.0	166.2	40.83	52.11	626.8	19.9	0.0824	1.07810
560.0	59.62	3.716	15650.0	20500.0	168.1	41.80	52.80	636.5	20.3	0.0856	1.07495
580.0	57.39	3.577	16530.0	21560.0	170.0	42.68	53.45	646.2	20.7	0.0888	1.07208
600.0	55.34	3.449	17420.0	22640.0	171.8	43.48	54.04	655.8	21.1	0.0919	1.06944
					20.00 MPa isobar						
95.69[a]	457.8	28.54	-5644.0	-4943.0	68.79	34.28	52.36	1624.0	220.0	0.232	1.68609
120.0	428.5	26.71	-4405.0	-3656.0	80.77	33.26	53.59	1437.0	123.0	0.196	1.63459
140.0	403.2	25.13	-3370.0	-2574.0	89.11	32.22	54.70	1279.0	87.1	0.170	1.59096
160.0	376.3	23.45	-2319.0	-1466.0	96.50	31.16	56.18	1123.0	65.5	0.146	1.54510
180.0	346.8	21.62	-1247.0	-321.9	103.2	30.26	58.36	972.4	51.0	0.125	1.49604
200.0	314.3	19.59	-147.4	873.5	109.5	29.65	61.27	831.0	40.6	0.109	1.44310
210.0	296.9	18.50	413.1	1494.0	112.6	29.46	62.84	766.4	36.4	0.102	1.41524
220.0	278.7	17.38	978.9	2130.0	115.5	29.34	64.31	707.8	32.8	0.0949	1.38675
240.0	241.8	15.07	2110.0	3437.0	121.2	29.29	66.00	614.6	27.0	0.0823	1.32998
250.0	224.0	13.96	2664.0	4096.0	123.9	29.31	65.79	581.8	24.9	0.0764	1.30315
260.0	207.2	12.92	3202.0	4750.0	126.5	29.34	64.80	558.0	23.1	0.0711	1.27831
265.0	199.3	12.43	3463.0	5072.0	127.7	29.36	64.06	549.1	22.4	0.0689	1.26681
270.0	191.9	11.96	3718.0	5390.0	128.9	29.38	63.18	541.9	21.7	0.0669	1.25596
275.0	184.8	11.52	3968.0	5704.0	130.0	29.41	62.22	536.2	21.2	0.0652	1.24577
280.0	178.2	11.11	4212.0	6013.0	131.1	29.45	61.19	531.9	20.7	0.0638	1.23625
285.0	172.0	10.72	4450.0	6316.0	132.2	29.49	60.14	528.7	20.3	0.0626	1.22736
290.0	166.2	10.36	4683.0	6614.0	133.3	29.55	59.10	526.6	19.9	0.0616	1.21909
295.0	160.7	10.02	4911.0	6907.0	134.3	29.61	58.07	525.2	19.6	0.0609	1.21140
300.0	155.7	9.703	5134.0	7195.0	135.2	29.69	57.10	524.6	19.3	0.0603	1.20425
305.0	150.9	9.407	5352.0	7478.0	136.2	29.78	56.17	524.5	19.0	0.0599	1.19759
310.0	146.5	9.130	5566.0	7757.0	137.1	29.88	55.31	525.0	18.8	0.0595	1.19140
315.0	142.3	8.871	5777.0	8031.0	137.9	29.99	54.51	525.8	18.7	0.0593	1.18562
320.0	138.4	8.629	5984.0	8302.0	138.8	30.12	53.79	527.0	18.5	0.0592	1.18022
325.0	134.8	8.401	6188.0	8569.0	139.6	30.26	53.12	528.4	18.4	0.0591	1.17518
330.0	131.3	8.187	6390.0	8833.0	140.4	30.41	52.53	530.1	18.3	0.0591	1.17045
340.0	125.1	7.796	6788.0	9353.0	142.0	30.74	51.52	534.0	18.2	0.0593	1.16185
350.0	119.5	7.447	7179.0	9864.0	143.5	31.11	50.73	538.3	18.1	0.0597	1.15421
360.0	114.4	7.133	7565.0	10370.0	144.9	31.51	50.13	543.0	18.0	0.0603	1.14739

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
370.0	109.9	6.850	7948.0	10870.0	146.3	31.94	49.68	548.0	18.0	0.0610	1.14125
380.0	105.8	6.593	8329.0	11360.0	147.6	32.40	49.38	553.1	18.1	0.0618	1.13569
390.0	102.0	6.358	8710.0	11860.0	148.9	32.88	49.19	558.2	18.1	0.0627	1.13064
400.0	98.54	6.142	9091.0	12350.0	150.1	33.38	49.09	563.4	18.2	0.0638	1.12601
410.0	95.35	5.943	9472.0	12840.0	151.3	33.89	49.08	568.6	18.3	0.0649	1.12176
420.0	92.40	5.759	9856.0	13330.0	152.5	34.42	49.14	573.8	18.4	0.0661	1.11783
430.0	89.66	5.589	10240.0	13820.0	153.6	34.96	49.25	579.0	18.5	0.0673	1.11420
440.0	87.10	5.429	10630.0	14310.0	154.8	35.50	49.42	584.2	18.6	0.0686	1.11081
450.0	84.71	5.280	11020.0	14810.0	155.9	36.05	49.62	589.3	18.8	0.0699	1.10766
460.0	82.47	5.141	11420.0	15310.0	157.0	36.61	49.87	594.4	18.9	0.0713	1.10471
470.0	80.37	5.009	11810.0	15810.0	158.1	37.16	50.13	599.5	19.1	0.0728	1.10194
480.0	78.38	4.886	12220.0	16310.0	159.1	37.71	50.43	604.5	19.2	0.0742	1.09934
500.0	74.74	4.659	13030.0	17320.0	161.2	38.81	51.06	614.5	19.5	0.0772	1.09457
520.0	71.46	4.454	13860.0	18350.0	163.2	39.87	51.74	624.3	19.9	0.0803	1.09029
540.0	68.50	4.270	14710.0	19390.0	165.2	40.89	52.42	634.0	20.2	0.0835	1.08644
560.0	65.80	4.102	15570.0	20450.0	167.1	41.85	53.09	643.6	20.6	0.0866	1.08294
580.0	63.34	3.948	16450.0	21520.0	169.0	42.74	53.72	653.1	21.0	0.0897	1.07974
600.0	61.07	3.807	17340.0	22600.0	170.8	43.53	54.29	662.6	21.3	0.0928	1.07681
					25.00 MPa isobar						
96.91[a]	459.2	28.62	-5621.0	-4748.0	69.00	34.34	52.18	1646.0	223.0	0.234	1.68808
150.0	395.7	24.67	-2935.0	-1921.0	92.23	31.83	54.35	1255.0	79.4	0.164	1.57773
160.0	382.9	23.87	-2422.0	-1375.0	95.75	31.31	54.88	1183.0	69.6	0.152	1.55600
180.0	356.1	22.20	-1391.0	-264.6	102.3	30.39	56.23	1044.0	54.9	0.132	1.51104
200.0	327.4	20.41	-348.4	876.6	108.3	29.72	57.92	916.7	44.5	0.115	1.46400
220.0	297.2	18.52	702.4	2052.0	113.9	29.33	59.58	805.1	36.8	0.102	1.41546
240.0	266.3	16.60	1749.0	3256.0	119.1	29.19	60.61	715.6	31.1	0.0910	1.36718
250.0	251.1	15.65	2265.0	3862.0	121.6	29.20	60.70	680.3	28.9	0.0858	1.34395
260.0	236.5	14.74	2773.0	4468.0	124.0	29.25	60.45	651.4	27.0	0.0808	1.32180
270.0	222.7	13.88	3269.0	5070.0	126.3	29.34	59.88	628.5	25.4	0.0764	1.30103
280.0	209.7	13.07	3753.0	5665.0	128.4	29.45	59.05	611.0	24.1	0.0728	1.28184
290.0	197.7	12.33	4222.0	6251.0	130.5	29.61	58.02	598.1	23.1	0.0701	1.26434
300.0	186.8	11.64	4678.0	6825.0	132.4	29.79	56.90	589.1	22.2	0.0682	1.24851
310.0	176.9	11.03	5122.0	7389.0	134.3	30.02	55.77	583.1	21.6	0.0669	1.23428
320.0	168.0	10.47	5553.0	7941.0	136.0	30.28	54.69	579.6	21.0	0.0661	1.22154
330.0	159.9	9.967	5975.0	8483.0	137.7	30.59	53.72	578.0	20.6	0.0656	1.21013
340.0	152.6	9.513	6388.0	9016.0	139.3	30.92	52.87	577.9	20.3	0.0654	1.19989
350.0	146.0	9.102	6794.0	9541.0	140.8	31.30	52.16	578.8	20.0	0.0654	1.19068
360.0	140.0	8.729	7195.0	10060.0	142.3	31.70	51.57	580.7	19.9	0.0656	1.18237
370.0	134.6	8.389	7593.0	10570.0	143.7	32.13	51.12	583.2	19.7	0.0660	1.17485
380.0	129.6	8.079	7987.0	11080.0	145.0	32.59	50.78	586.1	19.7	0.0666	1.16800
390.0	125.0	7.794	8381.0	11590.0	146.4	33.06	50.54	589.5	19.6	0.0673	1.16174
400.0	120.8	7.531	8774.0	12090.0	147.6	33.56	50.39	593.1	19.6	0.0681	1.15600
410.0	116.9	7.289	9167.0	12600.0	148.9	34.07	50.32	597.0	19.6	0.0690	1.15071
420.0	113.3	7.064	9561.0	13100.0	150.1	34.59	50.33	601.0	19.7	0.0700	1.14583
430.0	110.0	6.855	9956.0	13600.0	151.3	35.13	50.39	605.1	19.7	0.0711	1.14130
440.0	106.8	6.660	10350.0	14110.0	152.4	35.67	50.50	609.4	19.8	0.0722	1.13709
450.0	103.9	6.478	10750.0	14610.0	153.6	36.21	50.66	613.7	19.9	0.0734	1.13316
460.0	101.2	6.306	11160.0	15120.0	154.7	36.76	50.85	618.1	20.0	0.0747	1.12948
480.0	96.16	5.994	11970.0	16140.0	156.9	37.86	51.33	626.9	20.2	0.0774	1.12280
500.0	91.69	5.716	12800.0	17170.0	159.0	38.95	51.89	635.8	20.4	0.0802	1.11686
520.0	87.68	5.465	13640.0	18220.0	161.0	40.01	52.50	644.8	20.7	0.0831	1.11154
540.0	84.05	5.239	14500.0	19270.0	163.0	41.03	53.13	653.8	21.0	0.0861	1.10675
560.0	80.75	5.033	15380.0	20340.0	164.9	41.99	53.75	662.8	21.3	0.0892	1.10241
580.0	77.73	4.845	16260.0	21420.0	166.8	42.87	54.33	671.7	21.6	0.0922	1.09845
600.0	74.95	4.672	17170.0	22520.0	168.7	43.66	54.86	680.7	22.0	0.0951	1.09482

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					30.00 MPa isobar						
98.12[a]	460.6	28.71	-5598.0	-4553.0	69.21	34.39	52.02	1668.0	226.0	0.236	1.69000
150.0	400.9	24.99	-3013.0	-1813.0	91.61	31.98	53.56	1304.0	83.5	0.169	1.58613
160.0	388.9	24.24	-2513.0	-1275.0	95.08	31.46	53.89	1236.0	73.4	0.158	1.56563
180.0	364.0	22.69	-1512.0	-189.7	101.5	30.53	54.72	1107.0	58.4	0.138	1.52376
200.0	337.9	21.06	-509.3	914.9	107.3	29.83	55.76	989.1	47.9	0.122	1.48078
250.0	270.5	16.86	1978.0	3757.0	120.0	29.21	57.49	764.2	32.2	0.0932	1.37353
260.0	257.5	16.05	2463.0	4332.0	122.2	29.26	57.42	733.7	30.2	0.0886	1.35352
270.0	245.0	15.27	2941.0	4905.0	124.4	29.35	57.19	708.0	28.6	0.0843	1.33445
280.0	233.1	14.53	3410.0	5475.0	126.5	29.49	56.80	686.8	27.1	0.0806	1.31644
290.0	221.8	13.83	3871.0	6041.0	128.4	29.66	56.29	669.5	25.9	0.0777	1.29961
300.0	211.3	13.17	4323.0	6601.0	130.3	29.87	55.70	655.9	24.9	0.0755	1.28399
310.0	201.4	12.56	4765.0	7155.0	132.2	30.12	55.06	645.3	24.1	0.0738	1.26960
320.0	192.4	11.99	5200.0	7702.0	133.9	30.40	54.40	637.3	23.4	0.0726	1.25638
330.0	184.0	11.47	5626.0	8243.0	135.6	30.72	53.77	631.6	22.9	0.0718	1.24428
340.0	176.3	10.99	6047.0	8777.0	137.2	31.07	53.19	627.6	22.4	0.0712	1.23322
350.0	169.2	10.54	6461.0	9307.0	138.7	31.45	52.67	625.2	22.0	0.0710	1.22311
360.0	162.6	10.14	6871.0	9831.0	140.2	31.85	52.23	624.0	21.7	0.0709	1.21386
370.0	156.6	9.761	7278.0	10350.0	141.6	32.29	51.86	623.8	21.5	0.0710	1.20539
380.0	151.0	9.415	7682.0	10870.0	143.0	32.75	51.58	624.4	21.3	0.0713	1.19761
390.0	145.9	9.095	8085.0	11380.0	144.3	33.22	51.38	625.6	21.2	0.0718	1.19045
400.0	141.2	8.799	8487.0	11900.0	145.6	33.72	51.24	627.4	21.1	0.0724	1.18384
410.0	136.7	8.523	8888.0	12410.0	146.9	34.23	51.18	629.6	21.0	0.0731	1.17773
420.0	132.6	8.266	9291.0	12920.0	148.1	34.75	51.17	632.1	21.0	0.0740	1.17206
430.0	128.8	8.027	9694.0	13430.0	149.3	35.28	51.22	635.0	21.0	0.0749	1.16679
440.0	125.2	7.803	10100.0	13940.0	150.5	35.82	51.31	638.1	21.0	0.0759	1.16187
450.0	121.8	7.593	10510.0	14460.0	151.6	36.36	51.45	641.3	21.0	0.0770	1.15727
460.0	118.6	7.395	10920.0	14970.0	152.8	36.91	51.62	644.8	21.0	0.0781	1.15297
480.0	112.8	7.034	11750.0	16010.0	155.0	38.00	52.05	652.0	21.2	0.0806	1.14511
500.0	107.7	6.711	12590.0	17060.0	157.1	39.09	52.57	659.6	21.4	0.0832	1.13813
520.0	103.0	6.420	13440.0	18110.0	159.2	40.15	53.13	667.4	21.6	0.0860	1.13187
540.0	98.78	6.157	14310.0	19180.0	161.2	41.16	53.72	675.5	21.8	0.0888	1.12623
560.0	94.93	5.917	15190.0	20260.0	163.2	42.11	54.30	683.6	22.1	0.0917	1.12111
580.0	91.42	5.698	16090.0	21350.0	165.1	42.99	54.85	691.9	22.3	0.0946	1.11644
600.0	88.18	5.496	17000.0	22460.0	167.0	43.78	55.35	700.3	22.6	0.0974	1.11216
					35.00 MPa isobar						
99.31[a]	461.9	28.79	-5575.0	-4359.0	69.42	34.45	51.88	1689.0	228.0	0.239	1.69186
150.0	405.6	25.28	-3084.0	-1700.0	91.04	32.13	52.92	1349.0	87.5	0.175	1.59379
200.0	346.7	21.61	-644.1	975.3	106.4	29.97	54.23	1052.0	51.0	0.128	1.49491
250.0	285.6	17.80	1754.0	3720.0	118.7	29.29	55.33	837.0	35.1	0.0995	1.39671
260.0	273.8	17.07	2223.0	4274.0	120.8	29.33	55.31	806.1	33.0	0.0952	1.37832
270.0	262.3	16.35	2686.0	4826.0	122.9	29.42	55.20	779.2	31.3	0.0911	1.36064
280.0	251.3	15.66	3143.0	5378.0	124.9	29.56	55.01	756.0	29.8	0.0874	1.34377
290.0	240.8	15.01	3594.0	5926.0	126.9	29.74	54.74	736.4	28.5	0.0844	1.32779
300.0	230.7	14.38	4039.0	6472.0	128.7	29.96	54.42	719.9	27.4	0.0820	1.31274
310.0	221.3	13.79	4477.0	7015.0	130.5	30.21	54.07	706.3	26.5	0.0802	1.29864
320.0	212.4	13.24	4910.0	7553.0	132.2	30.51	53.69	695.2	25.7	0.0787	1.28549
330.0	204.0	12.72	5337.0	8089.0	133.8	30.83	53.32	686.3	25.0	0.0776	1.27326
340.0	196.3	12.23	5759.0	8620.0	135.4	31.19	52.96	679.3	24.4	0.0768	1.26191
350.0	189.0	11.78	6177.0	9148.0	137.0	31.58	52.63	674.0	23.9	0.0763	1.25139
360.0	182.2	11.36	6591.0	9673.0	138.4	31.99	52.35	670.0	23.5	0.0760	1.24165
370.0	175.9	10.97	7003.0	10190.0	139.9	32.43	52.11	667.3	23.2	0.0759	1.23262
380.0	170.0	10.60	7413.0	10720.0	141.3	32.89	51.93	665.6	22.9	0.0760	1.22426
390.0	164.6	10.26	7822.0	11230.0	142.6	33.36	51.80	664.7	22.7	0.0763	1.21649
400.0	159.4	9.939	8230.0	11750.0	143.9	33.86	51.72	664.6	22.5	0.0767	1.20927
410.0	154.7	9.640	8638.0	12270.0	145.2	34.37	51.69	665.1	22.4	0.0773	1.20256
420.0	150.2	9.361	9046.0	12790.0	146.4	34.89	51.71	666.1	22.3	0.0780	1.19629
430.0	146.0	9.099	9456.0	13300.0	147.6	35.42	51.77	667.5	22.2	0.0787	1.19044
440.0	142.0	8.853	9867.0	13820.0	148.8	35.95	51.88	669.3	22.2	0.0796	1.18496

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m³	mol/dm³	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
460.0	134.8	8.403	10700.0	14860.0	151.2	37.04	52.19	673.8	22.2	0.0816	1.17499
480.0	128.4	8.002	11540.0	15910.0	153.4	38.14	52.61	679.2	22.2	0.0838	1.16616
500.0	122.6	7.642	12390.0	16970.0	155.5	39.22	53.10	685.2	22.3	0.0863	1.15827
520.0	117.4	7.317	13250.0	18030.0	157.6	40.27	53.65	691.8	22.5	0.0889	1.15119
540.0	112.7	7.022	14130.0	19110.0	159.7	41.28	54.21	698.7	22.6	0.0916	1.14479
560.0	108.3	6.753	15020.0	20200.0	161.6	42.23	54.77	705.9	22.8	0.0943	1.13897
580.0	104.4	6.506	15920.0	21300.0	163.6	43.10	55.30	713.4	23.1	0.0971	1.13366
600.0	100.7	6.279	16840.0	22410.0	165.5	43.89	55.77	721.1	23.3	0.0998	1.12878
					40.00 MPa isobar						
100.50[a]	463.2	28.87	-5551.0	-4165.0	69.62	34.51	51.76	1710.0	231.0	0.241	1.69365
150.0	410.0	25.55	-3148.0	-1583.0	90.50	32.28	52.40	1391.0	91.3	0.180	1.60083
200.0	354.4	22.09	-760.1	1051.0	105.7	30.11	53.08	1109.0	53.8	0.134	1.50716
250.0	297.9	18.57	1571.0	3725.0	117.6	29.40	53.77	901.5	37.6	0.105	1.41580
260.0	287.0	17.89	2027.0	4263.0	119.7	29.43	53.77	870.6	35.6	0.101	1.39865
280.0	266.1	16.59	2926.0	5337.0	123.7	29.66	53.63	819.0	32.2	0.0935	1.36620
290.0	256.2	15.97	3368.0	5873.0	125.6	29.84	53.49	797.9	30.8	0.0905	1.35103
300.0	246.7	15.38	3806.0	6407.0	127.4	30.06	53.31	779.7	29.6	0.0880	1.33660
310.0	237.7	14.81	4239.0	6939.0	129.1	30.32	53.12	764.1	28.6	0.0860	1.32295
320.0	229.1	14.28	4668.0	7469.0	130.8	30.62	52.92	750.8	27.7	0.0844	1.31008
330.0	221.0	13.77	5093.0	7998.0	132.4	30.95	52.71	739.6	27.0	0.0831	1.29798
340.0	213.3	13.29	5515.0	8524.0	134.0	31.31	52.52	730.4	26.3	0.0821	1.28663
350.0	206.0	12.84	5933.0	9048.0	135.5	31.70	52.34	722.8	25.8	0.0814	1.27600
360.0	199.2	12.42	6349.0	9571.0	137.0	32.11	52.19	716.6	25.3	0.0809	1.26605
370.0	192.8	12.02	6764.0	10090.0	138.4	32.55	52.07	711.8	24.9	0.0807	1.25675
380.0	186.8	11.64	7177.0	10610.0	139.8	33.01	51.99	708.1	24.5	0.0806	1.24806
390.0	181.1	11.29	7589.0	11130.0	141.1	33.49	51.94	705.3	24.2	0.0807	1.23992
400.0	175.8	10.96	8001.0	11650.0	142.5	33.99	51.93	703.4	24.0	0.0810	1.23231
410.0	170.8	10.65	8413.0	12170.0	143.7	34.50	51.96	702.3	23.8	0.0814	1.22518
420.0	166.1	10.35	8826.0	12690.0	145.0	35.02	52.02	701.7	23.6	0.0819	1.21849
430.0	161.6	10.07	9240.0	13210.0	146.2	35.55	52.11	701.8	23.5	0.0825	1.21221
440.0	157.4	9.812	9656.0	13730.0	147.4	36.08	52.24	702.3	23.4	0.0833	1.20630
460.0	149.7	9.330	10490.0	14780.0	149.8	37.17	52.58	704.5	23.3	0.0850	1.19550
480.0	142.8	8.899	11340.0	15840.0	152.0	38.26	53.01	707.9	23.3	0.0870	1.18587
500.0	136.5	8.509	12200.0	16900.0	154.2	39.33	53.51	712.3	23.3	0.0893	1.17724
520.0	130.8	8.156	13070.0	17980.0	156.3	40.38	54.05	717.5	23.4	0.0917	1.16945
540.0	125.7	7.834	13960.0	19060.0	158.3	41.39	54.60	723.2	23.5	0.0943	1.16239
560.0	121.0	7.540	14860.0	20160.0	160.3	42.34	55.15	729.4	23.6	0.0969	1.15596
580.0	116.6	7.270	15770.0	21270.0	162.3	43.21	55.67	735.9	23.8	0.0995	1.15008
600.0	112.6	7.020	16690.0	22390.0	164.2	43.99	56.13	742.8	24.0	0.102	1.14467
					50.00 MPa isobar						
102.80[a]	465.7	29.03	-5502.0	-3780.0	70.01	34.64	51.56	1750.0	235.0	0.246	1.69706
200.0	367.2	22.89	-952.9	1231.0	104.3	30.40	51.46	1208.0	59.1	0.145	1.52775
250.0	317.3	19.78	1282.0	3810.0	115.8	29.66	51.67	1013.0	42.1	0.116	1.44621
260.0	307.8	19.18	1730.0	4326.0	117.9	29.68	51.68	982.3	40.0	0.112	1.43089
280.0	289.2	18.03	2587.0	5360.0	121.7	29.89	51.67	929.6	36.4	0.104	1.40165
300.0	271.8	16.94	3442.0	6393.0	125.3	30.29	51.63	886.9	33.6	0.0987	1.37451
320.0	255.6	15.93	4287.0	7425.0	128.6	30.85	51.58	853.1	31.4	0.0947	1.34962
340.0	240.7	15.00	5123.0	8457.0	131.7	31.55	51.56	826.8	29.8	0.0919	1.32703
360.0	227.0	14.15	5955.0	9488.0	134.7	32.35	51.60	806.9	28.5	0.0901	1.30666
380.0	214.7	13.38	6785.0	10520.0	137.5	33.26	51.71	792.2	27.5	0.0892	1.28836
400.0	203.5	12.68	7615.0	11560.0	140.1	34.23	51.91	781.7	26.7	0.0890	1.27196
420.0	193.4	12.05	8450.0	12600.0	142.7	35.26	52.19	774.7	26.2	0.0895	1.25725
440.0	184.2	11.48	9291.0	13650.0	145.1	36.32	52.56	770.4	25.8	0.0904	1.24404
460.0	175.9	10.96	10140.0	14700.0	147.4	37.40	53.00	768.3	25.5	0.0917	1.23215
480.0	168.3	10.49	11000.0	15770.0	149.7	38.48	53.50	768.0	25.3	0.0934	1.22142
500.0	161.4	10.06	11870.0	16840.0	151.9	39.56	54.04	769.2	25.2	0.0953	1.21169
520.0	155.1	9.668	12760.0	17930.0	154.0	40.60	54.60	771.4	25.2	0.0974	1.20284

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	149.3	9.307	13650.0	19030.0	156.1	41.60	55.16	774.6	25.2	0.0997	1.19475
560.0	144.0	8.975	14560.0	20130.0	158.1	42.55	55.71	778.6	25.2	0.102	1.18735
580.0	139.1	8.667	15480.0	21250.0	160.1	43.41	56.22	783.2	25.3	0.104	1.18053
600.0	134.5	8.383	16420.0	22380.0	162.0	44.19	56.67	788.4	25.4	0.107	1.17425
				60.00 MPa isobar							
105.10[a]	468.2	29.18	-5453.0	-3397.0	70.39	34.79	51.41	1788.0	239.0	0.251	1.70026
150.0	424.8	26.48	-3360.0	-1094.0	88.64	32.85	51.01	1535.0	106.0	0.199	1.62451
200.0	377.9	23.56	-1109.0	1438.0	103.2	30.70	50.38	1293.0	63.8	0.155	1.54476
250.0	332.6	20.73	1059.0	3954.0	114.4	29.93	50.31	1107.0	46.1	0.126	1.47009
260.0	323.9	20.19	1485.0	4457.0	116.4	29.95	50.32	1078.0	43.8	0.122	1.45606
280.0	307.0	19.14	2329.0	5464.0	120.1	30.15	50.38	1025.0	40.0	0.114	1.42916
300.0	291.0	18.14	3165.0	6472.0	123.6	30.54	50.46	980.5	37.0	0.108	1.40394
320.0	276.0	17.20	3995.0	7482.0	126.9	31.09	50.58	944.0	34.7	0.104	1.38053
340.0	262.0	16.33	4821.0	8495.0	130.0	31.78	50.75	914.4	32.8	0.101	1.35896
360.0	249.0	15.52	5647.0	9513.0	132.9	32.59	50.99	890.6	31.3	0.0985	1.33919
380.0	237.0	14.77	6474.0	10540.0	135.6	33.49	51.29	871.8	30.2	0.0972	1.32114
400.0	226.0	14.09	7305.0	11560.0	138.3	34.46	51.66	857.2	29.3	0.0966	1.30469
420.0	215.8	13.45	8143.0	12600.0	140.8	35.48	52.09	846.2	28.6	0.0966	1.28971
440.0	206.5	12.87	8989.0	13650.0	143.2	36.54	52.58	838.2	28.0	0.0972	1.27606
460.0	198.0	12.34	9844.0	14710.0	145.6	37.61	53.12	832.6	27.6	0.0982	1.26363
480.0	190.1	11.85	10710.0	15770.0	147.9	38.69	53.70	829.0	27.3	0.0995	1.25227
500.0	182.9	11.40	11590.0	16850.0	150.1	39.76	54.30	827.2	27.0	0.101	1.24187
520.0	176.2	10.98	12480.0	17950.0	152.2	40.80	54.90	826.8	26.9	0.103	1.23233
540.0	170.0	10.60	13390.0	19050.0	154.3	41.80	55.50	827.6	26.8	0.105	1.22355
560.0	164.3	10.24	14310.0	20170.0	156.3	42.74	56.06	829.5	26.8	0.107	1.21545
580.0	159.0	9.908	15240.0	21290.0	158.3	43.60	56.59	832.1	26.8	0.109	1.20796
600.0	154.0	9.598	16180.0	22430.0	160.2	44.37	57.05	835.5	26.9	0.112	1.20102
				80.00 MPa isobar							
109.60[a]	472.7	29.46	-5352.0	-2636.0	71.12	35.11	51.20	1858.0	245.0	0.263	1.70611
150.0	436.8	27.23	-3521.0	-582.8	87.09	33.41	50.25	1652.0	120.0	0.218	1.64338
200.0	395.1	24.63	-1352.0	1896.0	101.4	31.27	49.03	1435.0	72.5	0.174	1.57205
220.0	379.1	23.63	-511.5	2874.0	106.0	30.77	48.78	1361.0	62.9	0.161	1.54512
240.0	363.5	22.66	317.3	3848.0	110.3	30.52	48.67	1295.0	55.8	0.149	1.51918
260.0	348.3	21.71	1137.0	4822.0	114.2	30.49	48.67	1236.0	50.4	0.140	1.49432
280.0	333.8	20.80	1950.0	5796.0	117.8	30.67	48.77	1184.0	46.2	0.132	1.47065
300.0	319.8	19.93	2760.0	6773.0	121.1	31.04	48.97	1139.0	42.8	0.126	1.44825
320.0	306.5	19.11	3568.0	7755.0	124.3	31.57	49.25	1100.0	40.2	0.121	1.42716
340.0	294.0	18.32	4378.0	8743.0	127.3	32.25	49.60	1067.0	38.0	0.117	1.40741
360.0	282.2	17.59	5191.0	9740.0	130.1	33.04	50.04	1039.0	36.3	0.114	1.38898
380.0	271.0	16.89	6010.0	10750.0	132.9	33.92	50.54	1015.0	34.9	0.112	1.37182
400.0	260.6	16.25	6837.0	11760.0	135.5	34.88	51.10	995.3	33.7	0.111	1.35589
420.0	250.9	15.64	7674.0	12790.0	138.0	35.89	51.71	979.1	32.8	0.110	1.34110
440.0	241.8	15.07	8521.0	13830.0	140.4	36.94	52.36	966.0	32.0	0.110	1.32738
460.0	233.2	14.54	9381.0	14880.0	142.7	38.00	53.03	955.4	31.4	0.110	1.31465
480.0	225.3	14.04	10250.0	15950.0	145.0	39.07	53.73	947.1	30.9	0.111	1.30284
500.0	217.8	13.58	11140.0	17030.0	147.2	40.13	54.43	940.7	30.5	0.112	1.29186
520.0	210.9	13.14	12040.0	18130.0	149.4	41.16	55.12	936.1	30.2	0.114	1.28164
540.0	204.3	12.74	12960.0	19240.0	151.5	42.15	55.78	932.9	29.9	0.115	1.27213
560.0	198.2	12.36	13880.0	20360.0	153.5	43.08	56.40	931.0	29.8	0.117	1.26325
580.0	192.5	12.00	14830.0	21490.0	155.5	43.94	56.97	930.3	29.6	0.119	1.25495
600.0	187.1	11.66	15780.0	22640.0	157.4	44.70	57.46	930.6	29.6	0.121	1.24719

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					100.00 MPa isobar						
113.90[a]	476.9	29.73	-5247.0	-1884.0	71.81	35.46	51.06	1922.0	249.0	0.275	1.71138
150.0	447.0	27.87	-3649.0	-60.0	85.73	33.94	49.81	1752.0	133.0	0.237	1.65913
200.0	408.9	25.49	-1535.0	2388.0	99.83	31.81	48.26	1553.0	80.3	0.193	1.59364
220.0	394.4	24.59	-717.7	3350.0	104.4	31.31	47.91	1485.0	69.8	0.179	1.56919
240.0	380.4	23.71	88.4	4306.0	108.6	31.04	47.73	1422.0	62.0	0.167	1.54569
260.0	366.8	22.87	886.5	5260.0	112.4	30.99	47.71	1366.0	56.1	0.157	1.52318
280.0	353.7	22.05	1680.0	6215.0	115.9	31.16	47.83	1316.0	51.5	0.148	1.50169
300.0	341.2	21.27	2472.0	7174.0	119.2	31.51	48.07	1271.0	47.8	0.141	1.48125
320.0	329.2	20.52	3265.0	8139.0	122.3	32.03	48.42	1231.0	44.9	0.136	1.46187
340.0	317.7	19.80	4061.0	9111.0	125.3	32.69	48.87	1196.0	42.5	0.131	1.44356
360.0	306.8	19.12	4864.0	10090.0	128.1	33.46	49.39	1166.0	40.5	0.128	1.42630
380.0	296.4	18.48	5676.0	11090.0	130.8	34.33	49.99	1140.0	38.9	0.125	1.41007
400.0	286.7	17.87	6497.0	12090.0	133.4	35.27	50.65	1117.0	37.6	0.124	1.39482
420.0	277.4	17.29	7330.0	13110.0	135.9	36.27	51.35	1098.0	36.4	0.123	1.38052
440.0	268.7	16.75	8176.0	14150.0	138.3	37.30	52.09	1081.0	35.5	0.122	1.36710
460.0	260.4	16.23	9036.0	15200.0	140.6	38.36	52.85	1068.0	34.7	0.122	1.35452
480.0	252.6	15.74	9911.0	16260.0	142.9	39.42	53.62	1056.0	34.1	0.122	1.34272
500.0	245.2	15.29	10800.0	17340.0	145.1	40.47	54.38	1047.0	33.6	0.123	1.33164
520.0	238.3	14.85	11700.0	18440.0	147.2	41.49	55.13	1039.0	33.1	0.124	1.32124
540.0	231.7	14.44	12620.0	19550.0	149.3	42.47	55.85	1033.0	32.8	0.125	1.31147
560.0	225.5	14.05	13560.0	20670.0	151.4	43.39	56.52	1028.0	32.5	0.126	1.30227
580.0	219.6	13.69	14500.0	21810.0	153.3	44.24	57.12	1025.0	32.3	0.128	1.29360
600.0	214.0	13.34	15460.0	22960.0	155.3	44.99	57.65	1023.0	32.1	0.129	1.28543
					120.00 MPa isobar						
118.00[a]	480.9	29.98	-5141.0	-1138.0	72.46	35.82	50.96	1979.0	252.0	0.288	1.71617
150.0	456.1	28.43	-3752.0	469.0	84.52	34.45	49.57	1839.0	146.0	0.255	1.67268
200.0	420.6	26.21	-1679.0	2899.0	98.51	32.32	47.78	1654.0	87.7	0.210	1.61157
220.0	407.2	25.38	-877.9	3850.0	103.0	31.81	47.37	1590.0	76.2	0.196	1.58892
240.0	394.3	24.58	-87.8	4794.0	107.2	31.53	47.15	1531.0	67.7	0.184	1.56720
260.0	381.8	23.80	695.0	5737.0	110.9	31.47	47.11	1478.0	61.3	0.173	1.54639
280.0	369.8	23.05	1474.0	6680.0	114.4	31.62	47.23	1429.0	56.3	0.164	1.52650
300.0	358.3	22.33	2253.0	7627.0	117.7	31.95	47.49	1385.0	52.3	0.157	1.50752
320.0	347.2	21.64	3035.0	8580.0	120.8	32.45	47.87	1345.0	49.1	0.150	1.48946
340.0	336.5	20.98	3822.0	9542.0	123.7	33.09	48.37	1309.0	46.4	0.145	1.47229
360.0	326.4	20.34	4617.0	10520.0	126.5	33.85	48.95	1278.0	44.3	0.141	1.45602
380.0	316.7	19.74	5421.0	11500.0	129.1	34.71	49.60	1250.0	42.5	0.138	1.44060
400.0	307.4	19.16	6238.0	12500.0	131.7	35.63	50.32	1226.0	40.9	0.136	1.42603
420.0	298.6	18.61	7067.0	13510.0	134.2	36.62	51.08	1204.0	39.7	0.134	1.41225
440.0	290.3	18.09	7910.0	14540.0	136.6	37.64	51.87	1186.0	38.6	0.133	1.39923
460.0	282.3	17.60	8769.0	15590.0	138.9	38.68	52.68	1170.0	37.7	0.133	1.38693
480.0	274.7	17.13	9643.0	16650.0	141.1	39.73	53.50	1156.0	37.0	0.133	1.37532
500.0	267.5	16.68	10530.0	17730.0	143.3	40.77	54.31	1144.0	36.3	0.133	1.36434
520.0	260.7	16.25	11440.0	18820.0	145.5	41.78	55.10	1135.0	35.8	0.134	1.35396
540.0	254.2	15.85	12360.0	19930.0	147.6	42.75	55.85	1126.0	35.3	0.135	1.34414
560.0	248.0	15.46	13290.0	21060.0	149.6	43.67	56.55	1120.0	35.0	0.136	1.33485
580.0	242.1	15.09	14240.0	22190.0	151.6	44.51	57.19	1114.0	34.6	0.137	1.32604
600.0	236.5	14.74	15200.0	23340.0	153.6	45.26	57.74	1110.0	34.4	0.138	1.31769
					140.00 MPa isobar						
122.10[a]	484.8	30.22	-5033.0	-399.5	73.08	36.17	50.89	2031.0	255.0	0.302	1.72057
150.0	464.1	28.93	-3838.0	1001.0	83.42	34.94	49.45	1917.0	159.0	0.274	1.68457
200.0	430.7	26.85	-1795.0	3420.0	97.35	32.80	47.47	1743.0	94.7	0.228	1.62691
250.0	400.3	24.95	158.3	5769.0	107.8	31.92	46.71	1600.0	69.3	0.194	1.57545
300.0	372.5	23.22	2081.0	8110.0	116.4	32.36	47.09	1485.0	56.3	0.171	1.52933
320.0	362.2	22.57	2854.0	9056.0	119.4	32.84	47.50	1446.0	52.8	0.165	1.51231
340.0	352.2	21.95	3633.0	10010.0	122.3	33.47	48.01	1410.0	50.0	0.159	1.49609
360.0	342.6	21.36	4421.0	10980.0	125.1	34.21	48.63	1378.0	47.6	0.155	1.48063

Thermophysical properties of methane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
380.0	333.5	20.79	5221.0	11960.0	127.7	35.05	49.32	1349.0	45.7	0.151	1.46593
400.0	324.7	20.24	6032.0	12950.0	130.3	35.97	50.07	1324.0	44.0	0.148	1.45196
420.0	316.3	19.72	6858.0	13960.0	132.7	36.94	50.87	1301.0	42.6	0.146	1.43868
440.0	308.3	19.22	7699.0	14980.0	135.1	37.95	51.69	1281.0	41.4	0.145	1.42607
460.0	300.6	18.74	8556.0	16030.0	137.4	38.98	52.54	1263.0	40.4	0.144	1.41410
480.0	293.3	18.28	9428.0	17090.0	139.7	40.02	53.39	1248.0	39.6	0.143	1.40273
500.0	286.3	17.85	10320.0	18160.0	141.9	41.05	54.23	1235.0	38.8	0.143	1.39193
550.0	270.2	16.84	12610.0	20920.0	147.2	43.48	56.20	1209.0	37.4	0.144	1.36721
600.0	255.7	15.94	14990.0	23780.0	152.1	45.50	57.79	1193.0	36.5	0.146	1.34539
					160.00 MPa isobar						
126.00[a]	488.4	30.44	-4923.0	332.9	73.67	36.52	50.83	2079.0	256.0	0.318	1.72462
150.0	471.5	29.39	-3909.0	1535.0	82.41	35.42	49.42	1987.0	171.0	0.294	1.69516
200.0	439.7	27.41	-1890.0	3948.0	96.30	33.25	47.28	1822.0	101.0	0.247	1.64032
250.0	411.0	25.62	40.2	6285.0	106.7	32.33	46.44	1687.0	74.0	0.211	1.59161
300.0	384.9	23.99	1943.0	8612.0	115.2	32.74	46.81	1575.0	60.1	0.186	1.54795
350.0	361.0	22.50	3871.0	10980.0	122.5	34.17	48.06	1484.0	51.9	0.170	1.50888
400.0	339.5	21.16	5866.0	13430.0	129.1	36.28	49.88	1413.0	46.8	0.160	1.47407
450.0	320.0	19.95	7952.0	15970.0	135.1	38.75	51.99	1359.0	43.4	0.155	1.44314
500.0	302.5	18.85	10140.0	18630.0	140.6	41.31	54.17	1319.0	41.1	0.153	1.41568
550.0	286.7	17.87	12430.0	21390.0	145.9	43.72	56.19	1290.0	39.6	0.153	1.39129
600.0	272.4	16.98	14820.0	24240.0	150.9	45.72	57.82	1271.0	38.5	0.155	1.36955
					180.00 MPa isobar						
129.80[a]	491.9	30.66	-4811.0	1059.0	74.23	36.85	50.77	2124.0	257.0	0.334	1.72839
150.0	478.3	29.81	-3968.0	2069.0	81.47	35.88	49.46	2051.0	184.0	0.314	1.70469
200.0	447.9	27.92	-1968.0	4479.0	95.35	33.68	47.16	1895.0	108.0	0.266	1.65220
250.0	420.6	26.22	-56.8	6809.0	105.7	32.73	46.26	1765.0	78.5	0.228	1.60579
300.0	395.7	24.67	1829.0	9126.0	114.2	33.10	46.61	1657.0	63.6	0.201	1.56417
350.0	373.0	23.25	3745.0	11490.0	121.5	34.49	47.88	1568.0	54.9	0.183	1.52679
400.0	352.4	21.97	5730.0	13920.0	128.0	36.57	49.74	1496.0	49.4	0.172	1.49329
450.0	333.6	20.80	7809.0	16460.0	134.0	39.01	51.90	1440.0	45.8	0.165	1.46330
500.0	316.6	19.74	9995.0	19120.0	139.5	41.55	54.12	1397.0	43.3	0.163	1.43648
550.0	301.2	18.78	12290.0	21870.0	144.8	43.94	56.18	1366.0	41.6	0.162	1.41246
600.0	287.2	17.90	14670.0	24730.0	149.8	45.93	57.85	1344.0	40.3	0.163	1.39090
					200.00 MPa isobar						
133.60[a]	495.3	30.87	-4698.0	1780.0	74.77	37.15	50.72	2166.0	258.0	0.352	1.73190
150.0	484.6	30.21	-4018.0	2603.0	80.58	36.33	49.56	2110.0	197.0	0.336	1.71335
200.0	455.4	28.38	-2033.0	5013.0	94.47	34.09	47.10	1961.0	114.0	0.285	1.66286
250.0	429.3	26.76	-136.8	7338.0	104.8	33.09	46.14	1837.0	82.8	0.245	1.61839
300.0	405.5	25.27	1735.0	9649.0	113.3	33.43	46.47	1732.0	66.9	0.216	1.57851
350.0	383.7	23.92	3640.0	12000.0	120.5	34.79	47.75	1644.0	57.7	0.196	1.54260
400.0	363.9	22.68	5616.0	14430.0	127.0	36.84	49.63	1572.0	51.9	0.184	1.51025
450.0	345.8	21.55	7690.0	16970.0	133.0	39.26	51.83	1515.0	48.0	0.176	1.48113
500.0	329.3	20.52	9872.0	19620.0	138.6	41.78	54.08	1471.0	45.3	0.172	1.45491
550.0	314.2	19.58	12160.0	22380.0	143.8	44.15	56.18	1438.0	43.4	0.171	1.43129
600.0	300.4	18.73	14550.0	25230.0	148.8	46.13	57.87	1414.0	42.1	0.171	1.40996

[a]At melting line
[b]At liquid-vapor boundary

Appendix F: Thermophysical Properties of Ethane

Thermophysical properties of coexisting gaseous and liquid ethane

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
90.348[a]	0.00000	651.9	21.68	-14880.0	-14880.0	76.75	46.91	67.62	1992.0	1260.0	0.254	1.94443
90.348[a]	0.00000	0.0000	0.00000	2287.0	3693.0	275.0	26.88	35.19	180.9	2.15	0.00343	1.00000
100.0	0.00001	641.4	21.33	-14210.0	-14210.0	83.73	47.17	69.30	1945.0	802.0	0.248	1.92542
100.0	0.00001	0.0004	0.00001	2549.0	3452.0	259.6	27.42	35.74	189.8	3.42	0.00397	1.00000
110.0	0.00008	630.5	20.97	-13520.0	-13520.0	90.37	46.40	69.70	1882.0	568.0	0.241	1.90583
110.0	0.00008	0.0025	0.00008	2826.0	3750.0	247.2	27.98	36.30	198.6	3.76	0.00454	1.00000
120.0	0.00036	619.5	20.60	-12820.0	-12820.0	96.45	45.45	69.77	1812.0	436.0	0.232	1.88630
120.0	0.00036	0.0107	0.00036	3107.0	4105.0	237.5	28.56	36.89	206.9	4.03	0.00514	1.00001
130.0	0.00129	608.4	20.23	-12120.0	-12120.0	102.0	44.59	69.85	1739.0	352.0	0.222	1.86677
130.0	0.00129	0.0361	0.00120	3393.0	4470.0	229.7	29.16	37.52	214.8	4.31	0.00576	1.00004
140.0	0.00383	597.1	19.86	-11420.0	-11420.0	107.2	43.90	70.05	1664.0	295.0	0.212	1.84719
140.0	0.00383	0.0997	0.00332	3683.0	4838.0	223.4	29.81	38.24	222.2	4.60	0.00642	1.00011
150.0	0.00967	585.8	19.48	-10720.0	-10720.0	112.1	43.37	70.41	1588.0	252.0	0.202	1.82750
150.0	0.00967	0.2359	0.00785	3974.0	5207.0	218.2	30.51	39.06	229.0	4.90	0.00710	1.00026
160.0	0.02146	574.2	19.09	-10020.0	-10010.0	116.6	43.00	70.92	1512.0	220.0	0.192	1.80763
160.0	0.02146	0.4936	0.01642	4264.0	5572.0	214.0	31.29	40.03	235.2	5.20	0.00782	1.00055
170.0	0.04290	562.4	18.70	-9305.0	-9302.0	120.9	42.77	71.61	1437.0	193.0	0.182	1.78750
170.0	0.04290	0.9362	0.03114	4554.0	5931.0	210.5	32.16	41.18	240.7	5.51	0.00859	1.00105
180.0	0.07874	550.2	18.30	-8587.0	-8583.0	125.0	42.68	72.50	1361.0	171.0	0.172	1.76704
180.0	0.07874	1.641	0.05456	4839.0	6282.0	207.6	33.12	42.53	245.4	5.80	0.00940	1.00184
190.0	0.1347	537.8	17.88	-7860.0	-7852.0	129.0	42.72	73.62	1284.0	153.0	0.162	1.74614
190.0	0.1347	2.697	0.08968	5117.0	6619.0	205.1	34.17	44.14	249.3	6.10	0.0103	1.00302
200.0	0.2174	524.9	17.45	-7121.0	-7108.0	132.8	42.88	75.01	1207.0	137.0	0.152	1.72469
200.0	0.2174	4.208	0.1399	5388.0	6942.0	203.0	35.33	46.04	252.1	6.40	0.0112	1.00471
210.0	0.3340	511.4	17.01	-6367.0	-6348.0	136.5	43.16	76.73	1129.0	122.0	0.143	1.70255
210.0	0.3340	6.293	0.2093	5647.0	7243.0	201.2	36.59	48.31	253.9	6.70	0.0122	1.00705
220.0	0.4923	497.3	16.54	-5596.0	-5567.0	140.0	43.55	78.85	1050.0	109.0	0.134	1.67956
220.0	0.4923	9.095	0.3025	5893.0	7520.0	199.5	37.97	51.06	254.5	7.01	0.0133	1.01020
230.0	0.7004	482.4	16.04	-4805.0	-4761.0	143.6	44.06	81.50	969.1	98.0	0.126	1.65547
230.0	0.7004	12.79	0.4253	6120.0	7767.0	198.0	39.47	54.43	253.8	7.35	0.0146	1.01436
240.0	0.9670	466.5	15.51	-3988.0	-3926.0	147.1	44.70	84.86	886.7	87.5	0.117	1.63002
240.0	0.9670	17.60	0.5853	6324.0	7976.0	196.6	41.11	58.68	251.9	7.71	0.0159	1.01981
250.0	1.301	449.3	14.94	-3140.0	-3053.0	150.5	45.46	89.23	802.1	77.9	0.109	1.60279
250.0	1.301	23.83	0.7925	6498.0	8140.0	195.3	42.92	64.28	248.4	8.13	0.0174	1.02689
260.0	1.712	430.4	14.31	-2254.0	-2134.0	154.0	46.38	95.15	714.9	68.9	0.101	1.57320
260.0	1.712	31.93	1.062	6632.0	8244.0	194.0	44.92	72.08	243.3	8.62	0.0191	1.03614
270.0	2.210	409.1	13.60	-1316.0	-1153.0	157.6	47.49	103.7	624.1	60.4	0.0926	1.54031
270.0	2.210	42.59	1.416	6709.0	8270.0	192.5	47.17	83.92	236.6	9.22	0.0212	1.04842
280.0	2.806	384.1	12.77	-306.1	-86.4	161.3	48.85	117.8	527.9	52.2	0.0842	1.50242
280.0	2.806	57.06	1.898	6700.0	8179.0	190.8	49.76	104.6	227.9	10.0	0.0242	1.06528
290.0	3.515	352.8	11.73	821.4	1121.0	165.4	50.68	147.6	422.6	43.8	0.0762	1.45579
290.0	3.515	78.14	2.599	6540.0	7893.0	188.7	52.87	151.5	217.0	11.2	0.0305	1.09019

Thermophysical properties of coexisting gaseous and liquid ethane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
300.0	4.355	305.3	10.15	2228.0	2657.0	170.3	53.67	280.3	298.1	34.0	0.0788	1.38707
300.0	4.355	115.8	3.852	6003.0	7134.0	185.2	56.95	379.3	203.2	13.4	0.0555	1.13582
305.34[b]	4.871	206.7	6.875	4262.0	4971.0	177.7						1.25179

[a]Triple point
[b]Critical point

Thermophysical properties of ethane on the melting line

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
90.35[a]	0.00000	651.9	21.68	-14880.0	-14880.0	76.75	46.91	67.62	1992.0	1260.0	0.254	1.94443
90.4	0.3211	651.7	21.67	-14870.0	-14860.0	76.83	46.91	67.64	1991.0	1250.0	0.254	1.94399
90.6	1.558	651.9	21.68	-14870.0	-14790.0	76.89	46.95	67.68	1993.0	1250.0	0.254	1.94437
90.8	2.799	652.1	21.69	-14860.0	-14730.0	76.94	47.00	67.71	1996.0	1260.0	0.255	1.94474
91.0	4.042	652.4	21.69	-14860.0	-14670.0	76.99	47.04	67.75	1999.0	1260.0	0.255	1.94512
91.2	5.289	652.6	21.70	-14850.0	-14610.0	77.05	47.07	67.78	2001.0	1260.0	0.255	1.94550
91.4	6.539	652.8	21.71	-14850.0	-14540.0	77.10	47.11	67.81	2004.0	1260.0	0.256	1.94588
91.6	7.792	653.1	21.72	-14840.0	-14480.0	77.16	47.14	67.85	2007.0	1270.0	0.256	1.94626
91.8	9.049	653.3	21.73	-14840.0	-14420.0	77.21	47.18	67.88	2010.0	1270.0	0.256	1.94664
92.0	10.31	653.5	21.73	-14830.0	-14360.0	77.26	47.21	67.91	2014.0	1270.0	0.256	1.94702
92.2	11.57	653.8	21.74	-14830.0	-14290.0	77.31	47.24	67.94	2017.0	1270.0	0.257	1.94740
92.4	12.84	654.0	21.75	-14820.0	-14230.0	77.37	47.27	67.98	2021.0	1270.0	0.257	1.94778
92.6	14.11	654.2	21.76	-14820.0	-14170.0	77.42	47.30	68.01	2024.0	1280.0	0.257	1.94816
92.8	15.38	654.5	21.77	-14810.0	-14100.0	77.47	47.32	68.04	2028.0	1280.0	0.258	1.94855
93.0	16.66	654.7	21.77	-14800.0	-14040.0	77.52	47.35	68.07	2032.0	1280.0	0.258	1.94893
93.2	17.93	654.9	21.78	-14800.0	-13980.0	77.58	47.38	68.10	2035.0	1280.0	0.258	1.94931
93.4	19.22	655.2	21.79	-14790.0	-13910.0	77.63	47.40	68.13	2039.0	1280.0	0.258	1.94969
93.6	20.50	655.4	21.80	-14790.0	-13850.0	77.68	47.42	68.16	2043.0	1290.0	0.259	1.95007
93.8	21.79	655.7	21.80	-14780.0	-13780.0	77.73	47.44	68.19	2047.0	1290.0	0.259	1.95045
94.0	23.08	655.9	21.81	-14780.0	-13720.0	77.78	47.47	68.22	2052.0	1290.0	0.259	1.95083
94.2	24.38	656.1	21.82	-14770.0	-13660.0	77.83	47.49	68.24	2056.0	1290.0	0.260	1.95121
94.4	25.68	656.4	21.83	-14770.0	-13590.0	77.89	47.51	68.27	2060.0	1290.0	0.260	1.95159
94.6	26.98	656.6	21.84	-14760.0	-13530.0	77.94	47.53	68.30	2065.0	1290.0	0.260	1.95197
94.8	28.28	656.8	21.84	-14760.0	-13460.0	77.99	47.54	68.33	2069.0	1300.0	0.261	1.95234
95.0	29.59	657.1	21.85	-14750.0	-13400.0	78.04	47.56	68.36	2073.0	1300.0	0.261	1.95272
95.2	30.90	657.3	21.86	-14750.0	-13330.0	78.09	47.58	68.38	2078.0	1300.0	0.261	1.95310
95.4	32.22	657.5	21.87	-14740.0	-13270.0	78.14	47.60	68.41	2083.0	1300.0	0.262	1.95348
95.6	33.54	657.8	21.87	-14740.0	-13200.0	78.19	47.61	68.44	2087.0	1300.0	0.262	1.95385
95.8	34.86	658.0	21.88	-14730.0	-13140.0	78.24	47.63	68.46	2092.0	1310.0	0.262	1.95423
96.0	36.18	658.2	21.89	-14730.0	-13070.0	78.29	47.65	68.49	2097.0	1310.0	0.263	1.95460
96.2	37.51	658.4	21.90	-14720.0	-13010.0	78.34	47.66	68.51	2102.0	1310.0	0.263	1.95498
96.4	38.84	658.7	21.90	-14720.0	-12940.0	78.39	47.68	68.54	2107.0	1310.0	0.263	1.95535
96.6	40.18	658.9	21.91	-14710.0	-12880.0	78.44	47.69	68.56	2111.0	1310.0	0.264	1.95572
96.8	41.51	659.1	21.92	-14710.0	-12810.0	78.48	47.71	68.59	2116.0	1310.0	0.264	1.95610
97.0	42.86	659.4	21.93	-14700.0	-12750.0	78.53	47.72	68.61	2121.0	1310.0	0.264	1.95647
97.2	44.20	659.6	21.94	-14690.0	-12680.0	78.58	47.74	68.64	2126.0	1320.0	0.265	1.95684
97.4	45.55	659.8	21.94	-14690.0	-12610.0	78.63	47.75	68.66	2131.0	1320.0	0.265	1.95721
97.6	46.90	660.1	21.95	-14680.0	-12550.0	78.68	47.77	68.69	2136.0	1320.0	0.265	1.95758
97.8	48.25	660.3	21.96	-14680.0	-12480.0	78.73	47.78	68.71	2142.0	1320.0	0.266	1.95795
98.0	49.61	660.5	21.97	-14670.0	-12410.0	78.78	47.79	68.73	2147.0	1320.0	0.266	1.95831
98.2	50.97	660.7	21.97	-14670.0	-12350.0	78.82	47.81	68.76	2152.0	1320.0	0.267	1.95868
98.4	52.33	661.0	21.98	-14660.0	-12280.0	78.87	47.82	68.78	2157.0	1320.0	0.267	1.95905
98.6	53.70	661.2	21.99	-14660.0	-12210.0	78.92	47.84	68.80	2162.0	1320.0	0.267	1.95941
98.8	55.07	661.4	22.00	-14650.0	-12150.0	78.97	47.85	68.82	2167.0	1330.0	0.268	1.95978
99.0	56.44	661.6	22.00	-14640.0	-12080.0	79.01	47.87	68.84	2173.0	1330.0	0.268	1.96014
99.2	57.82	661.9	22.01	-14640.0	-12010.0	79.06	47.88	68.87	2178.0	1330.0	0.268	1.96050
99.4	59.20	662.1	22.02	-14630.0	-11940.0	79.11	47.89	68.89	2183.0	1330.0	0.269	1.96087
99.6	60.58	662.3	22.03	-14630.0	-11880.0	79.16	47.91	68.91	2188.0	1330.0	0.269	1.96123
99.8	61.97	662.5	22.03	-14620.0	-11810.0	79.20	47.92	68.93	2194.0	1330.0	0.270	1.96159
100.0	63.36	662.8	22.04	-14620.0	-11740.0	79.25	47.94	68.95	2199.0	1330.0	0.270	1.96195
100.2	64.75	663.0	22.05	-14610.0	-11670.0	79.30	47.95	68.97	2204.0	1330.0	0.270	1.96231
100.4	66.15	663.2	22.06	-14610.0	-11610.0	79.34	47.97	68.99	2210.0	1330.0	0.271	1.96266
100.6	67.55	663.4	22.06	-14600.0	-11540.0	79.39	47.98	69.01	2215.0	1340.0	0.271	1.96302
100.8	68.95	663.6	22.07	-14590.0	-11470.0	79.44	48.00	69.03	2220.0	1340.0	0.272	1.96338

[a]Triple point

Thermophysical properties of ethane

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.01 MPa isobar						
90.35[a]	651.6	21.67	-14870.0	-14870.0	76.82	46.90	67.64	1990.0	1250.0	0.254	1.94389
100.0	641.1	21.32	-14210.0	-14210.0	83.78	47.14	69.32	1943.0	797.0	0.248	1.92494
110.0	630.2	20.96	-13510.0	-13510.0	90.41	46.37	69.72	1881.0	565.0	0.240	1.90545
120.0	619.3	20.59	-12820.0	-12820.0	96.48	45.43	69.78	1811.0	434.0	0.232	1.88600
130.0	608.2	20.23	-12120.0	-12120.0	102.1	44.58	69.87	1738.0	351.0	0.222	1.86651
140.0	597.0	19.85	-11420.0	-11420.0	107.3	43.88	70.07	1663.0	294.0	0.212	1.84692
150.0	585.6	19.47	-10720.0	-10720.0	112.1	43.35	70.43	1587.0	252.0	0.202	1.82716
150.390[b]	585.3	19.46	-10690.0	-10690.0	112.3	43.35	70.42	1585.0	251.0	0.202	1.82673
150.390[b]	0.2433	0.008093	3985.0	5221.0	218.1	30.54	39.10	229.3	4.92	0.00713	1.00027
155.0	0.2347	0.007805	4127.0	5408.0	219.3	30.81	39.34	232.6	5.05	0.00745	1.00026
160.0	0.2272	0.007557	4282.0	5606.0	220.6	31.12	39.62	236.1	5.20	0.00780	1.00026
170.0	0.2136	0.007106	4598.0	6005.0	223.0	31.77	40.24	243.0	5.50	0.00852	1.00024
180.0	0.2016	0.006707	4919.0	6411.0	225.3	32.47	40.91	249.5	5.80	0.00927	1.00023
190.0	0.1909	0.006350	5248.0	6823.0	227.5	33.21	41.63	255.9	6.11	0.0101	1.00021
200.0	0.1813	0.006030	5585.0	7243.0	229.7	34.01	42.41	261.9	6.42	0.0109	1.00020
210.0	0.1726	0.005741	5929.0	7672.0	231.8	34.85	43.24	267.8	6.73	0.0117	1.00019
220.0	0.1647	0.005478	6283.0	8108.0	233.8	35.74	44.12	273.5	7.04	0.0126	1.00019
230.0	0.1575	0.005239	6645.0	8554.0	235.8	36.68	45.05	279.0	7.35	0.0135	1.00018
240.0	0.1509	0.005020	7017.0	9009.0	237.7	37.66	46.03	284.4	7.66	0.0145	1.00017
260.0	0.1393	0.004632	7791.0	9951.0	241.5	39.76	48.11	294.6	8.27	0.0166	1.00016
280.0	0.1293	0.004300	8609.0	10940.0	245.1	42.01	50.36	304.4	8.87	0.0188	1.00015
300.0	0.1206	0.004013	9473.0	11970.0	248.7	44.39	52.73	313.7	9.47	0.0212	1.00014
320.0	0.1131	0.003762	10390.0	13040.0	252.2	46.86	55.20	322.6	10.1	0.0237	1.00013
330.0	0.1097	0.003648	10860.0	13600.0	253.9	48.13	56.46	327.0	10.3	0.0250	1.00012
340.0	0.1064	0.003540	11350.0	14170.0	255.6	49.40	57.74	331.3	10.6	0.0264	1.00012
350.0	0.1034	0.003439	11850.0	14760.0	257.3	50.69	59.02	335.5	10.9	0.0278	1.00012
360.0	0.1005	0.003343	12360.0	15350.0	259.0	51.98	60.31	339.7	11.2	0.0293	1.00011
380.0	0.09521	0.003167	13430.0	16590.0	262.3	54.58	62.91	347.9	11.8	0.0322	1.00011
400.0	0.09044	0.003009	14550.0	17870.0	265.6	57.17	65.50	355.9	12.3	0.0353	1.00010
420.0	0.08613	0.002865	15720.0	19210.0	268.8	59.75	68.07	363.7	12.8	0.0385	1.00010
440.0	0.08221	0.002735	16940.0	20590.0	272.1	62.30	70.62	371.3	13.4	0.0418	1.00009
460.0	0.07864	0.002616	18210.0	22030.0	275.3	64.81	73.13	378.8	13.9	0.0452	1.00009
480.0	0.07536	0.002507	19530.0	23520.0	278.4	67.27	75.59	386.1	14.4	0.0486	1.00009
500.0	0.07234	0.002407	20900.0	25050.0	281.6	69.69	78.01	393.3	14.9	0.0521	1.00008
520.0	0.06956	0.002314	22320.0	26640.0	284.7	72.05	80.37	400.4	15.4	0.0557	1.00008
540.0	0.06698	0.002228	23780.0	28270.0	287.7	74.36	82.68	407.4	15.9	0.0594	1.00008
560.0	0.06459	0.002149	25290.0	29950.0	290.8	76.60	84.92	414.3	16.3	0.0630	1.00007
580.0	0.06236	0.002075	26840.0	31670.0	293.8	78.79	87.10	421.0	16.8	0.0667	1.00007
600.0	0.06028	0.002006	28440.0	33430.0	296.8	80.90	89.21	427.7	17.3	0.0705	1.00007
					0.05 MPa isobar						
90.36[a]	651.6	21.67	-14870.0	-14870.0	76.82	46.90	67.64	1990.0	1250.0	0.254	1.94391
100.0	641.1	21.32	-14210.0	-14210.0	83.78	47.14	69.32	1943.0	797.0	0.248	1.92497
150.0	585.6	19.47	-10720.0	-10710.0	112.1	43.35	70.43	1587.0	252.0	0.202	1.82720
172.406[b]	559.5	18.61	-9133.0	-9130.0	121.9	42.74	71.81	1418.0	188.0	0.179	1.78261
172.406[b]	1.079	0.03587	4623.0	6016.0	209.8	32.38	41.48	241.9	5.58	0.00878	1.00121
175.0	1.054	0.03505	4708.0	6135.0	210.5	32.53	41.58	243.8	5.66	0.00897	1.00118
180.0	1.023	0.03402	4873.0	6343.0	211.7	32.83	41.81	247.2	5.81	0.00935	1.00114
190.0	0.9663	0.03214	5208.0	6764.0	213.9	33.50	42.36	253.8	6.11	0.0101	1.00108
200.0	0.9159	0.03046	5549.0	7191.0	216.1	34.24	43.01	260.2	6.42	0.0109	1.00102
210.0	0.8707	0.02896	5898.0	7624.0	218.2	35.03	43.74	266.2	6.73	0.0118	1.00097
220.0	0.8299	0.02760	6254.0	8066.0	220.3	35.89	44.54	272.1	7.04	0.0127	1.00093
240.0	0.7590	0.02524	6993.0	8974.0	224.2	37.77	46.33	283.2	7.66	0.0146	1.00085
260.0	0.6995	0.02326	7771.0	9920.0	228.0	39.84	48.35	293.7	8.27	0.0166	1.00078
280.0	0.6488	0.02158	8592.0	10910.0	231.7	42.07	50.54	303.6	8.88	0.0188	1.00073
300.0	0.6050	0.02012	9458.0	11940.0	235.2	44.43	52.87	313.0	9.48	0.0212	1.00068
320.0	0.5668	0.01885	10370.0	13020.0	238.7	46.89	55.32	322.1	10.1	0.0238	1.00063
330.0	0.5495	0.01827	10850.0	13580.0	240.5	48.15	56.57	326.5	10.4	0.0251	1.00061
340.0	0.5332	0.01773	11340.0	14160.0	242.2	49.43	57.83	330.8	10.6	0.0264	1.00060
350.0	0.5178	0.01722	11840.0	14740.0	243.9	50.71	59.11	335.1	10.9	0.0278	1.00058

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
360.0	0.5034	0.01674	12350.0	15340.0	245.5	52.00	60.40	339.3	11.2	0.0293	1.00056
380.0	0.4767	0.01585	13420.0	16570.0	248.9	54.60	62.98	347.5	11.8	0.0322	1.00053
400.0	0.4527	0.01506	14540.0	17860.0	252.2	57.19	65.56	355.6	12.3	0.0353	1.00051
420.0	0.4311	0.01434	15710.0	19190.0	255.4	59.76	68.13	363.4	12.8	0.0385	1.00048
440.0	0.4114	0.01368	16930.0	20580.0	258.7	62.31	70.67	371.1	13.4	0.0418	1.00046
460.0	0.3935	0.01309	18200.0	22020.0	261.9	64.81	73.17	378.6	13.9	0.0452	1.00044
480.0	0.3770	0.01254	19520.0	23510.0	265.0	67.28	75.63	386.0	14.4	0.0486	1.00042
500.0	0.3619	0.01204	20890.0	25050.0	268.2	69.69	78.04	393.2	14.9	0.0522	1.00040
520.0	0.3479	0.01157	22310.0	26630.0	271.3	72.06	80.40	400.3	15.4	0.0557	1.00039
540.0	0.3350	0.01114	23770.0	28260.0	274.4	74.36	82.71	407.3	15.9	0.0594	1.00037
560.0	0.3230	0.01074	25280.0	29940.0	277.4	76.61	84.95	414.2	16.3	0.0630	1.00036
580.0	0.3119	0.01037	26840.0	31660.0	280.4	78.79	87.13	421.0	16.8	0.0667	1.00035
600.0	0.3015	0.01003	28440.0	33420.0	283.4	80.90	89.24	427.7	17.3	0.0705	1.00034
				0.10 MPa isobar							
90.36[a]	651.6	21.67	-14870.0	-14870.0	76.82	46.90	67.64	1991.0	1250.0	0.254	1.94392
100.0	641.2	21.32	-14210.0	-14210.0	83.78	47.15	69.32	1943.0	798.0	0.248	1.92500
150.0	585.6	19.48	-10720.0	-10710.0	112.1	43.35	70.43	1587.0	252.0	0.202	1.82726
184.305[b]	544.9	18.12	-8275.0	-8270.0	126.8	42.68	72.96	1328.0	163.0	0.167	1.75810
184.305[b]	2.047	0.06806	4960.0	6429.0	206.5	33.56	43.19	247.2	5.93	0.00977	1.00229
185.0	2.023	0.06726	4984.0	6471.0	206.7	33.59	43.19	247.7	5.95	0.00982	1.00226
190.0	1.964	0.06531	5156.0	6687.0	207.9	33.88	43.36	251.2	6.11	0.0102	1.00220
200.0	1.857	0.06174	5503.0	7123.0	210.1	34.54	43.82	257.9	6.42	0.0110	1.00208
210.0	1.761	0.05858	5857.0	7564.0	212.3	35.28	44.40	264.2	6.73	0.0119	1.00197
220.0	1.676	0.05575	6218.0	8011.0	214.4	36.09	45.09	270.3	7.04	0.0127	1.00187
240.0	1.529	0.05086	6963.0	8929.0	218.3	37.90	46.73	281.8	7.66	0.0146	1.00171
260.0	1.407	0.04680	7746.0	9882.0	222.2	39.93	48.64	292.5	8.28	0.0167	1.00157
280.0	1.304	0.04335	8570.0	10880.0	225.8	42.14	50.77	302.6	8.89	0.0189	1.00146
300.0	1.215	0.04039	9439.0	11910.0	229.4	44.48	53.06	312.2	9.48	0.0213	1.00136
320.0	1.137	0.03782	10350.0	13000.0	232.9	46.93	55.47	321.4	10.1	0.0238	1.00127
330.0	1.102	0.03665	10830.0	13560.0	234.6	48.19	56.70	325.9	10.4	0.0251	1.00123
340.0	1.069	0.03555	11320.0	14130.0	236.4	49.46	57.96	330.3	10.7	0.0265	1.00119
350.0	1.038	0.03452	11820.0	14720.0	238.1	50.74	59.22	334.6	10.9	0.0279	1.00116
360.0	1.009	0.03355	12340.0	15320.0	239.7	52.03	60.50	338.8	11.2	0.0293	1.00113
380.0	0.9551	0.03176	13410.0	16550.0	243.1	54.62	63.07	347.1	11.8	0.0323	1.00107
400.0	0.9068	0.03016	14520.0	17840.0	246.4	57.20	65.64	355.2	12.3	0.0354	1.00101
420.0	0.8632	0.02871	15700.0	19180.0	249.6	59.78	68.20	363.1	12.9	0.0386	1.00096
440.0	0.8237	0.02739	16920.0	20570.0	252.9	62.32	70.73	370.8	13.4	0.0418	1.00092
460.0	0.7876	0.02619	18190.0	22010.0	256.1	64.83	73.22	378.4	13.9	0.0452	1.00088
480.0	0.7546	0.02510	19510.0	23500.0	259.2	67.29	75.68	385.8	14.4	0.0487	1.00084
500.0	0.7242	0.02409	20880.0	25030.0	262.4	69.70	78.08	393.1	14.9	0.0522	1.00081
520.0	0.6962	0.02315	22300.0	26620.0	265.5	72.06	80.44	400.2	15.4	0.0558	1.00078
540.0	0.6703	0.02229	23770.0	28250.0	268.6	74.37	82.74	407.2	15.9	0.0594	1.00075
560.0	0.6463	0.02149	25280.0	29930.0	271.6	76.62	84.98	414.1	16.4	0.0631	1.00072
580.0	0.6239	0.02075	26830.0	31650.0	274.6	78.80	87.16	420.9	16.8	0.0668	1.00070
600.0	0.6031	0.02006	28430.0	33420.0	277.6	80.90	89.26	427.6	17.3	0.0705	1.00067
				0.101325 MPa isobar							
90.36[a]	651.6	21.67	-14870.0	-14870.0	76.82	46.90	67.64	1991.0	1250.0	0.254	1.94392
100.0	641.2	21.32	-14210.0	-14210.0	83.78	47.15	69.32	1943.0	798.0	0.248	1.92500
150.0	585.6	19.48	-10720.0	-10710.0	112.1	43.35	70.43	1587.0	252.0	0.202	1.82726
184.548[b]	544.6	18.11	-8257.0	-8252.0	126.9	42.69	72.98	1326.0	163.0	0.167	1.75759
184.548[b]	2.072	0.06889	4966.0	6437.0	206.4	33.58	43.23	247.3	5.94	0.00979	1.00232
185.0	2.050	0.06819	4983.0	6469.0	206.6	33.60	43.22	247.7	5.95	0.00983	1.00229
190.0	1.991	0.06620	5155.0	6685.0	207.8	33.89	43.39	251.1	6.11	0.0102	1.00223
200.0	1.882	0.06259	5502.0	7121.0	210.0	34.55	43.84	257.8	6.42	0.0110	1.00211
210.0	1.785	0.05938	5856.0	7562.0	212.2	35.28	44.42	264.2	6.73	0.0119	1.00200
220.0	1.699	0.05650	6217.0	8010.0	214.2	36.09	45.11	270.3	7.04	0.0127	1.00190
240.0	1.550	0.05155	6962.0	8928.0	218.2	37.90	46.74	281.8	7.66	0.0146	1.00173

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
260.0	1.426	0.04743	7745.0	9881.0	222.0	39.93	48.65	292.5	8.28	0.0167	1.00159
280.0	1.321	0.04393	8569.0	10880.0	225.7	42.14	50.78	302.6	8.89	0.0189	1.00148
300.0	1.231	0.04093	9438.0	11910.0	229.3	44.48	53.06	312.2	9.48	0.0213	1.00138
320.0	1.152	0.03832	10350.0	13000.0	232.8	46.94	55.47	321.4	10.1	0.0238	1.00129
330.0	1.117	0.03714	10830.0	13560.0	234.5	48.19	56.71	325.9	10.4	0.0251	1.00125
340.0	1.083	0.03603	11320.0	14130.0	236.2	49.46	57.96	330.2	10.7	0.0265	1.00121
350.0	1.052	0.03498	11820.0	14720.0	237.9	50.74	59.23	334.5	10.9	0.0279	1.00117
360.0	1.022	0.03400	12340.0	15320.0	239.6	52.03	60.50	338.8	11.2	0.0293	1.00114
380.0	0.9678	0.03218	13400.0	16550.0	243.0	54.62	63.07	347.1	11.8	0.0323	1.00108
400.0	0.9188	0.03056	14520.0	17840.0	246.3	57.20	65.64	355.2	12.3	0.0354	1.00103
420.0	0.8747	0.02909	15700.0	19180.0	249.5	59.78	68.20	363.1	12.9	0.0386	1.00098
440.0	0.8346	0.02776	16920.0	20570.0	252.8	62.32	70.73	370.8	13.4	0.0418	1.00093
460.0	0.7981	0.02654	18190.0	22010.0	256.0	64.83	73.22	378.4	13.9	0.0452	1.00089
480.0	0.7646	0.02543	19510.0	23500.0	259.1	67.29	75.68	385.8	14.4	0.0487	1.00085
500.0	0.7338	0.02441	20880.0	25030.0	262.3	69.70	78.09	393.0	14.9	0.0522	1.00082
520.0	0.7055	0.02346	22300.0	26620.0	265.4	72.06	80.44	400.2	15.4	0.0558	1.00079
540.0	0.6792	0.02259	23770.0	28250.0	268.5	74.37	82.74	407.2	15.9	0.0594	1.00076
560.0	0.6549	0.02178	25280.0	29930.0	271.5	76.62	84.98	414.1	16.4	0.0631	1.00073
580.0	0.6322	0.02103	26830.0	31650.0	274.5	78.80	87.16	420.9	16.8	0.0668	1.00071
600.0	0.6111	0.02032	28430.0	33410.0	277.5	80.91	89.26	427.6	17.3	0.0705	1.00068
				0.20 MPa isobar							
90.38[a]	651.6	21.67	-14870.0	-14860.0	76.83	46.91	67.64	1991.0	1250.0	0.254	1.94395
100.0	641.2	21.32	-14210.0	-14200.0	83.77	47.15	69.32	1944.0	798.0	0.248	1.92507
150.0	585.7	19.48	-10720.0	-10710.0	112.1	43.36	70.42	1588.0	252.0	0.202	1.82737
160.0	574.0	19.09	-10010.0	-10000.0	116.6	42.99	70.94	1511.0	219.0	0.192	1.80740
180.0	549.9	18.29	-8579.0	-8568.0	125.1	42.66	72.57	1358.0	171.0	0.171	1.76648
198.176[b]	527.3	17.53	-7256.0	-7245.0	132.1	42.84	74.73	1221.0	139.0	0.154	1.72865
198.176[b]	3.893	0.1295	5339.0	6884.0	203.4	35.11	45.67	251.7	6.34	0.0110	1.00436
200.0	3.822	0.1271	5407.0	6981.0	203.9	35.19	45.65	253.1	6.40	0.0112	1.00428
210.0	3.609	0.1200	5772.0	7438.0	206.1	35.80	45.88	260.0	6.72	0.0120	1.00404
220.0	3.423	0.1138	6142.0	7899.0	208.2	36.51	46.30	266.6	7.04	0.0129	1.00383
230.0	3.256	0.1083	6518.0	8365.0	210.3	37.31	46.88	272.9	7.35	0.0138	1.00364
240.0	3.107	0.1033	6901.0	8837.0	212.3	38.18	47.58	278.9	7.67	0.0147	1.00348
260.0	2.848	0.09472	7694.0	9805.0	216.2	40.13	49.27	290.1	8.29	0.0168	1.00319
280.0	2.632	0.08753	8525.0	10810.0	219.9	42.28	51.25	300.7	8.90	0.0190	1.00294
300.0	2.448	0.08140	9399.0	11860.0	223.5	44.59	53.44	310.6	9.50	0.0213	1.00274
320.0	2.288	0.07610	10320.0	12950.0	227.1	47.01	55.77	320.0	10.1	0.0239	1.00256
330.0	2.216	0.07371	10800.0	13510.0	228.8	48.26	56.98	324.6	10.4	0.0252	1.00248
340.0	2.149	0.07147	11290.0	14090.0	230.5	49.52	58.21	329.1	10.7	0.0266	1.00240
350.0	2.086	0.06936	11790.0	14680.0	232.2	50.80	59.46	333.5	11.0	0.0280	1.00233
360.0	2.026	0.06738	12310.0	15280.0	233.9	52.08	60.71	337.8	11.2	0.0294	1.00226
370.0	1.970	0.06551	12840.0	15890.0	235.6	53.37	61.98	342.1	11.5	0.0309	1.00220
380.0	1.917	0.06374	13380.0	16520.0	237.3	54.66	63.25	346.3	11.8	0.0324	1.00214
400.0	1.819	0.06049	14500.0	17810.0	240.6	57.24	65.79	354.5	12.4	0.0354	1.00203
420.0	1.731	0.05756	15670.0	19150.0	243.8	59.80	68.33	362.5	12.9	0.0386	1.00193
440.0	1.651	0.05490	16900.0	20540.0	247.1	62.34	70.85	370.3	13.4	0.0419	1.00184
460.0	1.578	0.05248	18170.0	21980.0	250.3	64.85	73.33	377.9	13.9	0.0453	1.00176
480.0	1.511	0.05026	19490.0	23470.0	253.4	67.31	75.77	385.4	14.4	0.0487	1.00169
500.0	1.450	0.04823	20870.0	25010.0	256.6	69.72	78.17	392.7	14.9	0.0522	1.00162
520.0	1.394	0.04636	22290.0	26600.0	259.7	72.08	80.52	399.9	15.4	0.0558	1.00156
540.0	1.342	0.04462	23750.0	28230.0	262.8	74.38	82.81	407.0	15.9	0.0595	1.00150
560.0	1.294	0.04302	25260.0	29910.0	265.8	76.63	85.04	413.9	16.4	0.0631	1.00144
580.0	1.249	0.04152	26820.0	31630.0	268.9	78.81	87.22	420.8	16.9	0.0668	1.00139
600.0	1.207	0.04013	28420.0	33400.0	271.8	80.92	89.32	427.5	17.3	0.0705	1.00135

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.30 MPa isobar						
90.40[a]	651.7	21.67	-14870.0	-14860.0	76.83	46.91	67.64	1991.0	1250.0	0.254	1.94398
150.0	585.7	19.48	-10720.0	-10700.0	112.1	43.37	70.41	1588.0	252.0	0.202	1.82747
160.0	574.1	19.09	-10010.0	-9998.0	116.6	42.99	70.93	1512.0	220.0	0.192	1.80752
180.0	550.0	18.29	-8581.0	-8565.0	125.1	42.67	72.55	1359.0	171.0	0.171	1.76663
200.0	524.3	17.44	-7107.0	-7090.0	132.8	42.85	75.14	1203.0	136.0	0.152	1.72376
207.401[b]	515.0	17.13	-6564.0	-6547.0	135.5	43.07	76.24	1149.0	126.0	0.145	1.70838
207.401[b]	5.688	0.1892	5581.0	7167.0	201.6	36.25	47.68	253.5	6.62	0.0120	1.00637
210.0	5.558	0.1848	5682.0	7305.0	202.3	36.37	47.61	255.6	6.71	0.0122	1.00623
220.0	5.248	0.1745	6062.0	7781.0	204.5	36.96	47.69	262.7	7.03	0.0130	1.00588
230.0	4.977	0.1655	6447.0	8259.0	206.6	37.67	48.01	269.5	7.35	0.0139	1.00557
240.0	4.736	0.1575	6837.0	8742.0	208.7	38.48	48.52	275.8	7.67	0.0149	1.00530
250.0	4.520	0.1503	7235.0	9230.0	210.7	39.37	49.18	281.9	7.98	0.0159	1.00506
260.0	4.326	0.1438	7640.0	9726.0	212.6	40.33	49.95	287.7	8.30	0.0169	1.00484
280.0	3.986	0.1326	8479.0	10740.0	216.4	42.42	51.76	298.7	8.92	0.0191	1.00446
300.0	3.700	0.1230	9360.0	11800.0	220.0	44.69	53.83	308.9	9.52	0.0214	1.00414
320.0	3.454	0.1149	10280.0	12900.0	223.6	47.10	56.09	318.6	10.1	0.0240	1.00386
330.0	3.343	0.1112	10770.0	13460.0	225.3	48.33	57.27	323.3	10.4	0.0253	1.00374
340.0	3.240	0.1077	11260.0	14040.0	227.0	49.59	58.47	327.9	10.7	0.0266	1.00362
350.0	3.143	0.1045	11760.0	14630.0	228.8	50.85	59.69	332.4	11.0	0.0280	1.00351
360.0	3.052	0.1015	12280.0	15240.0	230.5	52.13	60.93	336.8	11.3	0.0295	1.00341
370.0	2.966	0.09864	12810.0	15850.0	232.1	53.41	62.18	341.2	11.6	0.0309	1.00331
380.0	2.885	0.09595	13350.0	16480.0	233.8	54.70	63.43	345.4	11.8	0.0324	1.00322
400.0	2.736	0.09100	14480.0	17770.0	237.1	57.27	65.95	353.8	12.4	0.0355	1.00306
420.0	2.602	0.08655	15650.0	19120.0	240.4	59.83	68.47	361.9	12.9	0.0387	1.00291
440.0	2.481	0.08252	16880.0	20510.0	243.7	62.37	70.97	369.8	13.5	0.0420	1.00277
460.0	2.371	0.07885	18150.0	21960.0	246.9	64.87	73.44	377.5	14.0	0.0453	1.00265
480.0	2.270	0.07550	19480.0	23450.0	250.0	67.33	75.87	385.0	14.5	0.0488	1.00253
500.0	2.178	0.07243	20850.0	24990.0	253.2	69.74	78.26	392.4	15.0	0.0523	1.00243
520.0	2.093	0.06961	22270.0	26580.0	256.3	72.09	80.59	399.7	15.5	0.0559	1.00234
540.0	2.015	0.06700	23740.0	28210.0	259.4	74.40	82.88	406.8	16.0	0.0595	1.00225
560.0	1.942	0.06457	25250.0	29890.0	262.4	76.64	85.11	413.8	16.4	0.0632	1.00217
580.0	1.874	0.06232	26800.0	31620.0	265.5	78.82	87.27	420.6	16.9	0.0669	1.00209
600.0	1.811	0.06023	28400.0	33380.0	268.5	80.93	89.37	427.4	17.4	0.0706	1.00202
					0.40 MPa isobar						
90.41[a]	651.7	21.67	-14870.0	-14850.0	76.83	46.91	67.65	1991.0	1250.0	0.254	1.94401
150.0	585.8	19.48	-10720.0	-10700.0	112.1	43.37	70.40	1589.0	253.0	0.202	1.82758
160.0	574.2	19.10	-10020.0	-9995.0	116.6	43.00	70.92	1512.0	220.0	0.192	1.80764
180.0	550.1	18.29	-8583.0	-8561.0	125.1	42.67	72.53	1359.0	171.0	0.171	1.76678
200.0	524.4	17.44	-7110.0	-7087.0	132.8	42.85	75.11	1204.0	136.0	0.152	1.72395
214.527[b]	505.1	16.80	-6021.0	-5997.0	138.1	43.32	77.63	1093.0	116.0	0.139	1.69226
214.527[b]	7.463	0.2482	5760.0	7372.0	200.4	37.20	49.49	254.3	6.84	0.0127	1.00837
215.0	7.386	0.2456	5781.0	7410.0	200.6	37.20	49.42	254.8	6.86	0.0128	1.00828
220.0	7.165	0.2383	5978.0	7657.0	201.7	37.45	49.28	258.6	7.02	0.0132	1.00803
230.0	6.769	0.2251	6372.0	8149.0	203.9	38.06	49.28	265.9	7.35	0.0141	1.00758
240.0	6.423	0.2136	6771.0	8643.0	206.0	38.80	49.56	272.7	7.67	0.0150	1.00719
250.0	6.116	0.2034	7174.0	9141.0	208.0	39.63	50.04	279.1	7.99	0.0160	1.00685
260.0	5.841	0.1943	7585.0	9645.0	210.0	40.54	50.67	285.2	8.31	0.0170	1.00654
280.0	5.368	0.1785	8433.0	10670.0	213.8	42.57	52.29	296.7	8.93	0.0192	1.00601
300.0	4.972	0.1653	9319.0	11740.0	217.5	44.81	54.25	307.3	9.54	0.0215	1.00556
320.0	4.634	0.1541	10250.0	12840.0	221.1	47.18	56.42	317.3	10.1	0.0240	1.00518
330.0	4.483	0.1491	10730.0	13410.0	222.8	48.41	57.56	322.1	10.4	0.0254	1.00501
340.0	4.342	0.1444	11230.0	14000.0	224.6	49.65	58.74	326.7	10.7	0.0267	1.00485
350.0	4.210	0.1400	11730.0	14590.0	226.3	50.91	59.93	331.3	11.0	0.0281	1.00471
360.0	4.087	0.1359	12250.0	15190.0	228.0	52.18	61.15	335.8	11.3	0.0295	1.00457
370.0	3.970	0.1320	12780.0	15810.0	229.7	53.46	62.38	340.2	11.6	0.0310	1.00444
380.0	3.861	0.1284	13330.0	16440.0	231.4	54.74	63.62	344.6	11.9	0.0325	1.00431
400.0	3.659	0.1217	14450.0	17740.0	234.7	57.31	66.11	353.0	12.4	0.0356	1.00409
420.0	3.478	0.1157	15630.0	19090.0	238.0	59.86	68.61	361.2	13.0	0.0388	1.00389

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	3.315	0.1103	16860.0	20480.0	241.2	62.39	71.09	369.2	13.5	0.0420	1.00370
460.0	3.167	0.1053	18130.0	21930.0	244.4	64.89	73.54	377.0	14.0	0.0454	1.00354
480.0	3.032	0.1008	19460.0	23430.0	247.6	67.34	75.96	384.6	14.5	0.0488	1.00338
500.0	2.908	0.09670	20830.0	24970.0	250.8	69.75	78.34	392.1	15.0	0.0524	1.00325
520.0	2.794	0.09291	22250.0	26560.0	253.9	72.11	80.67	399.4	15.5	0.0559	1.00312
540.0	2.688	0.08940	23720.0	28200.0	257.0	74.41	82.95	406.6	16.0	0.0596	1.00300
560.0	2.591	0.08616	25230.0	29880.0	260.0	76.65	85.17	413.6	16.5	0.0632	1.00289
580.0	2.500	0.08315	26790.0	31600.0	263.0	78.83	87.33	420.5	16.9	0.0669	1.00279
600.0	2.416	0.08034	28390.0	33370.0	266.0	80.94	89.42	427.3	17.4	0.0706	1.00270
				0.50 MPa isobar							
90.43[a]	651.7	21.67	-14870.0	-14850.0	76.84	46.92	67.65	1991.0	1250.0	0.254	1.94404
150.0	585.9	19.48	-10720.0	-10700.0	112.1	43.38	70.39	1589.0	253.0	0.202	1.82769
160.0	574.3	19.10	-10020.0	-9991.0	116.6	43.01	70.91	1513.0	220.0	0.192	1.80776
180.0	550.2	18.30	-8585.0	-8558.0	125.0	42.68	72.52	1360.0	171.0	0.171	1.76693
200.0	524.5	17.44	-7113.0	-7084.0	132.8	42.86	75.09	1205.0	136.0	0.152	1.72415
220.422[b]	496.7	16.52	-5563.0	-5533.0	140.2	43.57	78.95	1046.0	109.0	0.134	1.67856
220.422[b]	9.232	0.3070	5903.0	7531.0	199.5	38.03	51.18	254.5	7.03	0.0134	1.01035
225.0	8.904	0.2961	6091.0	7780.0	200.6	38.22	50.88	258.3	7.18	0.0138	1.00999
230.0	8.643	0.2874	6294.0	8034.0	201.7	38.49	50.73	262.2	7.35	0.0142	1.00969
240.0	8.174	0.2718	6701.0	8541.0	203.9	39.13	50.71	269.5	7.68	0.0151	1.00916
250.0	7.763	0.2582	7112.0	9049.0	205.9	39.90	50.98	276.3	8.00	0.0161	1.00870
260.0	7.399	0.2461	7529.0	9561.0	207.9	40.77	51.46	282.7	8.32	0.0171	1.00829
270.0	7.073	0.2352	7953.0	10080.0	209.9	41.72	52.10	288.8	8.64	0.0182	1.00792
280.0	6.778	0.2254	8385.0	10600.0	211.8	42.73	52.86	294.6	8.95	0.0193	1.00759
300.0	6.265	0.2083	9278.0	11680.0	215.5	44.92	54.68	305.6	9.57	0.0216	1.00701
320.0	5.830	0.1939	10210.0	12790.0	219.1	47.26	56.75	315.8	10.2	0.0241	1.00652
330.0	5.636	0.1874	10700.0	13370.0	220.9	48.48	57.86	320.8	10.5	0.0255	1.00631
340.0	5.456	0.1814	11190.0	13950.0	222.6	49.72	59.01	325.6	10.8	0.0268	1.00610
350.0	5.288	0.1759	11700.0	14550.0	224.3	50.97	60.18	330.2	11.0	0.0282	1.00591
360.0	5.130	0.1706	12220.0	15150.0	226.0	52.23	61.38	334.8	11.3	0.0296	1.00574
370.0	4.982	0.1657	12760.0	15770.0	227.7	53.50	62.59	339.3	11.6	0.0311	1.00557
380.0	4.843	0.1611	13300.0	16410.0	229.4	54.78	63.81	343.7	11.9	0.0326	1.00541
400.0	4.588	0.1526	14430.0	17710.0	232.8	57.34	66.27	352.3	12.4	0.0356	1.00513
420.0	4.359	0.1450	15610.0	19060.0	236.1	59.89	68.75	360.6	13.0	0.0388	1.00487
440.0	4.153	0.1381	16840.0	20460.0	239.3	62.42	71.21	368.7	13.5	0.0421	1.00464
460.0	3.966	0.1319	18110.0	21900.0	242.5	64.91	73.65	376.6	14.0	0.0455	1.00443
480.0	3.795	0.1262	19440.0	23400.0	245.7	67.36	76.06	384.3	14.5	0.0489	1.00424
500.0	3.639	0.1210	20810.0	24950.0	248.9	69.77	78.43	391.8	15.0	0.0524	1.00406
520.0	3.496	0.1163	22240.0	26540.0	252.0	72.13	80.75	399.1	15.5	0.0560	1.00390
540.0	3.363	0.1119	23710.0	28180.0	255.1	74.43	83.02	406.3	16.0	0.0596	1.00375
560.0	3.241	0.1078	25220.0	29860.0	258.1	76.67	85.24	413.4	16.5	0.0633	1.00362
580.0	3.127	0.1040	26780.0	31590.0	261.2	78.84	87.39	420.4	17.0	0.0670	1.00349
600.0	3.021	0.1005	28380.0	33350.0	264.2	80.95	89.48	427.2	17.4	0.0707	1.00337
				0.60 MPa isobar							
90.45[a]	651.7	21.67	-14870.0	-14840.0	76.84	46.92	67.65	1991.0	1250.0	0.254	1.94407
150.0	585.9	19.49	-10720.0	-10690.0	112.0	43.39	70.38	1590.0	253.0	0.202	1.82780
160.0	574.3	19.10	-10020.0	-9987.0	116.6	43.01	70.90	1514.0	220.0	0.192	1.80788
180.0	550.3	18.30	-8588.0	-8555.0	125.0	42.69	72.50	1361.0	171.0	0.172	1.76708
200.0	524.7	17.45	-7116.0	-7081.0	132.8	42.87	75.06	1205.0	136.0	0.152	1.72435
220.0	496.6	16.52	-5579.0	-5543.0	140.1	43.52	79.07	1045.0	109.0	0.134	1.67840
225.497[b]	489.2	16.27	-5164.0	-5127.0	142.0	43.82	80.23	1006.0	103.0	0.129	1.66647
225.497[b]	11.00	0.3659	6020.0	7660.0	198.7	38.78	52.82	254.3	7.19	0.0140	1.01235
230.0	10.61	0.3528	6212.0	7912.0	199.8	38.94	52.39	258.2	7.35	0.0144	1.01190
240.0	9.995	0.3324	6629.0	8434.0	202.0	39.49	52.00	266.1	7.68	0.0153	1.01121
250.0	9.466	0.3148	7048.0	8954.0	204.1	40.19	52.01	273.3	8.01	0.0162	1.01061
260.0	9.002	0.2994	7471.0	9475.0	206.2	41.01	52.31	280.1	8.33	0.0172	1.01009
270.0	8.589	0.2856	7900.0	10000.0	208.2	41.91	52.81	286.4	8.65	0.0183	1.00963
280.0	8.219	0.2733	8337.0	10530.0	210.1	42.89	53.47	292.5	8.97	0.0194	1.00921

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
300.0	7.579	0.2520	9237.0	11620.0	213.8	45.04	55.13	303.9	9.59	0.0217	1.00849
320.0	7.042	0.2342	10180.0	12740.0	217.5	47.35	57.10	314.4	10.2	0.0242	1.00788
330.0	6.803	0.2263	10660.0	13320.0	219.2	48.56	58.18	319.5	10.5	0.0255	1.00761
340.0	6.582	0.2189	11160.0	13900.0	221.0	49.78	59.29	324.4	10.8	0.0269	1.00737
350.0	6.376	0.2120	11670.0	14500.0	222.7	51.03	60.43	329.2	11.1	0.0283	1.00713
360.0	6.183	0.2056	12190.0	15110.0	224.4	52.28	61.61	333.8	11.4	0.0297	1.00692
370.0	6.002	0.1996	12730.0	15730.0	226.1	53.55	62.80	338.4	11.6	0.0312	1.00671
380.0	5.832	0.1940	13270.0	16370.0	227.8	54.82	64.00	342.9	11.9	0.0326	1.00652
390.0	5.672	0.1886	13830.0	17010.0	229.5	56.10	65.22	347.3	12.2	0.0342	1.00634
400.0	5.522	0.1836	14400.0	17670.0	231.2	57.38	66.44	351.6	12.5	0.0357	1.00617
420.0	5.244	0.1744	15580.0	19030.0	234.5	59.92	68.89	360.0	13.0	0.0389	1.00586
440.0	4.994	0.1661	16810.0	20430.0	237.7	62.44	71.33	368.2	13.6	0.0422	1.00558
460.0	4.767	0.1585	18090.0	21880.0	241.0	64.93	73.76	376.1	14.1	0.0455	1.00533
480.0	4.561	0.1517	19420.0	23380.0	244.2	67.38	76.16	383.9	14.6	0.0490	1.00510
500.0	4.372	0.1454	20800.0	24920.0	247.3	69.79	78.51	391.5	15.1	0.0525	1.00488
520.0	4.199	0.1396	22220.0	26520.0	250.4	72.14	80.83	398.9	15.6	0.0560	1.00469
540.0	4.040	0.1343	23690.0	28160.0	253.5	74.44	83.09	406.1	16.1	0.0597	1.00451
560.0	3.892	0.1294	25210.0	29840.0	256.6	76.68	85.30	413.2	16.5	0.0633	1.00435
580.0	3.755	0.1249	26760.0	31570.0	259.6	78.85	87.45	420.2	17.0	0.0670	1.00419
600.0	3.627	0.1206	28360.0	33340.0	262.6	80.96	89.53	427.1	17.5	0.0707	1.00405
					0.80 MPa isobar						
90.48[a]	651.8	21.67	-14870.0	-14830.0	76.85	46.93	67.66	1992.0	1250.0	0.254	1.94414
150.0	586.1	19.49	-10730.0	-10690.0	112.0	43.40	70.36	1591.0	253.0	0.202	1.82801
160.0	574.5	19.10	-10020.0	-9980.0	116.6	43.03	70.88	1515.0	221.0	0.192	1.80812
180.0	550.5	18.31	-8592.0	-8548.0	125.0	42.70	72.47	1362.0	172.0	0.172	1.76739
200.0	524.9	17.46	-7121.0	-7076.0	132.8	42.88	75.00	1207.0	137.0	0.152	1.72474
220.0	496.9	16.53	-5587.0	-5539.0	140.1	43.53	78.97	1047.0	109.0	0.134	1.67893
234.016[b]	476.2	15.84	-4480.0	-4430.0	145.0	44.30	82.76	936.2	93.7	0.122	1.64544
234.016[b]	14.57	0.4846	6205.0	7856.0	197.5	40.11	56.01	253.2	7.49	0.0151	1.01638
235.0	14.36	0.4776	6253.0	7928.0	197.8	40.12	55.75	254.3	7.52	0.0152	1.01614
240.0	13.89	0.4619	6473.0	8205.0	198.9	40.30	55.13	258.8	7.70	0.0156	1.01561
250.0	13.06	0.4344	6911.0	8753.0	201.2	40.83	54.44	267.0	8.03	0.0165	1.01467
260.0	12.36	0.4110	7349.0	9296.0	203.3	41.52	54.24	274.6	8.37	0.0175	1.01387
270.0	11.74	0.3905	7790.0	9839.0	205.4	42.33	54.39	281.6	8.69	0.0185	1.01318
280.0	11.20	0.3725	8236.0	10380.0	207.3	43.24	54.79	288.2	9.01	0.0196	1.01256
290.0	10.71	0.3563	8690.0	10930.0	209.3	44.23	55.37	294.4	9.33	0.0208	1.01202
300.0	10.28	0.3418	9151.0	11490.0	211.2	45.28	56.09	300.4	9.64	0.0219	1.01152
320.0	9.515	0.3164	10100.0	12630.0	214.8	47.53	57.84	311.6	10.2	0.0244	1.01066
330.0	9.180	0.3053	10590.0	13210.0	216.6	48.71	58.83	316.9	10.5	0.0257	1.01028
340.0	8.871	0.2950	11100.0	13810.0	218.4	49.92	59.87	322.0	10.8	0.0271	1.00994
350.0	8.584	0.2855	11610.0	14410.0	220.2	51.15	60.96	327.0	11.1	0.0284	1.00961
360.0	8.316	0.2766	12130.0	15030.0	221.9	52.39	62.08	331.8	11.4	0.0299	1.00931
370.0	8.067	0.2683	12670.0	15650.0	223.6	53.65	63.23	336.6	11.7	0.0313	1.00903
380.0	7.833	0.2605	13220.0	16290.0	225.3	54.91	64.40	341.2	12.0	0.0328	1.00877
390.0	7.613	0.2532	13780.0	16940.0	227.0	56.18	65.58	345.7	12.3	0.0343	1.00852
400.0	7.406	0.2463	14360.0	17600.0	228.7	57.45	66.77	350.2	12.5	0.0358	1.00829
420.0	7.027	0.2337	15540.0	18960.0	232.0	59.98	69.18	358.8	13.1	0.0390	1.00786
440.0	6.686	0.2223	16770.0	20370.0	235.3	62.49	71.58	367.2	13.6	0.0423	1.00748
460.0	6.378	0.2121	18050.0	21830.0	238.5	64.98	73.98	375.3	14.1	0.0456	1.00713
480.0	6.099	0.2028	19390.0	23330.0	241.7	67.42	76.35	383.2	14.7	0.0491	1.00682
500.0	5.844	0.1944	20760.0	24880.0	244.9	69.82	78.69	390.9	15.2	0.0526	1.00653
520.0	5.611	0.1866	22190.0	26480.0	248.0	72.17	80.99	398.4	15.6	0.0561	1.00627
540.0	5.395	0.1794	23660.0	28120.0	251.1	74.47	83.23	405.7	16.1	0.0598	1.00603
560.0	5.197	0.1728	25180.0	29810.0	254.2	76.70	85.43	412.9	16.6	0.0634	1.00580
580.0	5.012	0.1667	26740.0	31540.0	257.2	78.88	87.57	420.0	17.1	0.0671	1.00560
600.0	4.841	0.1610	28340.0	33310.0	260.2	80.98	89.64	426.9	17.5	0.0708	1.00541

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					1.00 MPa isobar						
90.51[a]	651.8	21.68	-14870.0	-14820.0	76.86	46.93	67.66	1992.0	1250.0	0.254	1.94420
150.0	586.2	19.49	-10730.0	-10680.0	112.0	43.41	70.35	1592.0	254.0	0.203	1.82823
160.0	574.6	19.11	-10030.0	-9973.0	116.6	43.04	70.86	1516.0	221.0	0.192	1.80836
180.0	550.6	18.31	-8596.0	-8542.0	125.0	42.71	72.43	1364.0	172.0	0.172	1.76769
200.0	525.1	17.46	-7127.0	-7070.0	132.7	42.90	74.95	1209.0	137.0	0.153	1.72513
220.0	497.3	16.54	-5595.0	-5535.0	140.1	43.55	78.87	1049.0	109.0	0.134	1.67946
240.0	465.5	15.48	-3963.0	-3899.0	147.2	44.67	85.30	879.6	86.9	0.117	1.62835
241.090[b]	464.7	15.45	-3897.0	-3833.0	147.4	44.77	85.29	877.6	86.5	0.116	1.62715
241.090[b]	18.20	0.6054	6345.0	7996.0	196.5	41.30	59.22	251.6	7.75	0.0160	1.02049
245.0	17.56	0.5838	6532.0	8245.0	197.5	41.37	58.26	255.6	7.89	0.0164	1.01975
250.0	16.97	0.5643	6762.0	8534.0	198.7	41.56	57.49	260.3	8.06	0.0168	1.01909
260.0	15.95	0.5303	7218.0	9104.0	200.9	42.09	56.58	268.8	8.40	0.0178	1.01793
270.0	15.08	0.5015	7673.0	9668.0	203.1	42.79	56.24	276.5	8.73	0.0188	1.01695
280.0	14.33	0.4765	8131.0	10230.0	205.1	43.61	56.30	283.7	9.06	0.0199	1.01609
290.0	13.66	0.4544	8594.0	10790.0	207.1	44.54	56.63	290.5	9.38	0.0210	1.01534
300.0	13.07	0.4348	9063.0	11360.0	209.0	45.54	57.16	296.8	9.69	0.0221	1.01467
320.0	12.06	0.4010	10030.0	12520.0	212.7	47.72	58.64	308.7	10.3	0.0246	1.01353
330.0	11.62	0.3863	10520.0	13110.0	214.6	48.87	59.53	314.2	10.6	0.0259	1.01303
340.0	11.21	0.3728	11030.0	13710.0	216.4	50.06	60.49	319.6	10.9	0.0272	1.01257
350.0	10.84	0.3603	11550.0	14320.0	218.1	51.27	61.51	324.8	11.2	0.0286	1.01215
360.0	10.49	0.3488	12070.0	14940.0	219.9	52.50	62.58	329.8	11.5	0.0300	1.01175
370.0	10.16	0.3380	12610.0	15570.0	221.6	53.74	63.68	334.7	11.8	0.0315	1.01139
380.0	9.863	0.3280	13170.0	16220.0	223.3	55.00	64.81	339.5	12.1	0.0329	1.01105
390.0	9.580	0.3186	13730.0	16870.0	225.0	56.25	65.95	344.2	12.3	0.0345	1.01073
400.0	9.314	0.3097	14310.0	17530.0	226.7	57.52	67.12	348.7	12.6	0.0360	1.01043
410.0	9.064	0.3014	14890.0	18210.0	228.4	58.78	68.29	353.2	12.9	0.0376	1.01015
420.0	8.827	0.2936	15490.0	18900.0	230.0	60.04	69.47	357.6	13.2	0.0392	1.00988
440.0	8.393	0.2791	16730.0	20310.0	233.3	62.54	71.84	366.1	13.7	0.0424	1.00939
460.0	8.001	0.2661	18020.0	21770.0	236.6	65.02	74.20	374.4	14.2	0.0458	1.00895
480.0	7.646	0.2543	19350.0	23280.0	239.8	67.46	76.55	382.4	14.7	0.0492	1.00855
500.0	7.323	0.2435	20730.0	24840.0	242.9	69.85	78.87	390.2	15.2	0.0527	1.00819
520.0	7.028	0.2337	22160.0	26440.0	246.1	72.20	81.14	397.9	15.7	0.0563	1.00786
540.0	6.756	0.2247	23630.0	28080.0	249.2	74.49	83.38	405.3	16.2	0.0599	1.00755
560.0	6.505	0.2163	25150.0	29770.0	252.2	76.73	85.56	412.6	16.7	0.0635	1.00727
580.0	6.273	0.2086	26710.0	31500.0	255.3	78.90	87.69	419.7	17.1	0.0672	1.00701
600.0	6.057	0.2014	28310.0	33280.0	258.3	81.00	89.75	426.7	17.6	0.0709	1.00677
					1.20 MPa isobar						
90.54[a]	651.8	21.68	-14870.0	-14810.0	76.87	46.94	67.67	1993.0	1250.0	0.254	1.94426
150.0	586.3	19.50	-10730.0	-10670.0	112.0	43.43	70.33	1593.0	254.0	0.203	1.82844
160.0	574.8	19.11	-10030.0	-9966.0	116.5	43.05	70.83	1517.0	221.0	0.192	1.80860
180.0	550.8	18.32	-8601.0	-8535.0	125.0	42.73	72.40	1365.0	172.0	0.172	1.76799
200.0	525.4	17.47	-7133.0	-7064.0	132.7	42.91	74.89	1211.0	137.0	0.153	1.72552
220.0	497.6	16.55	-5603.0	-5530.0	140.0	43.56	78.77	1052.0	110.0	0.134	1.67999
240.0	466.0	15.50	-3975.0	-3897.0	147.1	44.68	85.10	882.9	87.2	0.117	1.62913
247.195[b]	454.3	15.11	-3382.0	-3302.0	149.6	45.23	87.88	826.1	80.5	0.111	1.61064
247.195[b]	21.92	0.7289	6453.0	8099.0	195.7	42.40	62.54	249.5	8.00	0.0170	1.02471
250.0	21.27	0.7073	6597.0	8293.0	196.5	42.40	61.50	252.8	8.10	0.0172	1.02397
260.0	19.82	0.6592	7077.0	8897.0	198.8	42.73	59.47	262.5	8.45	0.0181	1.02232
270.0	18.63	0.6196	7549.0	9486.0	201.1	43.29	58.45	271.2	8.78	0.0191	1.02097
280.0	17.62	0.5860	8020.0	10070.0	203.2	44.02	58.04	279.1	9.11	0.0201	1.01982
290.0	16.75	0.5569	8494.0	10650.0	205.2	44.87	58.04	286.4	9.44	0.0212	1.01883
300.0	15.98	0.5314	8972.0	11230.0	207.2	45.82	58.33	293.2	9.75	0.0224	1.01796
310.0	15.29	0.5086	9456.0	11820.0	209.1	46.84	58.84	299.6	10.1	0.0236	1.01718
320.0	14.68	0.4880	9948.0	12410.0	211.0	47.92	59.50	305.7	10.4	0.0248	1.01648
330.0	14.12	0.4694	10450.0	13010.0	212.8	49.04	60.28	311.5	10.7	0.0261	1.01585
340.0	13.60	0.4524	10960.0	13610.0	214.6	50.21	61.15	317.2	11.0	0.0274	1.01527
350.0	13.13	0.4368	11480.0	14230.0	216.4	51.40	62.10	322.6	11.3	0.0288	1.01474
360.0	12.70	0.4224	12010.0	14860.0	218.2	52.61	63.10	327.8	11.6	0.0302	1.01425

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
370.0	12.30	0.4090	12560.0	15490.0	219.9	53.84	64.15	332.9	11.8	0.0316	1.01379
380.0	11.92	0.3965	13110.0	16140.0	221.6	55.08	65.23	337.8	12.1	0.0331	1.01337
390.0	11.57	0.3849	13680.0	16800.0	223.4	56.33	66.34	342.6	12.4	0.0346	1.01297
400.0	11.24	0.3740	14260.0	17470.0	225.1	57.59	67.47	347.3	12.7	0.0361	1.01260
410.0	10.94	0.3637	14850.0	18150.0	226.7	58.84	68.62	351.9	13.0	0.0377	1.01225
420.0	10.65	0.3541	15450.0	18840.0	228.4	60.10	69.77	356.4	13.2	0.0393	1.01193
440.0	10.11	0.3363	16690.0	20260.0	231.7	62.59	72.10	365.1	13.8	0.0425	1.01133
460.0	9.635	0.3204	17980.0	21720.0	235.0	65.06	74.43	373.5	14.3	0.0459	1.01079
480.0	9.203	0.3060	19310.0	23230.0	238.2	67.49	76.75	381.7	14.8	0.0493	1.01030
500.0	8.810	0.2930	20700.0	24790.0	241.4	69.89	79.04	389.6	15.3	0.0528	1.00986
520.0	8.451	0.2810	22120.0	26390.0	244.5	72.23	81.30	397.4	15.8	0.0564	1.00945
540.0	8.121	0.2701	23600.0	28040.0	247.6	74.52	83.52	404.9	16.3	0.0600	1.00908
560.0	7.817	0.2600	25120.0	29740.0	250.7	76.75	85.69	412.2	16.7	0.0636	1.00874
580.0	7.536	0.2506	26680.0	31470.0	253.7	78.92	87.81	419.4	17.2	0.0673	1.00843
600.0	7.275	0.2419	28290.0	33250.0	256.7	81.02	89.86	426.5	17.7	0.0710	1.00813
					1.40 MPa isobar						
90.57[a]	651.9	21.68	-14870.0	-14800.0	76.88	46.95	67.67	1993.0	1250.0	0.254	1.94432
150.0	586.5	19.50	-10740.0	-10660.0	112.0	43.44	70.31	1594.0	255.0	0.203	1.82866
160.0	574.9	19.12	-10030.0	-9959.0	116.5	43.07	70.81	1518.0	222.0	0.193	1.80884
180.0	551.0	18.32	-8605.0	-8529.0	124.9	42.74	72.37	1366.0	173.0	0.172	1.76829
200.0	525.6	17.48	-7139.0	-7058.0	132.7	42.92	74.84	1213.0	137.0	0.153	1.72591
220.0	497.9	16.56	-5611.0	-5526.0	140.0	43.58	78.68	1054.0	110.0	0.135	1.68051
240.0	466.4	15.51	-3986.0	-3896.0	147.1	44.69	84.90	886.1	87.5	0.117	1.62989
250.0	448.3	14.91	-3118.0	-3024.0	150.6	45.45	89.71	795.9	77.4	0.108	1.60128
252.599[b]	444.6	14.78	-2914.0	-2819.0	151.4	45.69	90.59	779.7	75.5	0.107	1.59536
252.599[b]	25.73	0.8558	6537.0	8173.0	195.0	43.42	66.05	247.2	8.25	0.0178	1.02906
255.0	25.01	0.8317	6669.0	8352.0	195.7	43.38	64.79	250.4	8.33	0.0180	1.02823
260.0	24.05	0.7999	6922.0	8672.0	196.9	43.47	63.16	255.8	8.50	0.0184	1.02714
270.0	22.44	0.7462	7416.0	9292.0	199.2	43.86	61.11	265.5	8.84	0.0194	1.02529
280.0	21.11	0.7020	7903.0	9898.0	201.4	44.47	60.07	274.2	9.17	0.0204	1.02378
290.0	19.98	0.6645	8389.0	10500.0	203.5	45.23	59.65	282.1	9.50	0.0215	1.02249
300.0	19.00	0.6319	8877.0	11090.0	205.6	46.11	59.65	289.4	9.82	0.0226	1.02138
310.0	18.14	0.6033	9369.0	11690.0	207.5	47.08	59.93	296.3	10.1	0.0238	1.02040
320.0	17.37	0.5778	9868.0	12290.0	209.4	48.12	60.42	302.7	10.4	0.0250	1.01953
330.0	16.68	0.5548	10380.0	12900.0	211.3	49.22	61.07	308.8	10.7	0.0263	1.01875
340.0	16.05	0.5339	10890.0	13510.0	213.1	50.36	61.84	314.7	11.0	0.0276	1.01804
350.0	15.48	0.5148	11420.0	14140.0	214.9	51.53	62.71	320.3	11.3	0.0290	1.01739
360.0	14.95	0.4973	11950.0	14770.0	216.7	52.73	63.64	325.8	11.6	0.0304	1.01679
370.0	14.47	0.4811	12500.0	15410.0	218.5	53.94	64.64	331.0	11.9	0.0318	1.01624
380.0	14.01	0.4661	13060.0	16060.0	220.2	55.17	65.67	336.1	12.2	0.0333	1.01573
390.0	13.59	0.4520	13630.0	16720.0	221.9	56.41	66.74	341.0	12.5	0.0348	1.01525
400.0	13.20	0.4390	14210.0	17400.0	223.6	57.66	67.84	345.9	12.8	0.0363	1.01480
410.0	12.83	0.4267	14800.0	18080.0	225.3	58.91	68.95	350.6	13.0	0.0378	1.01439
420.0	12.48	0.4152	15400.0	18770.0	227.0	60.16	70.08	355.2	13.3	0.0394	1.01400
440.0	11.85	0.3940	16650.0	20200.0	230.3	62.64	72.36	364.1	13.8	0.0427	1.01328
460.0	11.28	0.3751	17940.0	21670.0	233.6	65.10	74.66	372.7	14.4	0.0460	1.01264
480.0	10.77	0.3581	19280.0	23190.0	236.8	67.53	76.95	381.0	14.9	0.0494	1.01206
500.0	10.30	0.3426	20660.0	24750.0	240.0	69.92	79.22	389.0	15.4	0.0529	1.01154
520.0	9.879	0.3285	22090.0	26350.0	243.2	72.26	81.46	396.9	15.9	0.0565	1.01106
540.0	9.491	0.3156	23570.0	28010.0	246.3	74.55	83.67	404.5	16.3	0.0601	1.01062
560.0	9.133	0.3037	25090.0	29700.0	249.3	76.78	85.82	411.9	16.8	0.0637	1.01022
580.0	8.802	0.2927	26650.0	31440.0	252.4	78.94	87.93	419.2	17.3	0.0674	1.00985
600.0	8.496	0.2825	28260.0	33220.0	255.4	81.04	89.97	426.3	17.7	0.0711	1.00950
					1.60 MPa isobar						
90.61[a]	651.9	21.68	-14870.0	-14790.0	76.89	46.96	67.68	1993.0	1250.0	0.255	1.94438
150.0	586.6	19.51	-10740.0	-10660.0	111.9	43.45	70.29	1595.0	255.0	0.203	1.82887
160.0	575.1	19.12	-10040.0	-9952.0	116.5	43.08	70.79	1519.0	222.0	0.193	1.80907
180.0	551.2	18.33	-8610.0	-8522.0	124.9	42.76	72.33	1368.0	173.0	0.172	1.76859
200.0	525.8	17.49	-7144.0	-7053.0	132.7	42.94	74.79	1214.0	138.0	0.153	1.72630

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
220.0	498.2	16.57	-5618.0	-5522.0	139.9	43.59	78.58	1056.0	110.0	0.135	1.68104
240.0	466.9	15.53	-3997.0	-3894.0	147.0	44.71	84.70	889.4	87.8	0.117	1.63066
250.0	449.0	14.93	-3132.0	-3025.0	150.6	45.46	89.40	799.9	77.7	0.109	1.60225
257.468[b]	435.4	14.48	-2482.0	-2372.0	153.1	46.13	93.46	737.3	71.2	0.103	1.58096
257.468[b]	29.67	0.9867	6603.0	8224.0	194.3	44.39	69.82	244.8	8.48	0.0187	1.03355
260.0	28.75	0.9561	6749.0	8422.0	195.1	44.32	68.10	248.3	8.57	0.0188	1.03250
265.0	27.58	0.9173	7013.0	8757.0	196.3	44.36	65.97	254.1	8.74	0.0193	1.03116
270.0	26.56	0.8832	7272.0	9083.0	197.6	44.49	64.43	259.4	8.91	0.0197	1.02999
280.0	24.82	0.8254	7778.0	9717.0	199.9	44.96	62.48	269.1	9.24	0.0207	1.02801
290.0	23.38	0.7776	8278.0	10340.0	202.0	45.62	61.50	277.7	9.57	0.0218	1.02636
300.0	22.16	0.7369	8778.0	10950.0	204.1	46.43	61.12	285.6	9.89	0.0229	1.02497
310.0	21.10	0.7016	9279.0	11560.0	206.1	47.34	61.13	292.8	10.2	0.0240	1.02376
320.0	20.16	0.6704	9786.0	12170.0	208.1	48.34	61.43	299.7	10.5	0.0252	1.02269
330.0	19.32	0.6425	10300.0	12790.0	210.0	49.40	61.93	306.1	10.8	0.0265	1.02174
340.0	18.57	0.6174	10820.0	13410.0	211.8	50.51	62.58	312.2	11.1	0.0278	1.02088
350.0	17.88	0.5946	11350.0	14040.0	213.6	51.66	63.35	318.1	11.4	0.0292	1.02010
360.0	17.25	0.5737	11890.0	14680.0	215.4	52.84	64.21	323.7	11.7	0.0305	1.01939
370.0	16.67	0.5545	12440.0	15330.0	217.2	54.05	65.14	329.2	12.0	0.0320	1.01873
380.0	16.14	0.5367	13000.0	15980.0	219.0	55.27	66.13	334.4	12.3	0.0334	1.01813
390.0	15.64	0.5202	13570.0	16650.0	220.7	56.50	67.15	339.5	12.6	0.0349	1.01756
400.0	15.18	0.5048	14160.0	17320.0	222.4	57.73	68.21	344.5	12.8	0.0364	1.01704
410.0	14.75	0.4904	14750.0	18010.0	224.1	58.97	69.29	349.3	13.1	0.0380	1.01655
420.0	14.34	0.4769	15360.0	18710.0	225.8	60.22	70.39	354.0	13.4	0.0396	1.01609
430.0	13.96	0.4642	15970.0	19420.0	227.5	61.46	71.51	358.6	13.6	0.0412	1.01566
440.0	13.60	0.4523	16600.0	20140.0	229.1	62.69	72.63	363.1	13.9	0.0428	1.01525
460.0	12.94	0.4303	17900.0	21620.0	232.4	65.15	74.89	371.8	14.4	0.0461	1.01450
480.0	12.34	0.4105	19240.0	23140.0	235.6	67.57	77.16	380.3	14.9	0.0496	1.01383
500.0	11.80	0.3926	20630.0	24700.0	238.8	69.95	79.40	388.5	15.4	0.0530	1.01323
520.0	11.31	0.3762	22060.0	26310.0	242.0	72.29	81.63	396.4	15.9	0.0566	1.01267
540.0	10.86	0.3613	23540.0	27970.0	245.1	74.57	83.81	404.1	16.4	0.0602	1.01217
560.0	10.45	0.3476	25060.0	29660.0	248.2	76.80	85.95	411.6	16.9	0.0638	1.01170
580.0	10.07	0.3349	26630.0	31400.0	251.2	78.97	88.05	419.0	17.4	0.0675	1.01127
600.0	9.718	0.3232	28240.0	33190.0	254.3	81.06	90.08	426.2	17.8	0.0712	1.01087
					1.80 MPa isobar						
90.64[a]	651.9	21.68	-14860.0	-14780.0	76.90	46.96	67.69	1994.0	1260.0	0.255	1.94444
150.0	586.7	19.51	10740.0	-10650.0	111.9	43.46	70.28	1596.0	256.0	0.203	1.82908
200.0	526.1	17.50	-7150.0	-7047.0	132.6	42.95	74.74	1216.0	138.0	0.153	1.72668
220.0	498.6	16.58	-5626.0	-5518.0	139.9	43.60	78.49	1059.0	111.0	0.135	1.68155
240.0	467.4	15.54	-4009.0	-3893.0	147.0	44.72	84.51	892.6	88.1	0.118	1.63141
250.0	449.6	14.95	-3146.0	-3026.0	150.5	45.47	89.10	803.8	78.1	0.109	1.60320
260.0	429.3	14.28	-2230.0	-2104.0	154.1	46.38	95.81	708.5	68.4	0.100	1.57155
261.913[b]	426.5	14.18	-2079.0	-1952.0	154.7	46.58	96.53	697.8	67.3	0.0992	1.56720
261.913[b]	33.74	1.122	6652.0	8256.0	193.7	45.33	73.95	242.2	8.72	0.0195	1.03822
265.0	32.46	1.080	6838.0	8505.0	194.6	45.21	71.35	246.8	8.82	0.0197	1.03675
270.0	31.08	1.033	7113.0	8855.0	195.9	45.22	68.69	252.9	8.99	0.0201	1.03516
275.0	29.87	0.9933	7381.0	9193.0	197.2	45.32	66.79	258.5	9.16	0.0206	1.03378
280.0	28.80	0.9579	7644.0	9524.0	198.4	45.50	65.40	263.7	9.32	0.0210	1.03256
290.0	26.98	0.8973	8162.0	10170.0	200.6	46.04	63.65	273.1	9.65	0.0221	1.03047
300.0	25.47	0.8469	8674.0	10800.0	202.8	46.76	62.78	281.6	9.97	0.0232	1.02874
310.0	24.17	0.8037	9186.0	11430.0	204.8	47.62	62.47	289.4	10.3	0.0243	1.02725
315.0	23.58	0.7843	9443.0	11740.0	205.8	48.08	62.46	293.0	10.4	0.0249	1.02659
320.0	23.04	0.7661	9701.0	12050.0	206.8	48.57	62.52	296.6	10.6	0.0255	1.02596
330.0	22.04	0.7328	10220.0	12680.0	208.7	49.59	62.85	303.3	10.9	0.0267	1.02482
340.0	21.14	0.7030	10750.0	13310.0	210.6	50.68	63.37	309.8	11.2	0.0280	1.02380
350.0	20.33	0.6761	11280.0	13940.0	212.5	51.80	64.04	315.9	11.5	0.0293	1.02288
360.0	19.59	0.6516	11830.0	14590.0	214.3	52.96	64.81	321.7	11.8	0.0307	1.02204
370.0	18.92	0.6291	12380.0	15240.0	216.1	54.15	65.67	327.3	12.1	0.0321	1.02127
380.0	18.29	0.6084	12940.0	15900.0	217.8	55.36	66.60	332.7	12.4	0.0336	1.02057
390.0	17.72	0.5892	13520.0	16570.0	219.6	56.58	67.58	338.0	12.6	0.0351	1.01991
400.0	17.18	0.5714	14100.0	17250.0	221.3	57.81	68.60	343.0	12.9	0.0366	1.01931
410.0	16.68	0.5548	14700.0	17950.0	223.0	59.04	69.64	348.0	13.2	0.0381	1.01874

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
420.0	16.22	0.5393	15310.0	18650.0	224.7	60.28	70.72	352.8	13.5	0.0397	1.01821
430.0	15.78	0.5247	15930.0	19360.0	226.4	61.51	71.80	357.5	13.7	0.0413	1.01771
440.0	15.36	0.5109	16560.0	20080.0	228.0	62.74	72.91	362.1	14.0	0.0430	1.01724
460.0	14.61	0.4857	17860.0	21560.0	231.3	65.19	75.13	371.0	14.5	0.0463	1.01639
480.0	13.93	0.4631	19200.0	23090.0	234.6	67.61	77.36	379.6	15.0	0.0497	1.01562
500.0	13.31	0.4427	20590.0	24660.0	237.8	69.98	79.59	387.9	15.5	0.0532	1.01492
520.0	12.75	0.4241	22030.0	26270.0	240.9	72.32	81.79	395.9	16.0	0.0567	1.01429
540.0	12.24	0.4072	23510.0	27930.0	244.1	74.60	83.96	403.7	16.5	0.0603	1.01372
560.0	11.77	0.3916	25030.0	29630.0	247.2	76.83	86.09	411.3	17.0	0.0639	1.01319
580.0	11.34	0.3772	26600.0	31370.0	250.2	78.99	88.17	418.7	17.4	0.0676	1.01270
600.0	10.94	0.3639	28210.0	33160.0	253.2	81.08	90.19	426.0	17.9	0.0713	1.01225
					2.00 MPa isobar						
90.67[a]	652.0	21.68	-14860.0	-14770.0	76.90	46.97	67.69	1994.0	1260.0	0.255	1.94450
150.0	586.8	19.52	-10750.0	-10640.0	111.9	43.48	70.26	1597.0	256.0	0.203	1.82930
200.0	526.3	17.50	-7156.0	-7041.0	132.6	42.97	74.68	1218.0	138.0	0.153	1.72706
220.0	498.9	16.59	-5634.0	-5513.0	139.9	43.62	78.40	1061.0	111.0	0.135	1.68207
240.0	467.9	15.56	4020.0	3891.0	146.9	44.73	84.33	895.8	88.4	0.118	1.63216
250.0	450.2	14.97	-3160.0	-3026.0	150.5	45.47	88.81	807.7	78.4	0.109	1.60415
260.0	430.1	14.30	-2248.0	-2108.0	154.1	46.38	95.30	713.4	68.8	0.101	1.57281
266.011[b]	417.9	13.90	-1697.0	-1553.0	156.2	47.02	99.87	660.8	63.8	0.0959	1.55391
266.011[b]	37.97	1.263	6687.0	8271.0	193.1	46.24	78.52	239.5	8.96	0.0203	1.04309
270.0	36.11	1.201	6936.0	8602.0	194.3	46.05	74.44	245.6	9.09	0.0206	1.04095
275.0	34.50	1.147	7222.0	8965.0	195.7	46.03	71.27	252.1	9.25	0.0210	1.03909
280.0	33.12	1.101	7500.0	9316.0	196.9	46.11	69.02	257.9	9.41	0.0214	1.03750
290.0	30.81	1.025	8038.0	9990.0	199.3	46.50	66.18	268.3	9.74	0.0224	1.03485
300.0	28.94	0.9624	8566.0	10640.0	201.5	47.12	64.68	277.5	10.1	0.0235	1.03270
310.0	27.37	0.9102	9089.0	11290.0	203.6	47.91	63.95	285.8	10.4	0.0246	1.03090
315.0	26.67	0.8869	9351.0	11610.0	204.6	48.34	63.78	289.7	10.5	0.0251	1.03010
320.0	26.02	0.8652	9613.0	11920.0	205.6	48.81	63.72	293.4	10.7	0.0257	1.02936
330.0	24.83	0.8258	10140.0	12560.0	207.6	49.79	63.84	300.6	11.0	0.0269	1.02800
340.0	23.78	0.7908	10670.0	13200.0	209.5	50.84	64.21	307.3	11.3	0.0282	1.02680
350.0	22.84	0.7594	11210.0	13850.0	211.4	51.95	64.76	313.6	11.6	0.0295	1.02573
360.0	21.98	0.7310	11760.0	14500.0	213.2	53.09	65.44	319.7	11.9	0.0309	1.02475
370.0	21.20	0.7051	12320.0	15160.0	215.0	54.26	66.22	325.5	12.2	0.0323	1.02387
380.0	20.49	0.6812	12890.0	15820.0	216.8	55.45	67.09	331.0	12.4	0.0338	1.02305
390.0	19.82	0.6593	13460.0	16500.0	218.6	56.66	68.02	336.4	12.7	0.0352	1.02230
400.0	19.21	0.6389	14050.0	17180.0	220.3	57.88	68.99	341.6	13.0	0.0368	1.02160
410.0	18.64	0.6200	14650.0	17880.0	222.0	59.11	70.00	346.7	13.3	0.0383	1.02096
420.0	18.11	0.6023	15260.0	18580.0	223.7	60.34	71.04	351.6	13.5	0.0399	1.02035
430.0	17.61	0.5857	15880.0	19300.0	225.4	61.57	72.11	356.4	13.8	0.0415	1.01979
440.0	17.14	0.5701	16520.0	20030.0	227.1	62.79	73.18	361.1	14.1	0.0431	1.01926
460.0	16.29	0.5416	17820.0	21510.0	230.4	65.23	75.37	370.2	14.6	0.0464	1.01829
480.0	15.52	0.5161	19160.0	23040.0	233.6	67.64	77.57	378.9	15.1	0.0498	1.01742
500.0	14.83	0.4931	20560.0	24610.0	236.8	70.02	79.77	387.3	15.6	0.0533	1.01663
520.0	14.20	0.4722	22000.0	26230.0	240.0	72.35	81.95	395.5	16.1	0.0568	1.01592
540.0	13.63	0.4532	23480.0	27890.0	243.1	74.63	84.10	403.4	16.6	0.0604	1.01528
560.0	13.10	0.4357	25000.0	29590.0	246.2	76.85	86.22	411.0	17.0	0.0640	1.01468
580.0	12.62	0.4196	26570.0	31340.0	249.3	79.01	88.29	418.5	17.5	0.0677	1.01414
600.0	12.17	0.4047	28180.0	33130.0	252.3	81.10	90.30	425.8	17.9	0.0714	1.01363
					2.50 MPa isobar						
90.75[a]	652.1	21.69	-14860.0	-14750.0	76.93	46.99	67.71	1995.0	1260.0	0.255	1.94465
150.0	587.1	19.53	-10750.0	-10620.0	111.9	43.51	70.22	1599.0	257.0	0.204	1.82983
200.0	526.9	17.52	-7170.0	-7027.0	132.5	43.00	74.56	1222.0	139.0	0.154	1.72802
220.0	499.7	16.62	-5653.0	-5502.0	139.8	43.65	78.17	1067.0	112.0	0.136	1.68335
240.0	469.0	15.60	-4047.0	-3886.0	146.8	44.76	83.88	903.6	89.2	0.119	1.63399
250.0	451.7	15.02	-3194.0	-3027.0	150.3	45.50	88.12	817.1	79.2	0.110	1.60646
260.0	432.1	14.37	-2292.0	-2118.0	153.9	46.39	94.12	725.2	69.7	0.102	1.57586
270.0	409.1	13.61	-1317.0	-1133.0	157.6	47.48	103.7	624.4	60.5	0.0926	1.54039
275.0	395.5	13.15	-787.0	-597.0	159.6	48.16	111.4	568.2	55.7	0.0878	1.51964

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
275.086[b]	396.9	13.20	-813.2	-623.8	159.5	48.14	109.9	576.0	56.2	0.0884	1.52182
275.086[b]	49.35	1.641	6718.0	8241.0	191.7	48.44	92.78	232.4	9.60	0.0225	1.05628
280.0	46.00	1.530	7068.0	8702.0	193.4	48.02	83.81	241.3	9.72	0.0227	1.05238
285.0	43.65	1.452	7385.0	9108.0	194.8	47.88	78.65	248.6	9.86	0.0230	1.04965
290.0	41.69	1.386	7688.0	9492.0	196.1	47.88	75.14	255.1	10.0	0.0234	1.04737
295.0	40.00	1.330	7982.0	9861.0	197.4	47.98	72.65	261.1	10.2	0.0239	1.04542
300.0	38.53	1.281	8268.0	10220.0	198.6	48.17	70.84	266.5	10.3	0.0244	1.04372
310.0	36.03	1.198	8828.0	10910.0	200.9	48.72	68.51	276.5	10.6	0.0254	1.04084
315.0	34.95	1.162	9105.0	11260.0	202.0	49.07	67.79	281.0	10.8	0.0259	1.03960
320.0	33.97	1.130	9380.0	11590.0	203.0	49.46	67.27	285.3	10.9	0.0264	1.03846
325.0	33.06	1.099	9655.0	11930.0	204.1	49.88	66.92	289.5	11.1	0.0270	1.03742
330.0	32.22	1.071	9929.0	12260.0	205.1	50.33	66.70	293.4	11.2	0.0276	1.03645
335.0	31.44	1.045	10200.0	12600.0	206.1	50.80	66.59	297.2	11.4	0.0282	1.03555
340.0	30.70	1.021	10480.0	12930.0	207.1	51.29	66.57	300.9	11.5	0.0288	1.03471
350.0	29.36	0.9765	11030.0	13590.0	209.0	52.33	66.75	307.9	11.8	0.0301	1.03317
360.0	28.17	0.9368	11600.0	14260.0	210.9	53.41	67.15	314.6	12.1	0.0314	1.03181
370.0	27.09	0.9010	12160.0	14940.0	212.7	54.54	67.71	320.9	12.4	0.0328	1.03058
380.0	26.12	0.8685	12740.0	15620.0	214.6	55.70	68.40	326.9	12.7	0.0342	1.02946
390.0	25.22	0.8388	13330.0	16310.0	216.3	56.88	69.18	332.6	12.9	0.0357	1.02844
400.0	24.40	0.8115	13920.0	17000.0	218.1	58.07	70.03	338.2	13.2	0.0372	1.02750
410.0	23.64	0.7862	14530.0	17710.0	219.8	59.28	70.94	343.6	13.5	0.0387	1.02663
420.0	22.93	0.7627	15140.0	18420.0	221.6	60.49	71.90	348.8	13.7	0.0403	1.02583
430.0	22.28	0.7408	15770.0	19150.0	223.3	61.70	72.89	353.8	14.0	0.0418	1.02508
440.0	21.66	0.7203	16410.0	19880.0	225.0	62.92	73.90	358.7	14.3	0.0435	1.02438
450.0	21.08	0.7011	17060.0	20620.0	226.6	64.13	74.93	363.5	14.5	0.0451	1.02372
460.0	20.54	0.6830	17720.0	21380.0	228.3	65.34	75.98	368.2	14.8	0.0468	1.02310
480.0	19.54	0.6499	19070.0	22920.0	231.6	67.74	78.10	377.3	15.3	0.0501	1.02197
500.0	18.65	0.6201	20470.0	24500.0	234.8	70.10	80.24	386.0	15.8	0.0536	1.02095
520.0	17.84	0.5932	21910.0	26130.0	238.0	72.42	82.36	394.4	16.3	0.0571	1.02004
540.0	17.10	0.5688	23400.0	27800.0	241.1	74.69	84.47	402.5	16.8	0.0607	1.01920
560.0	16.43	0.5465	24930.0	29510.0	244.2	76.91	86.55	410.3	17.2	0.0643	1.01844
580.0	15.82	0.5260	26510.0	31260.0	247.3	79.07	88.59	418.0	17.7	0.0680	1.01774
600.0	15.25	0.5070	28120.0	33050.0	250.4	81.16	90.57	425.5	18.1	0.0717	1.01710
				3.00 MPa isobar							
90.83[a]	652.2	21.69	-14860.0	-14720.0	76.95	47.00	67.72	1996.0	1260.0	0.255	1.94481
150.0	587.5	19.54	-10760.0	-10610.0	111.8	43.54	70.18	1602.0	258.0	0.204	1.83036
200.0	527.5	17.54	-7183.0	-7012.0	132.5	43.03	74.43	1227.0	140.0	0.154	1.72896
220.0	500.5	16.64	-5671.0	-5491.0	139.7	43.68	77.96	1072.0	112.0	0.136	1.68461
240.0	470.2	15.64	-4073.0	-3881.0	146.7	44.78	83.46	911.3	89.9	0.119	1.63579
250.0	453.1	15.07	-3227.0	-3027.0	150.2	45.52	87.48	826.3	80.0	0.111	1.60870
260.0	434.0	14.43	-2334.0	-2126.0	153.7	46.39	93.05	736.7	70.6	0.102	1.57879
270.0	411.8	13.70	-1376.0	-1157.0	157.4	47.46	101.6	639.4	61.5	0.0938	1.54453
275.0	398.9	13.27	-859.5	-633.4	159.3	48.10	108.1	586.2	56.9	0.0891	1.52483
280.0	384.1	12.77	-305.2	-70.4	161.3	48.86	117.9	527.7	52.2	0.0842	1.50235
282.0	377.3	12.55	-68.4	170.7	162.2	49.20	123.4	502.2	50.2	0.0821	1.49223
282.908[b]	375.8	12.50	6.3	246.3	162.5	49.32	123.9	498.5	49.8	0.0817	1.49003
282.908[b]	62.31	2.072	6674.0	8122.0	190.3	50.60	113.9	225.0	10.3	0.0254	1.07144
285.0	59.56	1.981	6868.0	8383.0	191.2	50.20	104.2	230.2	10.3	0.0252	1.06820
286.0	58.65	1.951	6948.0	8486.0	191.6	50.08	101.2	232.2	10.3	0.0252	1.06714
290.0	55.54	1.847	7247.0	8871.0	192.9	49.73	92.19	239.5	10.4	0.0253	1.06349
295.0	52.43	1.744	7592.0	9313.0	194.4	49.52	85.11	247.4	10.5	0.0255	1.05985
300.0	49.89	1.659	7918.0	9726.0	195.8	49.46	80.46	254.4	10.7	0.0260	1.05689
305.0	47.75	1.588	8231.0	10120.0	197.1	49.53	77.23	260.7	10.8	0.0286	1.05440
310.0	45.89	1.526	8534.0	10500.0	198.3	49.69	74.89	266.5	10.9	0.0267	1.05224
315.0	44.26	1.472	8831.0	10870.0	199.5	49.93	73.17	271.8	11.1	0.0269	1.05033
320.0	42.79	1.423	9124.0	11230.0	200.7	50.22	71.89	276.9	11.2	0.0273	1.04864
325.0	41.47	1.379	9414.0	11590.0	201.8	50.56	70.94	281.6	11.3	0.0278	1.04711
330.0	40.27	1.339	9702.0	11940.0	202.9	50.93	70.24	286.1	11.5	0.0283	1.04571
335.0	39.16	1.302	9988.0	12290.0	203.9	51.35	69.74	290.4	11.6	0.0289	1.04443
340.0	38.14	1.268	10270.0	12640.0	204.9	51.79	69.39	294.5	11.8	0.0295	1.04325

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
345.0	37.19	1.237	10560.0	12990.0	206.0	52.25	69.17	298.5	11.9	0.0301	1.04216
350.0	36.31	1.207	10850.0	13330.0	206.9	52.74	69.06	302.3	12.1	0.0307	1.04114
360.0	34.70	1.154	11420.0	14020.0	208.9	53.76	69.09	309.5	12.3	0.0320	1.03929
370.0	33.27	1.106	12000.0	14710.0	210.8	54.84	69.37	316.3	12.6	0.0333	1.03764
380.0	31.98	1.064	12590.0	15410.0	212.6	55.95	69.83	322.8	12.9	0.0347	1.03617
390.0	30.82	1.025	13180.0	16110.0	214.5	57.10	70.44	328.9	13.2	0.0361	1.03483
400.0	29.76	0.9896	13790.0	16820.0	216.3	58.27	71.15	334.8	13.4	0.0376	1.03362
410.0	28.78	0.9572	14400.0	17530.0	218.0	59.45	71.94	340.5	13.7	0.0391	1.03250
420.0	27.88	0.9273	15020.0	18260.0	219.8	60.65	72.80	346.0	14.0	0.0407	1.03147
430.0	27.05	0.8995	15660.0	18990.0	221.5	61.85	73.70	351.3	14.2	0.0422	1.03051
440.0	26.27	0.8737	16300.0	19730.0	223.2	63.05	74.65	356.4	14.5	0.0438	1.02962
450.0	25.54	0.8495	16950.0	20480.0	224.9	64.25	75.62	361.4	14.7	0.0455	1.02879
460.0	24.86	0.8269	17620.0	21240.0	226.6	65.45	76.61	366.3	15.0	0.0471	1.02802
480.0	23.62	0.7855	18980.0	22800.0	229.9	67.83	78.65	375.7	15.5	0.0505	1.02660
500.0	22.51	0.7486	20380.0	24390.0	233.1	70.18	80.71	384.7	16.0	0.0539	1.02534
520.0	21.51	0.7154	21830.0	26030.0	236.3	72.49	82.78	393.3	16.5	0.0574	1.02420
540.0	20.61	0.6854	23320.0	27700.0	239.5	74.75	84.85	401.7	16.9	0.0610	1.02317
560.0	19.78	0.6580	24860.0	29420.0	242.6	76.97	86.89	409.7	17.4	0.0646	1.02224
580.0	19.03	0.6329	26440.0	31180.0	245.7	79.12	88.89	417.5	17.9	0.0682	1.02138
600.0	18.34	0.6098	28050.0	32970.0	248.7	81.20	90.85	425.2	18.3	0.0719	1.02059
					3.50 MPa isobar						
90.91[a]	652.3	21.69	-14860.0	-14700.0	76.97	47.02	67.73	1997.0	1260.0	0.255	1.94496
150.0	587.8	19.55	-10770.0	-10590.0	111.8	43.57	70.14	1604.0	259.0	0.204	1.83088
200.0	528.1	17.56	-7197.0	-6998.0	132.4	43.07	74.31	1231.0	140.0	0.155	1.72990
220.0	501.2	16.67	-5690.0	-5480.0	139.6	43.71	77.75	1078.0	113.0	0.137	1.68585
240.0	471.3	15.67	-4099.0	-3876.0	146.6	44.81	83.06	918.8	90.7	0.120	1.63755
250.0	454.5	15.11	-3258.0	-3027.0	150.1	45.54	86.88	835.3	80.8	0.112	1.61087
260.0	435.8	14.49	-2375.0	-2133.0	153.6	46.40	92.08	747.6	71.5	0.103	1.58160
270.0	414.4	13.78	-1431.0	-1177.0	157.2	47.44	99.78	653.6	62.6	0.0948	1.54841
275.0	402.1	13.37	-926.5	-664.8	159.0	48.06	105.4	602.8	58.1	0.0904	1.52959
280.0	388.1	12.91	-390.3	-119.2	161.0	48.77	113.3	548.0	53.5	0.0856	1.50850
285.0	371.7	12.36	193.3	476.4	163.1	49.62	126.1	486.9	48.7	0.0806	1.48389
286.0	368.0	12.24	318.3	604.3	163.6	49.82	129.7	473.6	47.7	0.0796	1.47834
288.0	359.9	11.97	579.9	872.3	164.5	50.26	138.9	445.3	45.5	0.0776	1.46634
289.805[b]	353.5	11.76	797.7	1095.0	165.3	50.64	146.7	424.8	44.0	0.0763	1.45683
289.805[b]	77.63	2.582	6545.0	7901.0	188.8	52.81	150.0	217.3	11.2	0.0303	1.08958
290.0	76.42	2.541	6593.0	7970.0	189.0	52.63	144.4	218.6	11.1	0.0299	1.08814
292.0	73.08	2.430	6801.0	8241.0	189.9	52.16	127.6	223.9	11.1	0.0294	1.08417
294.0	70.35	2.339	6988.0	8484.0	190.8	51.81	116.6	228.6	11.1	0.0292	1.08093
296.0	68.03	2.262	7162.0	8709.0	191.5	51.54	108.7	232.9	11.1	0.0290	1.07818
298.0	66.02	2.195	7326.0	8920.0	192.2	51.33	102.7	236.8	11.1	0.0291	1.07580
300.0	64.23	2.136	7483.0	9121.0	192.9	51.17	98.06	240.4	11.1	0.0292	1.07369
305.0	60.50	2.012	7849.0	9589.0	194.5	50.93	89.83	248.5	11.2	0.0359	1.06929
310.0	57.47	1.911	8193.0	10020.0	195.9	50.87	84.50	255.7	11.3	0.0288	1.06574
312.0	56.41	1.876	8326.0	10190.0	196.4	50.89	82.87	258.3	11.4	0.0286	1.06450
314.0	55.41	1.843	8456.0	10360.0	196.9	50.92	81.45	260.9	11.4	0.0285	1.06333
320.0	52.75	1.754	8839.0	10830.0	198.4	51.10	78.16	268.0	11.6	0.0286	1.06021
325.0	50.83	1.690	9149.0	11220.0	199.6	51.33	76.20	273.5	11.7	0.0289	1.05797
330.0	49.12	1.634	9454.0	11600.0	200.8	51.62	74.73	278.6	11.8	0.0293	1.05598
335.0	47.58	1.582	9756.0	11970.0	201.9	51.95	73.63	283.4	11.9	0.0298	1.05419
340.0	46.18	1.536	10050.0	12330.0	203.0	52.33	72.81	288.0	12.1	0.0303	1.05256
345.0	44.90	1.493	10350.0	12700.0	204.0	52.74	72.20	292.4	12.2	0.0308	1.05107
350.0	43.72	1.454	10650.0	13060.0	205.1	53.18	71.77	296.6	12.3	0.0314	1.04970
355.0	42.62	1.417	10940.0	13410.0	206.1	53.65	71.48	300.6	12.5	0.0320	1.04843
360.0	41.60	1.383	11240.0	13770.0	207.1	54.13	71.30	304.5	12.6	0.0326	1.04724
370.0	39.75	1.322	11840.0	14480.0	209.0	55.15	71.22	311.8	12.9	0.0339	1.04510
380.0	38.10	1.267	12430.0	15200.0	210.9	56.22	71.41	318.8	13.1	0.0353	1.04320
390.0	36.63	1.218	13040.0	15910.0	212.8	57.33	71.81	325.3	13.4	0.0367	1.04150
400.0	35.29	1.174	13650.0	16630.0	214.6	58.47	72.35	331.6	13.7	0.0381	1.03996
410.0	34.08	1.133	14270.0	17360.0	216.4	59.63	73.01	337.6	13.9	0.0396	1.03856
420.0	32.96	1.096	14900.0	18090.0	218.2	60.81	73.75	343.3	14.2	0.0411	1.03728

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
430.0	31.93	1.062	15540.0	18830.0	219.9	61.99	74.56	348.9	14.5	0.0426	1.03610
440.0	30.98	1.030	16190.0	19580.0	221.7	63.18	75.42	354.2	14.7	0.0442	1.03500
450.0	30.09	1.001	16850.0	20340.0	223.4	64.37	76.33	359.4	15.0	0.0458	1.03399
460.0	29.26	0.9731	17510.0	21110.0	225.1	65.55	77.26	364.5	15.2	0.0475	1.03304
470.0	28.49	0.9473	18190.0	21890.0	226.7	66.74	78.22	369.4	15.5	0.0491	1.03215
480.0	27.76	0.9230	18880.0	22680.0	228.4	67.92	79.20	374.2	15.7	0.0508	1.03131
500.0	26.42	0.8786	20300.0	24280.0	231.7	70.26	81.19	383.5	16.2	0.0542	1.02978
520.0	25.22	0.8387	21750.0	25920.0	234.9	72.56	83.21	392.4	16.7	0.0577	1.02842
540.0	24.14	0.8028	23250.0	27610.0	238.1	74.82	85.23	400.9	17.1	0.0613	1.02718
560.0	23.16	0.7701	24790.0	29330.0	241.2	77.02	87.23	409.2	17.6	0.0649	1.02606
580.0	22.26	0.7403	26370.0	31100.0	244.3	79.17	89.20	417.1	18.1	0.0685	1.02504
600.0	21.44	0.7129	27990.0	32900.0	247.3	81.25	91.13	424.9	18.5	0.0722	1.02411
					4.00 MPa isobar						
90.99[a]	652.4	21.69	-14860.0	-14670.0	76.99	47.03	67.75	1998.0	1260.0	0.255	1.94511
150.0	588.1	19.56	-10770.0	-10570.0	111.7	43.60	70.09	1607.0	260.0	0.205	1.83141
200.0	528.6	17.58	-7211.0	-6983.0	132.3	43.10	74.19	1235.0	141.0	0.155	1.73082
220.0	502.0	16.69	-5708.0	-5468.0	139.5	43.74	77.55	1084.0	114.0	0.137	1.68707
240.0	472.4	15.71	-4124.0	-3870.0	146.5	44.84	82.67	926.2	91.4	0.121	1.63927
250.0	455.8	15.16	-3289.0	-3025.0	149.9	45.56	86.32	844.0	81.6	0.112	1.61299
260.0	437.5	14.55	-2414.0	-2139.0	153.4	46.41	91.19	758.2	72.4	0.104	1.58430
270.0	416.8	13.86	-1483.0	-1195.0	157.0	47.43	98.19	667.0	63.5	0.0958	1.55208
275.0	405.0	13.47	-989.0	-691.9	158.8	48.02	103.1	618.3	59.2	0.0915	1.53402
280.0	391.8	13.03	-467.6	-160.6	160.7	48.70	109.8	566.5	54.8	0.0870	1.51406
285.0	376.7	12.53	91.8	411.0	162.8	49.49	119.6	510.1	50.2	0.0823	1.49132
290.0	358.4	11.92	711.7	1047.0	165.0	50.47	136.8	445.9	45.3	0.0775	1.46401
292.0	349.5	11.62	987.6	1332.0	165.9	50.96	148.5	416.6	43.1	0.0759	1.45090
294.0	339.0	11.27	1291.0	1646.0	167.0	51.55	166.8	383.8	40.7	0.0748	1.43566
295.980[b]	327.9	10.91	1603.0	1969.0	168.1	52.21	193.5	351.7	38.3	0.0746	1.41952
295.980[b]	97.05	3.227	6300.0	7540.0	186.9	55.14	228.0	209.2	12.3	0.0404	1.11291
300.0	84.99	2.827	6868.0	8283.0	189.4	53.64	144.3	222.9	12.0	0.0378	1.09838
302.0	81.43	2.708	7078.0	8555.0	190.3	53.23	129.2	227.9	11.9	0.0385	1.09411
304.0	78.47	2.610	7270.0	8803.0	191.2	52.92	118.9	232.3	11.9	0.0425	1.09057
306.0	75.94	2.525	7449.0	9033.0	191.9	52.68	111.3	236.4	11.9	0.0463	1.08756
308.0	73.73	2.452	7618.0	9249.0	192.6	52.50	105.4	240.2	11.9	0.0358	1.08492
310.0	71.76	2.386	7779.0	9455.0	193.3	52.36	100.8	243.7	11.9	0.0333	1.08259
312.0	69.99	2.328	7935.0	9653.0	193.9	52.26	97.04	247.0	11.9	0.0321	1.08048
314.0	68.38	2.274	8085.0	9844.0	194.5	52.19	93.92	250.1	11.9	0.0314	1.07858
316.0	66.90	2.225	8231.0	10030.0	195.1	52.15	91.29	253.1	11.9	0.0310	1.07683
318.0	65.53	2.179	8374.0	10210.0	195.7	52.13	89.05	255.9	12.0	0.0307	1.07521
320.0	64.26	2.137	8514.0	10390.0	196.2	52.13	87.12	258.7	12.0	0.0306	1.07371
322.0	63.08	2.098	8651.0	10560.0	196.8	52.15	85.45	261.3	12.0	0.0305	1.07232
324.0	61.97	2.061	8786.0	10730.0	197.3	52.19	84.00	263.8	12.1	0.0305	1.07101
330.0	59.00	1.962	9182.0	11220.0	198.8	52.39	80.59	270.9	12.2	0.0306	1.06752
335.0	56.86	1.891	9503.0	11620.0	200.0	52.64	78.55	276.4	12.3	0.0309	1.06501
340.0	54.95	1.827	9818.0	12010.0	201.1	52.94	77.01	281.5	12.4	0.0313	1.06277
345.0	53.23	1.770	10130.0	12390.0	202.3	53.28	75.85	286.4	12.5	0.0318	1.06076
350.0	51.67	1.718	10440.0	12770.0	203.3	53.67	74.97	291.0	12.7	0.0323	1.05894
355.0	50.24	1.671	10740.0	13140.0	204.4	54.08	74.32	295.3	12.8	0.0328	1.05727
360.0	48.92	1.627	11050.0	13510.0	205.4	54.53	73.84	299.5	12.9	0.0334	1.05573
365.0	47.70	1.586	11360.0	13880.0	206.5	54.99	73.51	303.6	13.0	0.0340	1.05431
370.0	46.56	1.548	11660.0	14240.0	207.5	55.48	73.30	307.5	13.2	0.0346	1.05298
380.0	44.49	1.480	12270.0	14980.0	209.4	56.50	73.15	314.9	13.4	0.0359	1.05058
390.0	42.66	1.419	12890.0	15710.0	211.3	57.57	73.29	321.8	13.7	0.0372	1.04846
400.0	41.02	1.364	13510.0	16440.0	213.2	58.68	73.64	328.4	13.9	0.0386	1.04655
410.0	39.53	1.315	14140.0	17180.0	215.0	59.81	74.14	334.7	14.2	0.0401	1.04484
420.0	38.17	1.270	14780.0	17930.0	216.8	60.97	74.75	340.8	14.4	0.0416	1.04327
430.0	36.93	1.228	15420.0	18680.0	218.6	62.13	75.46	346.6	14.7	0.0431	1.04184
440.0	35.79	1.190	16070.0	19440.0	220.3	63.31	76.23	352.2	14.9	0.0446	1.04052
450.0	34.72	1.155	16740.0	20200.0	222.0	64.48	77.06	357.6	15.2	0.0462	1.03930
460.0	33.73	1.122	17410.0	20980.0	223.7	65.66	77.94	362.8	15.4	0.0479	1.03816
470.0	32.81	1.091	18100.0	21760.0	225.4	66.84	78.84	367.9	15.7	0.0495	1.03710

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
480.0	31.95	1.062	18790.0	22550.0	227.1	68.01	79.77	372.8	15.9	0.0512	1.03611
500.0	30.37	1.010	20210.0	24170.0	230.4	70.34	81.69	382.4	16.4	0.0546	1.03430
520.0	28.96	0.9631	21670.0	25820.0	233.6	72.63	83.64	391.5	16.9	0.0580	1.03268
540.0	27.70	0.9210	23170.0	27510.0	236.8	74.88	85.61	400.2	17.3	0.0616	1.03124
560.0	26.55	0.8829	24720.0	29250.0	240.0	77.08	87.57	408.7	17.8	0.0651	1.02993
580.0	25.50	0.8482	26300.0	31020.0	243.1	79.22	89.50	416.8	18.2	0.0688	1.02873
600.0	24.55	0.8163	27930.0	32830.0	246.1	81.30	91.41	424.7	18.7	0.0724	1.02764
					4.50 MPa isobar						
91.07[a]	652.5	21.70	-14850.0	-14650.0	77.01	47.05	67.76	2000.0	1260.0	0.255	1.94526
100.0	642.9	21.38	-14240.0	-14030.0	83.43	47.29	69.20	1957.0	831.0	0.250	1.92791
150.0	588.4	19.57	-10780.0	-10550.0	111.7	43.63	70.05	1609.0	261.0	0.205	1.83193
200.0	529.2	17.60	-7224.0	-6968.0	132.2	43.13	74.08	1240.0	142.0	0.156	1.73174
220.0	502.7	16.72	-5725.0	-5456.0	139.5	43.78	77.36	1089.0	114.0	0.138	1.68828
240.0	473.4	15.74	-4149.0	-3863.0	146.4	44.86	82.31	933.5	92.1	0.121	1.64096
250.0	457.1	15.20	-3319.0	-3023.0	149.8	45.58	85.79	852.6	82.3	0.113	1.61505
260.0	439.2	14.61	-2452.0	-2144.0	153.3	46.42	90.37	768.5	73.2	0.105	1.58691
270.0	419.0	13.93	-1533.0	-1210.0	156.8	47.42	96.78	679.8	64.5	0.0968	1.55556
280.0	395.2	13.14	-538.7	-196.3	160.5	48.64	106.9	583.6	55.9	0.0883	1.51914
285.0	381.1	12.67	1.6	356.7	162.4	49.38	114.8	530.7	51.6	0.0837	1.49787
290.0	364.6	12.12	588.0	959.2	164.5	50.26	127.2	472.6	47.0	0.0792	1.47317
292.0	356.9	11.87	841.6	1221.0	165.4	50.68	134.7	447.0	45.0	0.0775	1.46185
294.0	348.4	11.59	1111.0	1500.0	166.4	51.15	144.7	419.6	42.9	0.0761	1.44928
296.0	338.6	11.26	1403.0	1803.0	167.4	51.71	159.5	389.5	40.7	0.0754	1.43495
298.0	326.8	10.87	1730.0	2144.0	168.5	52.39	184.2	355.5	38.2	0.0759	1.41784
299.0	319.7	10.63	1914.0	2338.0	169.2	52.81	204.8	336.2	36.7	0.0768	1.40758
300.0	311.2	10.35	2123.0	2558.0	169.9	53.33	238.2	314.4	35.1	0.0786	1.39540
301.0	300.1	9.981	2374.0	2825.0	170.8	54.02	305.8	288.4	33.1	0.0812	1.37973
301.5	292.8	9.736	2532.0	2994.0	171.4	54.49	379.4	272.6	31.8	0.0830	1.36928
301.561[b]	293.8	9.770	2517.0	2978.0	171.3	54.43	362.6	275.2	32.0	0.0832	1.37073
301.561[b]	125.9	4.188	5826.0	6901.0	184.3	57.75	527.8	200.7	14.1	0.0661	1.14831
305.0	103.6	3.447	6615.0	7921.0	187.7	55.59	196.9	216.3	13.1	0.110	1.12091
306.0	100.4	3.339	6759.0	8107.0	188.3	55.26	177.0	219.5	13.0	0.0810	1.11696
307.0	97.63	3.247	6890.0	8276.0	188.9	54.97	162.5	222.3	12.9	0.0587	1.11360
308.0	95.21	3.166	7012.0	8433.0	189.4	54.73	151.5	225.0	12.8	0.0505	1.11067
309.0	93.06	3.095	7126.0	8580.0	189.8	54.51	142.7	227.5	12.8	0.0460	1.10807
310.0	91.12	3.030	7234.0	8719.0	190.3	54.33	135.5	229.9	12.7	0.0430	1.10573
311.0	89.35	2.971	7337.0	8852.0	190.7	54.17	129.5	232.1	12.7	0.0409	1.10360
312.0	87.73	2.918	7436.0	8978.0	191.1	54.02	124.5	234.2	12.7	0.0394	1.10165
314.0	84.83	2.821	7624.0	9219.0	191.9	53.79	116.3	238.3	12.6	0.0372	1.09817
316.0	82.31	2.737	7801.0	9445.0	192.6	53.61	110.1	242.0	12.6	0.0357	1.09514
318.0	80.06	2.662	7970.0	9660.0	193.3	53.47	105.1	245.5	12.6	0.0347	1.09246
320.0	78.04	2.595	8132.0	9866.0	193.9	53.37	101.0	248.8	12.6	0.0340	1.09005
322.0	76.21	2.534	8289.0	10060.0	194.6	53.31	97.64	251.9	12.6	0.0335	1.08786
324.0	74.53	2.479	8441.0	10260.0	195.2	53.27	94.81	254.9	12.6	0.0332	1.08586
326.0	72.98	2.427	8590.0	10440.0	195.7	53.25	92.39	257.7	12.6	0.0329	1.08402
328.0	71.54	2.379	8735.0	10630.0	196.3	53.25	90.31	260.5	12.6	0.0327	1.08231
330.0	70.20	2.335	8878.0	10810.0	196.8	53.28	88.51	263.1	12.7	0.0326	1.08072
332.0	68.95	2.293	9018.0	10980.0	197.4	53.32	86.94	265.6	12.7	0.0326	1.07924
335.0	67.20	2.235	9225.0	11240.0	198.1	53.40	84.92	269.3	12.7	0.0326	1.07717
340.0	64.60	2.148	9561.0	11660.0	199.4	53.61	82.28	275.0	12.8	0.0327	1.07410
345.0	62.30	2.072	9890.0	12060.0	200.6	53.87	80.30	280.4	12.9	0.0330	1.07139
350.0	60.25	2.004	10210.0	12460.0	201.7	54.19	78.79	285.4	13.0	0.0334	1.06898
355.0	58.40	1.942	10530.0	12850.0	202.8	54.55	77.64	290.2	13.1	0.0338	1.06680
360.0	56.71	1.886	10850.0	13240.0	203.9	54.95	76.77	294.7	13.2	0.0343	1.06482
365.0	55.16	1.834	11170.0	13620.0	204.9	55.38	76.12	299.1	13.4	0.0348	1.06301
370.0	53.73	1.787	11480.0	14000.0	206.0	55.83	75.64	303.2	13.5	0.0354	1.06133
375.0	52.40	1.743	11790.0	14380.0	207.0	56.30	75.30	307.3	13.6	0.0359	1.05978
380.0	51.17	1.702	12110.0	14750.0	208.0	56.79	75.07	311.1	13.7	0.0365	1.05834
390.0	48.92	1.627	12740.0	15500.0	209.9	57.82	74.91	318.5	14.0	0.0378	1.05572
400.0	46.93	1.561	13370.0	16250.0	211.8	58.89	75.02	325.5	14.2	0.0392	1.05340

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
410.0	45.14	1.501	14000.0	17000.0	213.7	60.00	75.34	332.1	14.5	0.0406	1.05132
420.0	43.52	1.447	14650.0	17760.0	215.5	61.13	75.81	338.4	14.7	0.0421	1.04945
430.0	42.04	1.398	15300.0	18520.0	217.3	62.28	76.40	344.4	14.9	0.0436	1.04774
440.0	40.69	1.353	15960.0	19290.0	219.1	63.44	77.07	350.2	15.2	0.0451	1.04617
450.0	39.44	1.312	16630.0	20060.0	220.8	64.60	77.82	355.8	15.4	0.0467	1.04472
460.0	38.28	1.273	17310.0	20840.0	222.5	65.77	78.63	361.2	15.7	0.0483	1.04338
470.0	37.20	1.237	18000.0	21630.0	224.2	66.93	79.47	366.5	15.9	0.0499	1.04214
480.0	36.19	1.204	18690.0	22430.0	225.9	68.10	80.35	371.6	16.2	0.0515	1.04098
490.0	35.25	1.172	19400.0	23240.0	227.6	69.26	81.26	376.5	16.4	0.0532	1.03989
500.0	34.36	1.143	20120.0	24060.0	229.2	70.41	82.19	381.4	16.6	0.0549	1.03887
520.0	32.73	1.089	21590.0	25720.0	232.5	72.70	84.07	390.7	17.1	0.0584	1.03700
540.0	31.28	1.040	23090.0	27420.0	235.7	74.94	85.99	399.6	17.5	0.0619	1.03533
560.0	29.96	0.9963	24640.0	29160.0	238.9	77.13	87.91	408.2	18.0	0.0654	1.03382
580.0	28.76	0.9565	26230.0	30940.0	242.0	79.27	89.81	416.5	18.4	0.0691	1.03245
600.0	27.67	0.9202	27860.0	32750.0	245.0	81.35	91.68	424.5	18.9	0.0727	1.03120
					4.60 MPa isobar						
91.09[a]	652.5	21.70	-14850.0	-14640.0	77.02	47.05	67.76	2000.0	1260.0	0.255	1.94529
150.0	588.5	19.57	-10780.0	-10550.0	111.6	43.63	70.05	1610.0	261.0	0.205	1.83204
200.0	529.3	17.60	-7227.0	-6965.0	132.2	43.14	74.05	1240.0	142.0	0.156	1.73192
220.0	502.9	16.72	-5729.0	-5454.0	139.4	43.78	77.32	1090.0	114.0	0.138	1.68852
240.0	473.6	15.75	-4154.0	-3862.0	146.4	44.87	82.24	934.9	92.2	0.121	1.64129
250.0	457.4	15.21	-3325.0	-3023.0	149.8	45.58	85.69	854.2	82.5	0.113	1.61546
260.0	439.6	14.62	-2459.0	-2145.0	153.2	46.42	90.21	770.5	73.4	0.105	1.58742
270.0	419.5	13.95	-1543.0	-1213.0	156.7	47.42	96.52	682.3	64.7	0.0970	1.55623
280.0	395.8	13.16	-552.2	-202.8	160.4	48.63	106.3	586.8	56.1	0.0885	1.52011
285.0	381.9	12.70	-15.3	346.9	162.4	49.36	114.0	534.6	51.8	0.0840	1.49909
290.0	365.7	12.16	565.6	943.9	164.4	50.23	125.7	477.4	47.3	0.0795	1.47483
292.0	358.2	11.91	815.8	1202.0	165.3	50.63	132.6	452.5	45.3	0.0778	1.46377
294.0	349.9	11.64	1081.0	1476.0	166.3	51.09	141.8	425.8	43.3	0.0764	1.45158
296.0	340.5	11.32	1365.0	1772.0	167.3	51.62	154.8	396.8	41.2	0.0756	1.43782
298.0	329.4	10.96	1680.0	2100.0	168.4	52.26	175.5	364.5	38.8	0.0759	1.42167
299.0	322.9	10.74	1855.0	2283.0	169.0	52.64	191.7	346.4	37.4	0.0768	1.41222
300.0	315.3	10.49	2047.0	2486.0	169.7	53.10	215.8	326.5	35.9	0.0783	1.40132
301.0	306.1	10.18	2268.0	2720.0	170.4	53.67	257.0	303.9	34.2	0.0809	1.38812
301.5	300.4	9.990	2397.0	2857.0	170.9	54.02	292.0	291.0	33.2	0.0827	1.38009
302.0	293.6	9.762	2545.0	3016.0	171.4	54.46	350.0	276.3	32.0	0.0850	1.37041
302.5	284.5	9.461	2731.0	3217.0	172.1	55.04	472.3	258.8	30.5	0.0877	1.35769
302.612[b]	284.3	9.455	2740.0	3227.0	172.1	55.06	468.9	258.8	30.5	0.0884	1.35742
302.612[b]	134.5	4.473	5669.0	6697.0	183.6	58.32	725.1	198.9	14.7	0.0766	1.15898
305.0	112.2	3.731	6384.0	7617.0	186.6	56.40	246.7	211.7	13.5	0.128	1.13136
306.0	107.7	3.582	6560.0	7844.0	187.4	55.96	210.5	215.3	13.3	0.0926	1.12589
306.5	105.8	3.519	6639.0	7946.0	187.7	55.77	197.7	217.0	13.3	0.0744	1.12358
307.0	104.1	3.462	6713.0	8042.0	188.0	55.60	187.0	218.5	13.2	0.0652	1.12147
308.0	101.1	3.361	6852.0	8220.0	188.6	55.30	170.3	221.5	13.1	0.0552	1.11777
309.0	98.42	3.273	6979.0	8384.0	189.1	55.04	157.8	224.2	13.0	0.0497	1.11456
310.0	96.09	3.196	7097.0	8537.0	189.6	54.81	147.9	226.8	13.0	0.0461	1.11174
311.0	94.00	3.126	7209.0	8681.0	190.1	54.62	140.0	229.2	12.9	0.0435	1.10921
312.0	92.11	3.063	7315.0	8817.0	190.5	54.45	133.4	231.5	12.9	0.0415	1.10693
314.0	88.78	2.953	7515.0	9073.0	191.3	54.16	123.2	235.7	12.8	0.0388	1.10291
316.0	85.92	2.857	7702.0	9312.0	192.1	53.94	115.5	239.6	12.8	0.0371	1.09947
318.0	83.41	2.774	7878.0	9536.0	192.8	53.78	109.5	243.3	12.7	0.0359	1.09646
320.0	81.17	2.699	8046.0	9750.0	193.5	53.65	104.7	246.7	12.7	0.0350	1.09379
322.0	79.16	2.632	8209.0	9956.0	194.1	53.56	100.8	250.0	12.7	0.0343	1.09138
324.0	77.32	2.571	8365.0	10150.0	194.7	53.50	97.58	253.0	12.7	0.0339	1.08919
326.0	75.64	2.515	8518.0	10350.0	195.3	53.47	94.82	256.0	12.7	0.0336	1.08718
328.0	74.08	2.464	8667.0	10530.0	195.9	53.46	92.47	258.8	12.8	0.0333	1.08533
330.0	72.64	2.416	8812.0	10720.0	196.4	53.47	90.44	261.5	12.8	0.0332	1.08361
332.0	71.29	2.371	8955.0	10900.0	197.0	53.50	88.67	264.1	12.8	0.0331	1.08201
334.0	70.03	2.329	9096.0	11070.0	197.5	53.54	87.12	266.6	12.8	0.0330	1.08051
340.0	66.65	2.216	9507.0	11580.0	199.0	53.75	83.49	273.7	12.9	0.0331	1.07652
345.0	64.22	2.136	9840.0	11990.0	200.2	54.00	81.30	279.2	13.0	0.0333	1.07364

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
350.0	62.05	2.064	10170.0	12400.0	201.4	54.30	79.64	284.3	13.1	0.0336	1.07109
355.0	60.10	1.999	10490.0	12790.0	202.5	54.65	78.38	289.2	13.2	0.0340	1.06880
360.0	58.33	1.940	10810.0	13180.0	203.6	55.04	77.41	293.8	13.3	0.0345	1.06672
365.0	56.71	1.886	11130.0	13570.0	204.7	55.46	76.68	298.2	13.4	0.0350	1.06481
370.0	55.21	1.836	11440.0	13950.0	205.7	55.90	76.14	302.4	13.5	0.0355	1.06306
375.0	53.83	1.790	11760.0	14330.0	206.7	56.37	75.75	306.5	13.7	0.0361	1.06144
380.0	52.54	1.747	12070.0	14710.0	207.7	56.85	75.48	310.4	13.8	0.0367	1.05994
390.0	50.20	1.670	12700.0	15460.0	209.7	57.87	75.25	317.9	14.0	0.0380	1.05721
400.0	48.14	1.601	13340.0	16210.0	211.6	58.94	75.31	324.9	14.3	0.0393	1.05480
410.0	46.28	1.539	13980.0	16970.0	213.4	60.04	75.58	331.6	14.5	0.0407	1.05265
420.0	44.61	1.483	14620.0	17720.0	215.3	61.16	76.02	337.9	14.8	0.0422	1.05070
430.0	43.08	1.433	15280.0	18490.0	217.1	62.31	76.59	344.0	15.0	0.0437	1.04893
440.0	41.68	1.386	15940.0	19260.0	218.8	63.46	77.25	349.8	15.2	0.0452	1.04731
450.0	40.39	1.343	16610.0	20030.0	220.6	64.62	77.98	355.5	15.5	0.0467	1.04582
460.0	39.20	1.304	17290.0	20820.0	222.3	65.79	78.77	360.9	15.7	0.0483	1.04444
470.0	38.09	1.267	17980.0	21610.0	224.0	66.95	79.60	366.2	16.0	0.0500	1.04316
480.0	37.05	1.232	18670.0	22410.0	225.7	68.12	80.47	371.3	16.2	0.0516	1.04196
490.0	36.08	1.200	19380.0	23220.0	227.4	69.28	81.37	376.3	16.4	0.0533	1.04084
500.0	35.16	1.169	20100.0	24040.0	229.0	70.43	82.29	381.2	16.7	0.0550	1.03979
520.0	33.49	1.114	21570.0	25700.0	232.3	72.71	84.16	390.5	17.1	0.0584	1.03787
540.0	32.00	1.064	23080.0	27400.0	235.5	74.95	86.07	399.5	17.6	0.0619	1.03615
560.0	30.64	1.019	24630.0	29140.0	238.6	77.15	87.98	408.2	18.0	0.0655	1.03460
580.0	29.42	0.9783	26220.0	30920.0	241.8	79.28	89.87	416.5	18.5	0.0691	1.03320
600.0	28.29	0.9410	27850.0	32740.0	244.8	81.36	91.74	424.5	18.9	0.0727	1.03191
					4.70 MPa isobar						
91.11[a]	652.5	21.70	-14850.0	-14640.0	77.02	47.06	67.77	2000.0	1260.0	0.255	1.94532
150.0	588.5	19.57	-10780.0	-10540.0	111.6	43.64	70.04	1610.0	262.0	0.205	1.83214
200.0	529.4	17.61	-7229.0	-6963.0	132.2	43.14	74.03	1241.0	142.0	0.156	1.73211
220.0	503.0	16.73	-5732.0	-5452.0	139.4	43.79	77.28	1091.0	115.0	0.138	1.68876
240.0	473.8	15.76	-4159.0	-3861.0	146.3	44.87	82.17	936.3	92.4	0.121	1.64163
250.0	457.6	15.22	-3331.0	-3022.0	149.8	45.59	85.59	855.9	82.6	0.113	1.61586
260.0	439.9	14.63	-2467.0	-2145.0	153.2	46.43	90.06	772.5	73.5	0.105	1.58793
270.0	419.9	13.96	-1552.0	-1216.0	156.7	47.42	96.26	684.8	64.9	0.0972	1.55690
280.0	396.5	13.18	-565.6	-209.1	160.4	48.62	105.8	590.1	56.4	0.0888	1.52106
285.0	382.7	12.73	-31.9	337.4	162.3	49.34	113.2	538.5	52.1	0.0843	1.50029
290.0	366.8	12.20	543.8	929.1	164.4	50.20	124.3	482.2	47.6	0.0798	1.47643
292.0	359.5	11.95	790.8	1184.0	165.2	50.59	130.7	457.8	45.7	0.0781	1.46562
294.0	351.4	11.69	1051.0	1453.0	166.2	51.03	139.1	431.8	43.7	0.0767	1.45377
296.0	342.4	11.39	1330.0	1743.0	167.1	51.54	150.8	403.8	41.6	0.0758	1.44051
298.0	331.8	11.04	1635.0	2060.0	168.2	52.14	168.5	372.8	39.3	0.0760	1.42518
300.0	318.8	10.60	1982.0	2425.0	169.4	52.91	200.1	337.4	36.6	0.0781	1.40642
301.0	310.7	10.33	2184.0	2639.0	170.1	53.40	228.5	316.9	35.1	0.0805	1.39480
302.0	300.6	9.997	2420.0	2890.0	171.0	54.02	280.0	293.4	33.3	0.0845	1.38040
302.5	294.2	9.785	2560.0	3041.0	171.5	54.43	327.0	279.8	32.1	0.0873	1.37136
303.0	286.2	9.517	2729.0	3223.0	172.1	54.94	413.4	264.0	30.8	0.0911	1.36003
303.2	282.2	9.383	2810.0	3311.0	172.4	55.21	474.1	256.7	30.2	0.0929	1.35439
303.4	277.3	9.223	2905.0	3415.0	172.7	55.52	571.1	248.6	29.4	0.0949	1.34765
303.6	271.1	9.015	3024.0	3546.0	173.1	55.93	758.6	239.1	28.5	0.0972	1.33899
303.643[b]	272.7	9.067	3000.0	3518.0	173.0	55.82	689.7	241.6	28.7	0.0978	1.34115
303.643[b]	145.5	4.837	5461.0	6433.0	182.6	58.91	1152.0	197.2	15.4	0.0933	1.17270
305.0	124.0	4.122	6075.0	7215.0	185.2	57.41	355.1	206.3	14.2	0.150	1.14586
305.5	120.1	3.995	6203.0	7379.0	185.7	57.07	303.9	208.6	14.0	0.198	1.14114
306.0	117.0	3.890	6314.0	7522.0	186.2	56.79	269.4	210.7	13.8	0.106	1.13724
306.5	114.3	3.800	6413.0	7650.0	186.6	56.54	244.3	212.6	13.7	0.0841	1.13392
307.0	111.9	3.722	6504.0	7767.0	187.0	56.32	225.2	214.4	13.6	0.0728	1.13101
307.5	109.8	3.651	6588.0	7876.0	187.4	56.12	209.9	216.1	13.5	0.0657	1.12842
308.0	107.9	3.588	6667.0	7977.0	187.7	55.93	197.5	217.7	13.5	0.0607	1.12608
309.0	104.5	3.477	6813.0	8165.0	188.3	55.61	178.4	220.7	13.3	0.0539	1.12200
310.0	101.7	3.381	6946.0	8336.0	188.9	55.34	164.2	223.5	13.2	0.0495	1.11850
311.0	99.15	3.297	7069.0	8494.0	189.4	55.10	153.3	226.1	13.2	0.0464	1.11545
312.0	96.91	3.223	7185.0	8643.0	189.8	54.90	144.5	228.6	13.1	0.0440	1.11272

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
313.0	94.88	3.155	7294.0	8784.0	190.3	54.72	137.3	230.9	13.0	0.0422	1.11027
314.0	93.04	3.094	7399.0	8918.0	190.7	54.56	131.3	233.1	13.0	0.0408	1.10804
316.0	89.78	2.986	7597.0	9171.0	191.5	54.30	121.8	237.2	12.9	0.0386	1.10411
318.0	86.95	2.892	7782.0	9407.0	192.3	54.10	114.6	241.0	12.9	0.0371	1.10071
320.0	84.46	2.809	7957.0	9630.0	193.0	53.94	108.9	244.6	12.9	0.0360	1.09772
322.0	82.24	2.735	8125.0	9844.0	193.6	53.83	104.4	248.0	12.9	0.0353	1.09506
324.0	80.23	2.668	8287.0	10050.0	194.3	53.75	100.6	251.2	12.9	0.0347	1.09265
326.0	78.40	2.607	8444.0	10250.0	194.9	53.70	97.47	254.2	12.9	0.0343	1.09046
328.0	76.71	2.551	8596.0	10440.0	195.5	53.67	94.79	257.1	12.9	0.0340	1.08845
330.0	75.15	2.499	8745.0	10630.0	196.0	53.67	92.50	259.9	12.9	0.0337	1.08660
332.0	73.70	2.451	8891.0	10810.0	196.6	53.68	90.52	262.6	12.9	0.0336	1.08487
334.0	72.35	2.406	9035.0	10990.0	197.1	53.71	88.80	265.2	12.9	0.0335	1.08326
340.0	68.75	2.286	9452.0	11510.0	198.7	53.89	84.77	272.4	13.0	0.0334	1.07899
345.0	66.17	2.200	9790.0	11930.0	199.9	54.13	82.36	278.0	13.1	0.0336	1.07594
350.0	63.88	2.124	10120.0	12330.0	201.1	54.42	80.53	283.2	13.2	0.0339	1.07324
355.0	61.83	2.056	10450.0	12730.0	202.2	54.75	79.14	288.2	13.3	0.0343	1.07083
360.0	59.97	1.994	10770.0	13120.0	203.3	55.13	78.07	292.8	13.4	0.0347	1.06864
365.0	58.27	1.938	11090.0	13510.0	204.4	55.54	77.26	297.3	13.5	0.0352	1.06665
370.0	56.71	1.886	11410.0	13900.0	205.4	55.97	76.65	301.6	13.6	0.0357	1.06482
375.0	55.27	1.838	11720.0	14280.0	206.4	56.44	76.21	305.7	13.7	0.0363	1.06312
380.0	53.92	1.793	12040.0	14660.0	207.4	56.91	75.90	309.7	13.8	0.0369	1.06155
390.0	51.50	1.713	12670.0	15420.0	209.4	57.92	75.59	317.2	14.1	0.0381	1.05872
400.0	49.35	1.641	13310.0	16170.0	211.3	58.98	75.60	324.3	14.3	0.0394	1.05621
410.0	47.43	1.577	13950.0	16930.0	213.2	60.08	75.84	331.0	14.6	0.0408	1.05398
420.0	45.70	1.520	14600.0	17690.0	215.0	61.20	76.24	337.4	14.8	0.0423	1.05197
430.0	44.12	1.467	15250.0	18450.0	216.8	62.34	76.78	343.6	15.1	0.0438	1.05014
440.0	42.68	1.419	15910.0	19230.0	218.6	63.49	77.42	349.5	15.3	0.0453	1.04847
450.0	41.35	1.375	16590.0	20000.0	220.3	64.65	78.13	355.1	15.5	0.0468	1.04693
460.0	40.12	1.334	17270.0	20790.0	222.1	65.81	78.91	360.6	15.8	0.0484	1.04550
470.0	38.97	1.296	17960.0	21580.0	223.8	66.97	79.73	365.9	16.0	0.0500	1.04418
480.0	37.91	1.261	18660.0	22380.0	225.5	68.14	80.59	371.1	16.2	0.0517	1.04295
490.0	36.91	1.227	19360.0	23190.0	227.1	69.29	81.48	376.1	16.5	0.0534	1.04180
500.0	35.97	1.196	20080.0	24010.0	228.8	70.44	82.39	381.0	16.7	0.0551	1.04072
520.0	34.25	1.139	21550.0	25680.0	232.1	72.72	84.25	390.4	17.2	0.0585	1.03874
540.0	32.72	1.088	23060.0	27380.0	235.3	74.96	86.14	399.4	17.6	0.0620	1.03698
560.0	31.33	1.042	24610.0	29130.0	238.4	77.16	88.05	408.1	18.1	0.0656	1.03539
580.0	30.07	1.000	26210.0	30910.0	241.6	79.29	89.93	416.4	18.5	0.0692	1.03394
600.0	28.92	0.9618	27840.0	32720.0	244.6	81.37	91.79	424.5	18.9	0.0728	1.03263
					4.85 MPa isobar						
91.13[a]	652.5	21.70	-14850.0	-14630.0	77.03	47.06	67.77	2000.0	1260.0	0.255	1.94537
150.0	588.6	19.57	-10790.0	-10540.0	111.6	43.65	70.03	1611.0	262.0	0.205	1.83230
200.0	529.6	17.61	-7233.0	-6958.0	132.2	43.15	74.00	1243.0	142.0	0.156	1.73238
220.0	503.3	16.74	-5738.0	-5448.0	139.4	43.80	77.22	1093.0	115.0	0.138	1.68912
240.0	474.2	15.77	-4166.0	-3859.0	146.3	44.88	82.06	938.5	92.6	0.122	1.64212
250.0	458.0	15.23	-3340.0	-3022.0	149.7	45.59	85.44	858.4	82.9	0.114	1.61646
260.0	440.4	14.64	-2478.0	-2146.0	153.2	46.43	89.83	775.5	73.8	0.106	1.58868
270.0	420.5	13.99	-1566.0	-1220.0	156.7	47.42	95.89	688.4	65.1	0.0975	1.55789
280.0	397.4	13.22	-585.3	-218.3	160.3	48.61	105.1	594.8	56.7	0.0891	1.52246
285.0	383.9	12.77	-56.2	323.7	162.2	49.32	112.1	544.1	52.4	0.0847	1.50205
290.0	368.3	12.25	512.1	908.1	164.2	50.15	122.4	489.1	48.0	0.0803	1.47876
295.0	349.4	11.62	1142.0	1560.0	166.5	51.19	140.2	427.2	43.3	0.0766	1.45077
296.0	345.0	11.47	1280.0	1703.0	167.0	51.43	145.6	413.6	42.2	0.0761	1.44429
298.0	335.1	11.15	1572.0	2007.0	168.0	51.99	160.0	384.5	40.0	0.0761	1.42996
300.0	323.4	10.76	1897.0	2348.0	169.1	52.67	183.3	351.9	37.6	0.0779	1.41300
301.0	316.4	10.52	2079.0	2540.0	169.8	53.09	201.9	333.7	36.2	0.0800	1.40296
302.0	308.3	10.25	2282.0	2755.0	170.5	53.58	230.4	313.7	34.7	0.0836	1.39125
303.0	298.1	9.913	2519.0	3008.0	171.3	54.21	280.6	290.8	32.9	0.0899	1.37682
303.5	291.7	9.702	2659.0	3159.0	171.8	54.61	324.8	277.8	31.8	0.0951	1.36785
304.0	283.9	9.441	2824.0	3338.0	172.4	55.11	401.3	263.0	30.5	0.103	1.35681
304.2	280.1	9.313	2902.0	3423.0	172.7	55.35	451.0	256.4	29.9	0.108	1.35146

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
304.4	275.6	9.165	2991.0	3520.0	173.0	55.64	523.4	249.2	29.2	0.114	1.34525
304.6	270.2	8.986	3096.0	3635.0	173.4	55.99	640.3	241.1	28.4	0.122	1.33775
304.8	263.1	8.751	3229.0	3783.0	173.9	56.44	867.8	231.8	27.4	0.135	1.32798
304.9	258.4	8.594	3316.0	3880.0	174.2	56.74	1095.0	226.3	26.7	0.145	1.32150
305.0	252.1	8.383	3431.0	4010.0	174.6	57.13	1569.0	219.8	25.9	0.158	1.31279
305.1	241.1	8.019	3627.0	4232.0	175.3	57.78	3469.0	210.8	24.4	0.181	1.29786
305.147[b]	234.1	7.784	3754.0	4377.0	175.8	58.17	6861.0	206.5	23.6	0.198	1.28832
305.147[b]	177.9	5.915	4824.0	5644.0	180.0	59.74	7616.0	195.1	18.0	0.219	1.21405
310.0	111.7	3.713	6680.0	7986.0	187.6	56.23	201.2	218.3	13.8	0.0556	1.13069
311.0	108.1	3.596	6828.0	8177.0	188.2	55.91	181.8	221.3	13.6	0.0515	1.12639
312.0	105.1	3.496	6964.0	8351.0	188.8	55.64	167.3	224.0	13.5	0.0484	1.12272
313.0	102.5	3.409	7090.0	8513.0	189.3	55.40	156.1	226.6	13.4	0.0460	1.11950
314.0	100.1	3.330	7208.0	8664.0	189.8	55.20	147.1	229.0	13.4	0.0441	1.11665
315.0	98.03	3.260	7319.0	8807.0	190.2	55.02	139.7	231.3	13.3	0.0425	1.11408
316.0	96.10	3.196	7426.0	8944.0	190.7	54.86	133.5	233.5	13.2	0.0413	1.11174
318.0	92.69	3.082	7627.0	9200.0	191.5	54.60	123.7	237.6	13.2	0.0393	1.10761
320.0	89.74	2.984	7815.0	9440.0	192.2	54.40	116.3	241.4	13.1	0.0379	1.10406
322.0	87.14	2.898	7993.0	9667.0	192.9	54.25	110.5	245.0	13.1	0.0368	1.10094
324.0	84.83	2.821	8164.0	9883.0	193.6	54.13	105.8	248.4	13.1	0.0360	1.09815
326.0	82.73	2.751	8328.0	10090.0	194.2	54.05	101.9	251.6	13.1	0.0354	1.09565
328.0	80.82	2.688	8486.0	10290.0	194.8	54.00	98.65	254.6	13.1	0.0350	1.09336
330.0	79.07	2.630	8641.0	10490.0	195.4	53.97	95.91	257.5	13.1	0.0347	1.09127
332.0	77.45	2.576	8792.0	10670.0	196.0	53.97	93.55	260.3	13.1	0.0344	1.08933
334.0	75.95	2.526	8939.0	10860.0	196.6	53.98	91.51	263.0	13.1	0.0343	1.08754
336.0	74.54	2.479	9084.0	11040.0	197.1	54.01	89.74	265.6	13.1	0.0341	1.08587
338.0	73.22	2.435	9227.0	11220.0	197.6	54.06	88.18	268.1	13.1	0.0341	1.08430
340.0	71.98	2.394	9368.0	11390.0	198.1	54.12	86.81	270.5	13.2	0.0340	1.08282
345.0	69.16	2.300	9712.0	11820.0	199.4	54.32	84.02	276.2	13.2	0.0341	1.07948
350.0	66.68	2.218	10050.0	12240.0	200.6	54.59	81.92	281.6	13.3	0.0343	1.07655
355.0	64.47	2.144	10380.0	12640.0	201.7	54.90	80.32	286.7	13.4	0.0346	1.07394
360.0	62.47	2.078	10700.0	13040.0	202.9	55.27	79.10	291.4	13.5	0.0350	1.07158
365.0	60.65	2.017	11030.0	13430.0	203.9	55.66	78.16	296.0	13.6	0.0355	1.06944
370.0	58.99	1.962	11350.0	13820.0	205.0	56.09	77.45	300.4	13.7	0.0360	1.06748
375.0	57.45	1.911	11670.0	14210.0	206.0	56.54	76.92	304.6	13.8	0.0365	1.06568
380.0	56.02	1.863	11990.0	14590.0	207.0	57.01	76.54	308.6	13.9	0.0371	1.06401
385.0	54.70	1.819	12310.0	14970.0	208.0	57.50	76.28	312.5	14.1	0.0377	1.06245
390.0	53.45	1.778	12620.0	15350.0	209.0	58.00	76.12	316.3	14.2	0.0383	1.06100
400.0	51.19	1.702	13260.0	16110.0	211.0	59.05	76.04	323.5	14.4	0.0396	1.05835
410.0	49.17	1.635	13910.0	16870.0	212.8	60.13	76.22	330.3	14.7	0.0410	1.05600
420.0	47.35	1.575	14560.0	17640.0	214.7	61.25	76.58	336.8	14.9	0.0424	1.05388
430.0	45.69	1.520	15220.0	18410.0	216.5	62.38	77.08	343.0	15.1	0.0439	1.05196
440.0	44.18	1.469	15880.0	19180.0	218.3	63.53	77.68	348.9	15.4	0.0454	1.05020
450.0	42.79	1.423	16550.0	19960.0	220.0	64.68	78.37	354.7	15.6	0.0470	1.04859
460.0	41.50	1.380	17230.0	20750.0	221.7	65.84	79.12	360.2	15.8	0.0486	1.04710
470.0	40.31	1.341	17930.0	21540.0	223.5	67.00	79.93	365.5	16.1	0.0502	1.04572
480.0	39.20	1.304	18630.0	22350.0	225.1	68.16	80.77	370.7	16.3	0.0518	1.04444
490.0	38.16	1.269	19340.0	23160.0	226.8	69.32	81.64	375.8	16.6	0.0535	1.04324
500.0	37.18	1.236	20060.0	23980.0	228.5	70.47	82.54	380.7	16.8	0.0552	1.04211
520.0	35.39	1.177	21530.0	25650.0	231.8	72.74	84.38	390.2	17.2	0.0586	1.04005
540.0	33.80	1.124	23040.0	27360.0	235.0	74.98	86.26	399.3	17.7	0.0621	1.03822
560.0	32.36	1.076	24590.0	29100.0	238.1	77.17	88.15	408.0	18.1	0.0657	1.03656
580.0	31.05	1.033	26180.0	30880.0	241.3	79.31	90.03	416.4	18.6	0.0692	1.03507
600.0	29.86	0.9930	27820.0	32700.0	244.4	81.38	91.88	424.5	19.0	0.0729	1.03370
				4.90 MPa isobar							
91.14[a]	652.5	21.70	-14850.0	-14630.0	77.03	47.06	67.77	2000.0	1260.0	0.255	1.94538
150.0	588.6	19.58	-10790.0	-10540.0	111.6	43.65	70.02	1611.0	262.0	0.205	1.83235
200.0	529.6	17.61	-7235.0	-6957.0	132.2	43.16	73.99	1243.0	142.0	0.156	1.73247
220.0	503.3	16.74	-5740.0	-5447.0	139.4	43.80	77.20	1093.0	115.0	0.138	1.68924
240.0	474.3	15.77	-4169.0	-3858.0	146.3	44.88	82.03	939.2	92.7	0.122	1.64229
250.0	458.2	15.24	-3343.0	-3021.0	149.7	45.59	85.39	859.2	82.9	0.114	1.61666
260.0	440.5	14.65	-2481.0	-2147.0	153.1	46.43	89.76	776.5	73.8	0.106	1.58893

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
270.0	420.7	13.99	-1571.0	-1221.0	156.6	47.42	95.77	689.6	65.2	0.0976	1.55822
280.0	397.7	13.23	-591.8	-221.3	160.3	48.60	104.9	596.4	56.8	0.0892	1.52293
285.0	384.3	12.78	-64.1	319.3	162.2	49.31	111.7	545.9	52.6	0.0849	1.50262
290.0	368.8	12.27	501.9	901.4	164.2	50.13	121.8	491.3	48.2	0.0804	1.47951
295.0	350.1	11.64	1128.0	1549.0	166.4	51.16	138.9	430.2	43.4	0.0767	1.45186
296.0	345.8	11.50	1264.0	1690.0	166.9	51.40	144.0	416.7	42.4	0.0763	1.44548
298.0	336.2	11.18	1552.0	1991.0	167.9	51.94	157.6	388.1	40.3	0.0761	1.43145
300.0	324.8	10.80	1872.0	2325.0	169.0	52.60	178.9	356.4	37.9	0.0778	1.41498
301.0	318.1	10.58	2049.0	2512.0	169.7	53.00	195.5	338.8	36.6	0.0798	1.40533
302.0	310.4	10.32	2244.0	2719.0	170.3	53.46	219.8	319.5	35.1	0.0833	1.39424
303.0	301.0	10.01	2467.0	2957.0	171.1	54.04	260.1	298.0	33.4	0.0895	1.38089
303.5	295.3	9.820	2596.0	3095.0	171.6	54.39	292.7	285.9	32.4	0.0946	1.37287
304.0	288.6	9.597	2742.0	3253.0	172.1	54.82	343.1	272.6	31.3	0.102	1.36339
304.5	280.1	9.315	2918.0	3444.0	172.7	55.35	433.8	257.5	29.9	0.117	1.35151
304.6	278.1	9.247	2959.0	3489.0	172.9	55.48	461.6	254.2	29.6	0.121	1.34868
304.8	273.5	9.096	3049.0	3588.0	173.2	55.78	536.2	247.1	28.9	0.134	1.34233
305.0	268.0	8.912	3156.0	3706.0	173.6	56.13	655.2	239.2	28.1	0.157	1.33467
305.2	260.8	8.673	3292.0	3857.0	174.1	56.58	880.3	230.1	27.1	0.222	1.32474
305.3	256.1	8.516	3379.0	3955.0	174.4	56.88	1093.0	224.9	26.4	0.385	1.31825
305.4	249.9	8.310	3492.0	4082.0	174.8	57.26	1495.0	218.9	25.6	0.323	1.30979
305.5	240.5	7.998	3661.0	4274.0	175.4	57.81	2559.0	211.5	24.4	0.213	1.29702
305.6	216.2	7.191	4101.0	4782.0	177.1	59.00	11690.0	200.2	21.6	0.179	1.26439
305.7	178.6	5.938	4842.0	5668.0	180.0	59.70	4049.0	196.1	18.0	0.168	1.21495
305.8	167.9	5.582	5077.0	5955.0	180.9	59.57	2136.0	196.8	17.2	0.155	1.20118
305.9	161.6	5.375	5221.0	6132.0	181.5	59.41	1505.0	197.6	16.7	0.144	1.19320
306.0	157.1	5.226	5328.0	6265.0	182.0	59.26	1186.0	198.4	16.4	0.134	1.18749
306.2	150.7	5.012	5488.0	6466.0	182.6	58.99	859.6	199.9	15.9	0.120	1.17932
306.5	144.1	4.791	5663.0	6685.0	183.3	58.65	632.2	201.8	15.5	0.106	1.17095
306.6	142.3	4.732	5711.0	6746.0	183.5	58.55	585.1	202.4	15.4	0.102	1.16874
306.8	139.2	4.630	5797.0	6856.0	183.9	58.36	512.8	203.5	15.2	0.0961	1.16486
307.0	136.6	4.542	5874.0	6953.0	184.2	58.19	459.8	204.6	15.1	0.0908	1.16154
307.2	134.2	4.464	5943.0	7040.0	184.5	58.03	419.1	205.6	14.9	0.0864	1.15863
307.4	132.2	4.395	6006.0	7121.0	184.8	57.89	386.6	206.5	14.8	0.0826	1.15604
307.6	130.3	4.332	6064.0	7195.0	185.0	57.75	360.2	207.5	14.7	0.0793	1.15370
308.0	127.0	4.223	6170.0	7331.0	185.4	57.50	319.4	209.2	14.5	0.0738	1.14960
308.5	123.5	4.107	6288.0	7481.0	185.9	57.22	282.8	211.2	14.3	0.0684	1.14527
309.0	120.5	4.008	6393.0	7615.0	186.4	56.98	256.1	213.1	14.2	0.0642	1.14159
309.5	117.9	3.921	6488.0	7738.0	186.8	56.75	235.6	214.8	14.1	0.0607	1.13838
310.0	115.6	3.844	6577.0	7851.0	187.1	56.55	219.2	216.5	14.0	0.0579	1.13552
310.5	113.5	3.774	6659.0	7958.0	187.5	56.37	205.9	218.1	13.9	0.0555	1.13295
311.0	111.6	3.711	6737.0	8058.0	187.8	56.20	194.8	219.6	13.8	0.0534	1.13062
312.0	108.2	3.599	6882.0	8243.0	188.4	55.91	177.3	222.5	13.7	0.0500	1.12650
313.0	105.3	3.502	7015.0	8414.0	188.9	55.65	164.0	225.1	13.6	0.0474	1.12294
314.0	102.8	3.417	7138.0	8572.0	189.4	55.43	153.6	227.6	13.5	0.0453	1.11981
315.0	100.5	3.341	7255.0	8721.0	189.9	55.23	145.1	230.0	13.4	0.0436	1.11702
316.0	98.37	3.272	7365.0	8863.0	190.4	55.06	138.2	232.3	13.4	0.0422	1.11450
317.0	96.48	3.208	7471.0	8998.0	190.8	54.91	132.3	234.4	13.3	0.0411	1.11219
318.0	94.73	3.150	7572.0	9128.0	191.2	54.78	127.2	236.5	13.3	0.0401	1.11008
320.0	91.60	3.046	7765.0	9374.0	192.0	54.56	119.1	240.4	13.2	0.0385	1.10630
322.0	88.86	2.955	7947.0	9605.0	192.7	54.39	112.7	244.0	13.2	0.0374	1.10300
324.0	86.43	2.874	8121.0	9826.0	193.4	54.26	107.7	247.4	13.1	0.0365	1.10008
326.0	84.24	2.801	8287.0	10040.0	194.0	54.17	103.5	250.7	13.1	0.0359	1.09745
328.0	82.25	2.735	8449.0	10240.0	194.6	54.11	100.0	253.8	13.1	0.0354	1.09506
330.0	80.42	2.675	8605.0	10440.0	195.2	54.08	97.13	256.7	13.1	0.0350	1.09288
332.0	78.74	2.619	8758.0	10630.0	195.8	54.06	94.63	259.5	13.1	0.0347	1.09087
334.0	77.18	2.567	8907.0	10820.0	196.4	54.07	92.48	262.2	13.2	0.0345	1.08901
336.0	75.73	2.518	9053.0	11000.0	196.9	54.10	90.61	264.9	13.2	0.0344	1.08728
338.0	74.36	2.473	9197.0	11180.0	197.5	54.14	88.97	267.4	13.2	0.0343	1.08565
340.0	73.08	2.430	9339.0	11360.0	198.0	54.19	87.53	269.8	13.2	0.0343	1.08413
345.0	70.18	2.334	9686.0	11780.0	199.2	54.39	84.60	275.6	13.3	0.0343	1.08069
350.0	67.63	2.249	10020.0	12200.0	200.4	54.64	82.40	281.1	13.4	0.0345	1.07767
355.0	65.36	2.174	10360.0	12610.0	201.6	54.96	80.73	286.2	13.5	0.0348	1.07499
360.0	63.32	2.106	10680.0	13010.0	202.7	55.31	79.45	291.0	13.6	0.0352	1.07258

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
365.0	61.46	2.044	11010.0	13400.0	203.8	55.70	78.47	295.6	13.7	0.0356	1.07039
370.0	59.75	1.987	11330.0	13800.0	204.9	56.12	77.72	300.0	13.8	0.0361	1.06838
375.0	58.18	1.935	11650.0	14180.0	205.9	56.57	77.16	304.2	13.9	0.0366	1.06654
380.0	56.73	1.887	11970.0	14570.0	206.9	57.04	76.75	308.3	14.0	0.0372	1.06483
385.0	55.38	1.842	12290.0	14950.0	207.9	57.52	76.47	312.2	14.1	0.0378	1.06325
390.0	54.11	1.799	12610.0	15330.0	208.9	58.03	76.30	316.0	14.2	0.0384	1.06177
400.0	51.80	1.723	13250.0	16090.0	210.8	59.07	76.19	323.2	14.4	0.0397	1.05907
410.0	49.75	1.654	13890.0	16860.0	212.7	60.15	76.35	330.0	14.7	0.0411	1.05667
420.0	47.90	1.593	14550.0	17620.0	214.6	61.26	76.69	336.6	14.9	0.0425	1.05452
430.0	46.22	1.537	15200.0	18390.0	216.4	62.40	77.18	342.8	15.2	0.0440	1.05257
440.0	44.68	1.486	15870.0	19170.0	218.2	63.54	77.77	348.7	15.4	0.0455	1.05079
450.0	43.27	1.439	16540.0	19950.0	219.9	64.69	78.45	354.5	15.6	0.0470	1.04915
460.0	41.97	1.396	17220.0	20730.0	221.6	65.85	79.19	360.0	15.9	0.0486	1.04764
470.0	40.76	1.355	17920.0	21530.0	223.3	67.01	79.99	365.4	16.1	0.0502	1.04624
480.0	39.63	1.318	18620.0	22330.0	225.0	68.17	80.83	370.6	16.3	0.0518	1.04493
490.0	38.57	1.283	19330.0	23150.0	226.7	69.33	81.70	375.7	16.6	0.0535	1.04372
500.0	37.58	1.250	20050.0	23970.0	228.4	70.47	82.59	380.6	16.8	0.0552	1.04257
520.0	35.77	1.190	21520.0	25640.0	231.7	72.75	84.43	390.1	17.3	0.0586	1.04049
540.0	34.16	1.136	23030.0	27350.0	234.9	74.99	86.30	399.2	17.7	0.0621	1.03863
560.0	32.70	1.087	24590.0	29090.0	238.0	77.18	88.18	407.9	18.2	0.0657	1.03696
580.0	31.38	1.044	26180.0	30870.0	241.2	79.31	90.06	416.3	18.6	0.0693	1.03544
600.0	30.17	1.003	27810.0	32690.0	244.3	81.38	91.91	424.5	19.0	0.0729	1.03406
					5.00 MPa isobar						
91.15[a]	652.6	21.70	-14850.0	-14620.0	77.04	47.06	67.77	2001.0	1260.0	0.255	1.94541
150.0	588.7	19.58	-10790.0	-10530.0	111.6	43.66	70.02	1612.0	262.0	0.205	1.83245
200.0	529.7	17.62	-7237.0	-6954.0	132.2	43.16	73.96	1244.0	143.0	0.156	1.73265
220.0	503.5	16.74	-5743.0	-5444.0	139.4	43.81	77.17	1094.0	115.0	0.139	1.68948
240.0	474.5	15.78	-4173.0	-3856.0	146.3	44.89	81.96	940.6	92.8	0.122	1.64261
250.0	458.4	15.24	-3349.0	-3021.0	149.7	45.60	85.29	860.9	83.1	0.114	1.61706
260.0	440.8	14.66	-2488.0	-2147.0	153.1	46.43	89.61	778.4	74.0	0.106	1.58943
270.0	421.2	14.01	-1580.0	-1223.0	156.6	47.41	95.53	692.1	65.4	0.0978	1.55887
280.0	398.3	13.25	-604.6	-227.1	160.2	48.59	104.4	599.5	57.0	0.0895	1.52384
285.0	385.0	12.80	-79.8	310.7	162.1	49.29	111.1	549.6	52.8	0.0851	1.50375
290.0	369.8	12.30	481.7	888.3	164.1	50.11	120.6	495.8	48.5	0.0807	1.48099
295.0	351.6	11.69	1100.0	1527.0	166.3	51.10	136.5	435.9	43.8	0.0770	1.45397
296.0	347.4	11.55	1233.0	1666.0	166.8	51.34	141.2	422.8	42.8	0.0765	1.44779
298.0	338.1	11.24	1515.0	1960.0	167.8	51.86	153.2	395.2	40.7	0.0763	1.43429
300.0	327.4	10.89	1824.0	2283.0	168.9	52.48	171.4	364.8	38.4	0.0777	1.41867
302.0	314.1	10.45	2176.0	2654.0	170.1	53.26	203.4	330.4	35.8	0.0827	1.39960
303.0	305.9	10.17	2379.0	2871.0	170.8	53.76	231.4	310.8	34.3	0.0886	1.38785
304.0	295.7	9.835	2615.0	3124.0	171.6	54.38	279.4	288.8	32.5	0.101	1.37348
304.5	289.5	9.627	2753.0	3273.0	172.1	54.77	320.0	276.4	31.5	0.115	1.36467
305.0	281.9	9.375	2914.0	3448.0	172.7	55.25	385.5	262.7	30.2	0.153	1.35403
305.5	272.0	9.045	3115.0	3668.0	173.4	55.88	511.9	247.0	28.7	0.207	1.34020
305.6	269.5	8.963	3163.0	3721.0	173.6	56.03	553.0	243.5	28.4	0.173	1.33681
305.8	263.9	8.775	3273.0	3842.0	174.0	56.39	667.8	236.1	27.5	0.143	1.32899
306.0	256.7	8.537	3408.0	3994.0	174.5	56.83	864.5	227.8	26.6	0.128	1.31914
306.2	246.8	8.207	3592.0	4201.0	175.2	57.43	1267.0	218.5	25.2	0.117	1.30555
306.4	230.6	7.669	3888.0	4540.0	176.3	58.31	2283.0	207.9	23.3	0.109	1.28363
306.6	203.6	6.770	4397.0	5136.0	178.2	59.36	3309.0	199.5	20.4	0.104	1.24761
306.8	180.9	6.015	4860.0	5691.0	180.0	59.63	2163.0	198.0	18.3	0.101	1.21796
307.0	168.2	5.593	5141.0	6035.0	181.1	59.49	1380.0	198.8	17.3	0.0974	1.20160
307.2	160.2	5.326	5331.0	6269.0	181.9	59.27	1004.0	199.9	16.7	0.0936	1.19133
307.5	152.0	5.055	5534.0	6523.0	182.7	58.96	724.0	201.6	16.1	0.0882	1.18098
308.0	143.1	4.758	5774.0	6825.0	183.7	58.51	511.7	204.3	15.5	0.0807	1.16970
308.2	140.4	4.668	5851.0	6922.0	184.0	58.35	462.4	205.2	15.4	0.0782	1.16629
308.4	138.0	4.588	5921.0	7011.0	184.3	58.20	423.6	206.2	15.2	0.0758	1.16329
308.6	135.8	4.516	5985.0	7092.0	184.6	58.06	392.1	207.1	15.1	0.0737	1.16060
308.8	133.9	4.452	6045.0	7168.0	184.8	57.93	366.1	208.0	15.0	0.0717	1.15816
309.0	132.1	4.392	6100.0	7239.0	185.1	57.81	344.1	208.8	14.9	0.0699	1.15593
309.5	128.2	4.262	6227.0	7400.0	185.6	57.52	301.9	210.8	14.7	0.0660	1.15107

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
310.0	124.9	4.152	6339.0	7543.0	186.0	57.27	271.4	212.7	14.5	0.0627	1.14697
310.5	122.0	4.057	6440.0	7672.0	186.5	57.04	248.2	214.4	14.4	0.0598	1.14343
311.0	119.5	3.973	6533.0	7792.0	186.8	56.84	229.9	216.1	14.2	0.0574	1.14030
311.5	117.2	3.898	6620.0	7903.0	187.2	56.65	215.1	217.7	14.1	0.0553	1.13750
312.0	115.1	3.829	6701.0	8007.0	187.5	56.48	202.8	219.2	14.1	0.0535	1.13497
313.0	111.5	3.709	6852.0	8200.0	188.2	56.17	183.6	222.1	13.9	0.0504	1.13052
314.0	108.4	3.605	6989.0	8376.0	188.7	55.91	169.2	224.8	13.8	0.0480	1.12671
315.0	105.7	3.514	7117.0	8539.0	189.2	55.68	158.0	227.3	13.7	0.0460	1.12337
316.0	103.2	3.433	7236.0	8693.0	189.7	55.48	148.9	229.7	13.6	0.0443	1.12040
317.0	101.0	3.360	7350.0	8838.0	190.2	55.30	141.5	232.0	13.5	0.0430	1.11773
318.0	99.04	3.293	7458.0	8976.0	190.6	55.15	135.2	234.1	13.5	0.0418	1.11530
320.0	95.50	3.176	7662.0	9236.0	191.4	54.89	125.3	238.2	13.4	0.0400	1.11101
322.0	92.44	3.074	7852.0	9479.0	192.2	54.69	117.7	242.0	13.4	0.0386	1.10731
324.0	89.75	2.985	8033.0	9708.0	192.9	54.54	111.8	245.6	13.3	0.0376	1.10406
326.0	87.34	2.905	8205.0	9927.0	193.6	54.42	107.0	248.9	13.3	0.0368	1.10117
328.0	85.17	2.833	8371.0	10140.0	194.2	54.34	103.0	252.1	13.3	0.0362	1.09857
330.0	83.20	2.767	8532.0	10340.0	194.8	54.29	99.72	255.1	13.3	0.0357	1.09620
332.0	81.38	2.706	8688.0	10540.0	195.4	54.26	96.91	258.0	13.3	0.0354	1.09402
334.0	79.70	2.651	8841.0	10730.0	196.0	54.26	94.51	260.8	13.3	0.0351	1.09202
336.0	78.15	2.599	8990.0	10910.0	196.6	54.27	92.43	263.5	13.3	0.0349	1.09016
338.0	76.69	2.550	9136.0	11100.0	197.1	54.30	90.61	266.1	13.3	0.0348	1.08842
340.0	75.33	2.505	9281.0	11280.0	197.6	54.35	89.02	268.5	13.3	0.0347	1.08680
345.0	72.25	2.403	9632.0	11710.0	198.9	54.52	85.80	274.5	13.4	0.0347	1.08314
350.0	69.56	2.313	9974.0	12140.0	200.1	54.76	83.40	280.0	13.5	0.0348	1.07995
355.0	67.17	2.234	10310.0	12550.0	201.3	55.06	81.57	285.2	13.5	0.0351	1.07712
360.0	65.02	2.162	10640.0	12950.0	202.4	55.40	80.17	290.1	13.6	0.0354	1.07459
365.0	63.08	2.098	10970.0	13350.0	203.5	55.78	79.09	294.7	13.7	0.0358	1.07229
370.0	61.30	2.039	11290.0	13740.0	204.6	56.20	78.27	299.2	13.8	0.0363	1.07020
375.0	59.67	1.984	11610.0	14130.0	205.6	56.64	77.65	303.5	13.9	0.0368	1.06828
380.0	58.15	1.934	11930.0	14520.0	206.7	57.10	77.19	307.6	14.0	0.0374	1.06650
385.0	56.75	1.887	12260.0	14910.0	207.7	57.58	76.87	311.5	14.2	0.0379	1.06485
390.0	55.43	1.843	12580.0	15290.0	208.7	58.08	76.66	315.4	14.3	0.0386	1.06331
400.0	53.04	1.764	13220.0	16050.0	210.6	59.11	76.50	322.7	14.5	0.0398	1.06052
410.0	50.92	1.693	13870.0	16820.0	212.5	60.19	76.61	329.6	14.7	0.0412	1.05803
420.0	49.01	1.630	14520.0	17590.0	214.3	61.30	76.92	336.1	15.0	0.0426	1.05581
430.0	47.27	1.572	15180.0	18360.0	216.1	62.42	77.37	342.4	15.2	0.0441	1.05379
440.0	45.69	1.520	15840.0	19140.0	217.9	63.57	77.95	348.4	15.4	0.0456	1.05195
450.0	44.24	1.471	16520.0	19920.0	219.7	64.72	78.61	354.2	15.7	0.0471	1.05027
460.0	42.90	1.427	17200.0	20710.0	221.4	65.87	79.34	359.8	15.9	0.0487	1.04871
470.0	41.65	1.385	17900.0	21510.0	223.1	67.03	80.12	365.2	16.2	0.0503	1.04727
480.0	40.49	1.347	18600.0	22310.0	224.8	68.19	80.95	370.4	16.4	0.0519	1.04593
490.0	39.41	1.311	19310.0	23120.0	226.5	69.34	81.81	375.5	16.6	0.0536	1.04468
500.0	38.39	1.277	20030.0	23950.0	228.2	70.49	82.69	380.4	16.9	0.0553	1.04351
520.0	36.54	1.215	21500.0	25620.0	231.5	72.76	84.51	390.0	17.3	0.0587	1.04137
540.0	34.88	1.160	23020.0	27330.0	234.7	75.00	86.38	399.1	17.8	0.0622	1.03946
560.0	33.39	1.110	24570.0	29070.0	237.9	77.19	88.25	407.9	18.2	0.0657	1.03774
580.0	32.03	1.065	26160.0	30860.0	241.0	79.32	90.12	416.3	18.6	0.0693	1.03619
600.0	30.80	1.024	27800.0	32680.0	244.1	81.39	91.96	424.5	19.1	0.0730	1.03478
					5.20 MPa isobar						
91.19[a]	652.6	21.70	-14850.0	-14610.0	77.04	47.07	67.78	2001.0	1260.0	0.255	1.94547
150.0	588.8	19.58	-10790.0	-10530.0	111.6	43.67	70.00	1613.0	263.0	0.205	1.83266
200.0	530.0	17.62	-7243.0	-6948.0	132.2	43.18	73.92	1245.0	143.0	0.156	1.73301
220.0	503.8	16.75	-5750.0	-5440.0	139.3	43.82	77.09	1097.0	115.0	0.139	1.68995
240.0	474.9	15.79	-4183.0	-3854.0	146.2	44.90	81.83	943.4	93.1	0.122	1.64327
250.0	458.9	15.26	-3360.0	-3020.0	149.6	45.61	85.10	864.2	83.4	0.114	1.61785
260.0	441.5	14.68	-2503.0	-2149.0	153.1	46.44	89.32	782.3	74.3	0.106	1.59042
270.0	422.0	14.03	-1599.0	-1228.0	156.5	47.41	95.06	696.8	65.8	0.0981	1.56015
280.0	399.5	13.28	-629.8	-238.4	160.1	48.58	103.6	605.6	57.4	0.0899	1.52563
285.0	386.5	12.85	-110.4	294.1	162.0	49.26	109.8	556.7	53.3	0.0856	1.50595
290.0	371.7	12.36	442.8	863.4	164.0	50.05	118.5	504.3	49.0	0.0813	1.48383

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
295.0	354.3	11.78	1046.0	1488.0	166.1	51.01	132.4	446.8	44.5	0.0775	1.45794
296.0	350.3	11.65	1176.0	1622.0	166.6	51.23	136.3	434.4	43.6	0.0770	1.45211
298.0	341.7	11.36	1446.0	1904.0	167.5	51.71	146.1	408.4	41.6	0.0765	1.43950
300.0	331.9	11.04	1738.0	2209.0	168.5	52.27	159.9	380.3	39.4	0.0775	1.42526
302.0	320.3	10.65	2060.0	2548.0	169.7	52.94	181.4	349.4	37.1	0.0817	1.40856
304.0	305.8	10.17	2435.0	2946.0	171.0	53.81	221.2	314.1	34.3	0.0977	1.38769
305.0	296.4	9.858	2657.0	3184.0	171.8	54.37	258.0	294.0	32.7	0.144	1.37448
306.0	284.6	9.463	2923.0	3472.0	172.7	55.11	325.2	271.4	30.8	0.125	1.35776
306.5	277.0	9.210	3084.0	3649.0	173.3	55.58	385.2	258.8	29.6	0.109	1.34713
306.6	275.2	9.153	3120.0	3688.0	173.4	55.69	401.2	256.1	29.3	0.107	1.34473
306.8	271.5	9.030	3196.0	3772.0	173.7	55.92	438.8	250.6	28.7	0.103	1.33956
307.0	267.4	8.892	3279.0	3864.0	174.0	56.17	486.6	244.9	28.1	0.100	1.33383
307.5	254.3	8.457	3536.0	4150.0	174.9	56.96	682.4	229.8	26.3	0.0932	1.31580
308.0	234.5	7.797	3913.0	4580.0	176.3	58.05	1069.0	214.3	23.8	0.0868	1.28882
308.5	206.7	6.875	4449.0	5205.0	178.3	59.16	1345.0	204.1	20.8	0.0814	1.25179
309.0	182.0	6.052	4968.0	5827.0	180.4	59.49	1085.0	201.9	18.6	0.0781	1.21939
309.5	165.8	5.515	5341.0	6284.0	181.8	59.27	763.8	203.0	17.3	0.0749	1.19858
310.0	155.3	5.165	5606.0	6613.0	182.9	58.94	569.8	204.9	16.5	0.0717	1.18515
311.0	142.0	4.723	5974.0	7075.0	184.4	58.30	383.4	208.8	15.6	0.0658	1.16838
311.5	137.4	4.568	6116.0	7254.0	185.0	58.03	333.8	210.7	15.4	0.0633	1.16253
312.0	133.5	4.438	6240.0	7411.0	185.5	57.78	297.8	212.5	15.1	0.0610	1.15765
312.5	130.1	4.326	6351.0	7553.0	185.9	57.55	270.5	214.2	15.0	0.0589	1.15346
313.0	127.2	4.229	6453.0	7683.0	186.3	57.34	249.1	215.8	14.8	0.0571	1.14980
313.5	124.5	4.141	6547.0	7803.0	186.7	57.15	231.8	217.4	14.7	0.0554	1.14655
314.0	122.2	4.063	6635.0	7915.0	187.1	56.97	217.6	218.9	14.6	0.0539	1.14363
314.5	120.0	3.991	6718.0	8021.0	187.4	56.81	205.6	220.4	14.5	0.0525	1.14097
315.0	118.0	3.926	6796.0	8121.0	187.7	56.65	195.4	221.8	14.4	0.0513	1.13854
316.0	114.5	3.809	6943.0	8308.0	188.3	56.38	179.0	224.4	14.2	0.0491	1.13422
317.0	111.5	3.707	7078.0	8480.0	188.9	56.14	166.3	227.0	14.1	0.0473	1.13046
318.0	108.8	3.617	7204.0	8641.0	189.4	55.94	156.1	229.4	14.0	0.0457	1.12714
319.0	106.3	3.536	7322.0	8793.0	189.9	55.75	147.7	231.6	13.9	0.0444	1.12417
320.0	104.1	3.463	7435.0	8937.0	190.3	55.59	140.8	233.8	13.9	0.0432	1.12147
321.0	102.1	3.395	7543.0	9075.0	190.7	55.44	134.9	235.9	13.8	0.0423	1.11901
322.0	100.2	3.333	7647.0	9207.0	191.1	55.32	129.8	237.9	13.7	0.0414	1.11675
324.0	96.90	3.223	7845.0	9458.0	191.9	55.11	121.5	241.7	13.7	0.0400	1.11271
326.0	93.99	3.126	8031.0	9695.0	192.7	54.94	115.0	245.3	13.6	0.0389	1.10917
328.0	91.39	3.039	8208.0	9919.0	193.3	54.82	109.8	248.7	13.6	0.0380	1.10604
330.0	89.05	2.962	8379.0	10130.0	194.0	54.73	105.6	251.9	13.5	0.0374	1.10322
332.0	86.93	2.891	8543.0	10340.0	194.6	54.67	102.0	255.0	13.5	0.0369	1.10067
334.0	84.99	2.826	8703.0	10540.0	195.2	54.64	99.00	257.9	13.5	0.0365	1.09834
336.0	83.19	2.767	8859.0	10740.0	195.8	54.63	96.42	260.7	13.5	0.0361	1.09619
338.0	81.53	2.711	9011.0	10930.0	196.4	54.64	94.19	263.4	13.5	0.0359	1.09420
340.0	79.98	2.660	9160.0	11120.0	196.9	54.66	92.25	266.0	13.5	0.0357	1.09235
342.0	78.53	2.612	9307.0	11300.0	197.5	54.70	90.55	268.5	13.6	0.0356	1.09061
345.0	76.52	2.545	9523.0	11570.0	198.2	54.79	88.38	272.2	13.6	0.0355	1.08821
350.0	73.51	2.445	9874.0	12000.0	199.5	55.00	85.51	277.9	13.6	0.0355	1.08464
355.0	70.87	2.357	10220.0	12420.0	200.7	55.27	83.34	283.2	13.7	0.0357	1.08150
360.0	68.51	2.278	10550.0	12830.0	201.8	55.59	81.68	288.3	13.8	0.0360	1.07870
365.0	66.38	2.208	10880.0	13240.0	203.0	55.95	80.40	293.1	13.9	0.0363	1.07619
370.0	64.45	2.143	11210.0	13640.0	204.0	56.35	79.42	297.6	14.0	0.0367	1.07390
375.0	62.67	2.084	11540.0	14030.0	205.1	56.78	78.67	302.0	14.1	0.0372	1.07181
380.0	61.04	2.030	11860.0	14430.0	206.1	57.22	78.10	306.2	14.2	0.0377	1.06989
385.0	59.52	1.979	12190.0	14820.0	207.2	57.70	77.69	310.2	14.3	0.0383	1.06810
390.0	58.11	1.932	12510.0	15200.0	208.2	58.18	77.40	314.1	14.4	0.0389	1.06644
400.0	55.55	1.847	13160.0	15980.0	210.1	59.20	77.12	321.6	14.6	0.0401	1.06344
410.0	53.27	1.772	13810.0	16750.0	212.0	60.27	77.14	328.6	14.9	0.0414	1.06078
420.0	51.24	1.704	14470.0	17520.0	213.9	61.36	77.38	335.3	15.1	0.0428	1.05841
430.0	49.40	1.643	15130.0	18290.0	215.7	62.48	77.78	341.6	15.3	0.0443	1.05626
440.0	47.72	1.587	15800.0	19080.0	217.5	63.62	78.30	347.7	15.6	0.0458	1.05431
450.0	46.18	1.536	16480.0	19860.0	219.3	64.76	78.93	353.6	15.8	0.0473	1.05252
460.0	44.76	1.489	17160.0	20650.0	221.0	65.92	79.63	359.2	16.0	0.0489	1.05087
470.0	43.45	1.445	17860.0	21450.0	222.7	67.07	80.38	364.7	16.3	0.0505	1.04935
480.0	42.23	1.404	18560.0	22260.0	224.4	68.22	81.19	370.0	16.5	0.0521	1.04793

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
490.0	41.09	1.366	19270.0	23080.0	226.1	69.37	82.03	375.1	16.7	0.0537	1.04661
500.0	40.02	1.331	20000.0	23900.0	227.8	70.52	82.90	380.1	16.9	0.0554	1.04538
520.0	38.07	1.266	21470.0	25580.0	231.1	72.79	84.69	389.7	17.4	0.0588	1.04313
540.0	36.33	1.208	22990.0	27290.0	234.3	75.02	86.53	398.9	17.8	0.0623	1.04112
560.0	34.76	1.156	24540.0	29040.0	237.5	77.21	88.39	407.8	18.3	0.0659	1.03932
580.0	33.35	1.109	26140.0	30830.0	240.6	79.34	90.24	416.2	18.7	0.0695	1.03769
600.0	32.06	1.066	27770.0	32650.0	243.7	81.41	92.07	424.4	19.1	0.0731	1.03621
				5.40 MPa isobar							
91.22[a]	652.6	21.70	-14850.0	-14600.0	77.05	47.08	67.78	2002.0	1260.0	0.255	1.94554
150.0	589.0	19.59	-10790.0	-10520.0	111.6	43.68	69.98	1614.0	263.0	0.205	1.83287
200.0	530.2	17.63	-7248.0	-6942.0	132.1	43.19	73.88	1247.0	143.0	0.157	1.73337
220.0	504.1	16.76	-5757.0	-5435.0	139.3	43.83	77.02	1099.0	116.0	0.139	1.69042
240.0	475.3	15.81	-4192.0	-3851.0	146.2	44.91	81.69	946.2	93.4	0.122	1.64392
250.0	459.4	15.28	-3372.0	-3018.0	149.6	45.61	84.91	867.4	83.7	0.114	1.61863
260.0	442.1	14.70	-2517.0	-2150.0	153.0	46.44	89.05	786.2	74.6	0.106	1.59139
270.0	422.8	14.06	-1617.0	-1233.0	156.5	47.41	94.61	701.5	66.1	0.0985	1.56141
280.0	400.6	13.32	-654.3	-249.0	160.0	48.56	102.7	611.5	57.9	0.0904	1.52737
285.0	387.9	12.90	-140.0	278.6	161.9	49.24	108.6	563.5	53.7	0.0862	1.50808
290.0	373.5	12.42	405.6	840.3	163.9	50.01	116.6	512.5	49.5	0.0819	1.48654
295.0	356.8	11.86	996.5	1452.0	165.9	50.92	128.9	457.0	45.2	0.0780	1.46164
296.0	353.0	11.74	1122.0	1582.0	166.4	51.13	132.2	445.2	44.2	0.0775	1.45609
298.0	344.9	11.47	1384.0	1854.0	167.3	51.58	140.4	420.5	42.3	0.0768	1.44421
300.0	335.9	11.17	1662.0	2145.0	168.3	52.09	151.3	394.2	40.3	0.0775	1.43102
302.0	325.5	10.82	1964.0	2463.0	169.3	52.69	167.1	365.9	38.2	0.0809	1.41597
304.0	313.1	10.41	2302.0	2820.0	170.5	53.41	192.5	334.5	35.8	0.0948	1.39809
305.0	305.6	10.16	2491.0	3022.0	171.2	53.85	212.3	317.4	34.4	0.136	1.38752
306.0	297.0	9.877	2701.0	3248.0	171.9	54.37	241.3	298.9	32.9	0.120	1.37526
306.5	292.0	9.712	2817.0	3373.0	172.3	54.68	261.6	289.1	32.0	0.107	1.36825
307.0	286.5	9.527	2944.0	3510.0	172.8	55.01	288.0	278.8	31.1	0.0997	1.36044
307.5	280.2	9.317	3083.0	3663.0	173.3	55.40	323.7	268.0	30.1	0.0949	1.35158
308.0	272.8	9.071	3241.0	3837.0	173.8	55.85	373.9	256.6	29.0	0.0910	1.34127
308.5	263.8	8.774	3425.0	4041.0	174.5	56.39	447.7	244.7	27.7	0.0874	1.32894
310.0	221.7	7.372	4259.0	4992.0	177.6	58.57	832.1	212.5	22.5	0.0763	1.27166
311.0	187.9	6.248	4966.0	5831.0	180.3	59.35	778.4	205.8	19.2	0.0711	1.22704
312.0	165.0	5.488	5507.0	6491.0	182.4	59.11	547.4	207.0	17.4	0.0672	1.19753
313.0	151.0	5.022	5881.0	6956.0	183.9	58.63	397.6	209.9	16.4	0.0635	1.17971
314.0	141.5	4.707	6161.0	7308.0	185.0	58.16	313.8	213.1	15.8	0.0600	1.16777
314.5	137.8	4.583	6279.0	7457.0	185.5	57.94	285.5	214.7	15.6	0.0584	1.16307
315.0	134.5	4.473	6387.0	7594.0	185.9	57.74	262.9	216.2	15.4	0.0570	1.15897
315.5	131.6	4.376	6487.0	7721.0	186.3	57.56	244.4	217.7	15.2	0.0556	1.15532
316.0	129.0	4.289	6580.0	7839.0	186.7	57.38	229.1	219.2	15.1	0.0543	1.15205
316.5	126.6	4.210	6668.0	7951.0	187.0	57.22	216.2	220.6	15.0	0.0532	1.14909
317.0	124.4	4.137	6750.0	8056.0	187.4	57.07	205.2	221.9	14.9	0.0521	1.14638
318.0	120.5	4.008	6904.0	8252.0	188.0	56.80	187.3	224.6	14.7	0.0501	1.14158
319.0	117.1	3.896	7046.0	8432.0	188.6	56.56	173.4	227.0	14.5	0.0485	1.13743
320.0	114.2	3.797	7177.0	8599.0	189.1	56.35	162.4	229.4	14.4	0.0470	1.13378
321.0	111.5	3.709	7301.0	8757.0	189.6	56.16	153.3	231.7	14.3	0.0457	1.13051
322.0	109.1	3.629	7418.0	8906.0	190.0	55.99	145.8	233.8	14.2	0.0446	1.12757
323.0	106.9	3.556	7530.0	9049.0	190.5	55.85	139.4	235.9	14.2	0.0436	1.12489
324.0	104.9	3.489	7638.0	9186.0	190.9	55.72	133.9	237.9	14.1	0.0428	1.12243
326.0	101.3	3.369	7841.0	9444.0	191.7	55.50	125.0	241.8	14.0	0.0413	1.11804
328.0	98.16	3.265	8033.0	9687.0	192.4	55.33	118.1	245.3	13.9	0.0402	1.11423
330.0	95.38	3.172	8215.0	9917.0	193.1	55.20	112.5	248.7	13.9	0.0393	1.11086
332.0	92.88	3.089	8389.0	10140.0	193.8	55.11	108.0	251.9	13.8	0.0386	1.10784
334.0	90.62	3.014	8558.0	10350.0	194.4	55.04	104.2	255.0	13.8	0.0380	1.10510
336.0	88.55	2.945	8721.0	10550.0	195.1	55.00	101.0	258.0	13.8	0.0375	1.10261
338.0	86.64	2.881	8880.0	10750.0	195.6	54.99	98.22	260.8	13.8	0.0372	1.10032
340.0	84.88	2.823	9035.0	10950.0	196.2	54.99	95.86	263.5	13.8	0.0369	1.09820
342.0	83.23	2.768	9187.0	11140.0	196.8	55.01	93.81	266.1	13.8	0.0367	1.09623
344.0	81.70	2.717	9336.0	11320.0	197.3	55.05	92.01	268.6	13.8	0.0365	1.09439

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
350.0	77.62	2.581	9770.0	11860.0	198.9	55.25	87.79	275.8	13.8	0.0363	1.08952
355.0	74.69	2.484	10120.0	12290.0	200.1	55.49	85.23	281.3	13.9	0.0364	1.08603
360.0	72.10	2.398	10460.0	12720.0	201.3	55.78	83.28	286.5	14.0	0.0366	1.08295
365.0	69.77	2.320	10800.0	13130.0	202.4	56.13	81.78	291.4	14.1	0.0369	1.08019
370.0	67.67	2.250	11130.0	13530.0	203.5	56.50	80.62	296.1	14.1	0.0372	1.07770
375.0	65.74	2.186	11460.0	13930.0	204.6	56.92	79.73	300.6	14.2	0.0377	1.07543
380.0	63.98	2.128	11790.0	14330.0	205.6	57.35	79.05	304.9	14.3	0.0381	1.07334
385.0	62.34	2.073	12120.0	14730.0	206.7	57.81	78.54	309.0	14.4	0.0387	1.07142
390.0	60.82	2.023	12450.0	15120.0	207.7	58.29	78.17	313.0	14.5	0.0392	1.06963
400.0	58.08	1.932	13100.0	15900.0	209.7	59.29	77.76	320.5	14.8	0.0404	1.06641
410.0	55.66	1.851	13760.0	16670.0	211.6	60.34	77.68	327.7	15.0	0.0417	1.06357
420.0	53.49	1.779	14420.0	17450.0	213.4	61.43	77.84	334.4	15.2	0.0431	1.06103
430.0	51.54	1.714	15080.0	18230.0	215.3	62.54	78.19	340.9	15.4	0.0445	1.05875
440.0	49.76	1.655	15750.0	19010.0	217.1	63.67	78.67	347.1	15.7	0.0460	1.05668
450.0	48.14	1.601	16430.0	19800.0	218.9	64.81	79.25	353.0	15.9	0.0475	1.05479
460.0	46.64	1.551	17120.0	20600.0	220.6	65.96	79.92	358.7	16.1	0.0491	1.05305
470.0	45.26	1.505	17820.0	21400.0	222.3	67.11	80.65	364.2	16.4	0.0506	1.05144
480.0	43.97	1.462	18520.0	22210.0	224.0	68.26	81.43	369.6	16.6	0.0523	1.04995
490.0	42.77	1.422	19240.0	23030.0	225.7	69.41	82.25	374.7	16.8	0.0539	1.04856
500.0	41.65	1.385	19960.0	23860.0	227.4	70.55	83.10	379.8	17.0	0.0556	1.04726
520.0	39.60	1.317	21440.0	25540.0	230.7	72.82	84.87	389.5	17.5	0.0590	1.04489
540.0	37.78	1.256	22960.0	27250.0	233.9	75.05	86.69	398.8	17.9	0.0625	1.04279
560.0	36.14	1.202	24510.0	29010.0	237.1	77.23	88.53	407.7	18.4	0.0660	1.04091
580.0	34.66	1.153	26110.0	30790.0	240.3	79.36	90.37	416.2	18.8	0.0696	1.03920
600.0	33.31	1.108	27750.0	32620.0	243.3	81.43	92.18	424.4	19.2	0.0732	1.03765
					5.60 MPa isobar						
91.25[a]	652.7	21.70	-14850.0	-14590.0	77.06	47.08	67.79	2002.0	1260.0	0.255	1.94560
150.0	589.1	19.59	-10800.0	-10510.0	111.6	43.69	69.97	1615.0	263.0	0.206	1.83307
200.0	530.4	17.64	-7253.0	-6936.0	132.1	43.20	73.83	1249.0	143.0	0.157	1.73373
220.0	504.4	16.77	-5764.0	-5430.0	139.3	43.84	76.95	1101.0	116.0	0.139	1.69089
240.0	475.7	15.82	-4202.0	-3848.0	146.2	44.92	81.57	948.9	93.7	0.123	1.64456
250.0	459.9	15.29	-3383.0	-3017.0	149.5	45.62	84.73	870.6	84.0	0.115	1.61941
260.0	442.7	14.72	-2531.0	-2150.0	152.9	46.45	88.77	790.0	75.0	0.107	1.59235
270.0	423.6	14.09	-1635.0	-1237.0	156.4	47.41	94.18	706.1	66.5	0.0989	1.56265
280.0	401.7	13.36	-678.2	-259.1	159.9	48.55	102.0	617.3	58.3	0.0908	1.52906
285.0	389.3	12.95	-168.7	263.9	161.8	49.21	107.5	570.2	54.2	0.0867	1.51013
290.0	375.3	12.48	370.0	818.7	163.7	49.96	114.9	520.4	50.1	0.0824	1.48913
295.0	359.1	11.94	949.7	1419.0	165.8	50.84	125.9	466.7	45.8	0.0786	1.46510
300.0	339.4	11.29	1594.0	2090.0	168.0	51.94	144.6	407.0	41.2	0.0775	1.43617
302.0	329.9	10.97	1880.0	2391.0	169.0	52.48	156.9	380.6	39.1	0.0803	1.42236
304.0	318.9	10.60	2193.0	2721.0	170.1	53.12	174.9	352.0	36.9	0.0923	1.40646
306.0	305.5	10.16	2547.0	3098.0	171.4	53.90	204.5	320.6	34.4	0.115	1.38734
307.0	297.5	9.892	2747.0	3314.0	172.1	54.39	227.8	303.5	33.0	0.0977	1.37589
308.0	288.0	9.576	2973.0	3557.0	172.9	54.96	262.1	285.3	31.5	0.0911	1.36250
308.5	282.5	9.393	3098.0	3694.0	173.3	55.29	285.9	275.7	30.6	0.0886	1.35479
309.0	276.3	9.188	3235.0	3844.0	173.8	55.66	316.4	265.9	29.6	0.0863	1.34617
309.5	269.3	8.954	3387.0	4012.0	174.3	56.08	356.0	255.8	28.6	0.0840	1.33641
310.0	261.1	8.684	3558.0	4202.0	174.9	56.55	407.4	245.7	27.5	0.0815	1.32520
315.0	158.5	5.271	5828.0	6890.0	183.5	58.80	387.2	212.0	17.0	0.0618	1.18922
316.0	148.8	4.947	6108.0	7240.0	184.7	58.42	317.0	214.6	16.4	0.0592	1.17686
318.0	135.4	4.502	6540.0	7784.0	186.4	57.72	236.2	220.0	15.6	0.0547	1.16003
318.5	132.8	4.416	6630.0	7899.0	186.7	57.56	223.2	221.3	15.5	0.0537	1.15682
319.0	130.4	4.338	6716.0	8007.0	187.1	57.42	211.9	222.6	15.3	0.0527	1.15389
320.0	126.3	4.199	6876.0	8210.0	187.7	57.16	193.5	225.1	15.1	0.0510	1.14868
321.0	122.6	4.078	7022.0	8396.0	188.3	56.92	179.1	227.5	15.0	0.0495	1.14419
322.0	119.4	3.971	7159.0	8569.0	188.8	56.71	167.5	229.8	14.8	0.0481	1.14023
323.0	116.6	3.876	7287.0	8731.0	189.3	56.53	158.0	232.1	14.7	0.0469	1.13670
324.0	114.0	3.790	7408.0	8885.0	189.8	56.36	150.0	234.2	14.6	0.0458	1.13352
325.0	111.6	3.712	7523.0	9032.0	190.3	56.21	143.3	236.3	14.5	0.0449	1.13064
326.0	109.5	3.640	7634.0	9172.0	190.7	56.08	137.5	238.2	14.4	0.0440	1.12799
328.0	105.6	3.512	7843.0	9437.0	191.5	55.86	128.1	242.0	14.3	0.0426	1.12329

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
330.0	102.3	3.401	8039.0	9686.0	192.3	55.69	120.8	245.6	14.2	0.0414	1.11920
332.0	99.30	3.302	8226.0	9921.0	193.0	55.56	114.9	249.0	14.2	0.0405	1.11560
334.0	96.64	3.214	8404.0	10150.0	193.6	55.46	110.1	252.2	14.1	0.0397	1.11238
336.0	94.24	3.134	8576.0	10360.0	194.3	55.39	106.2	255.3	14.1	0.0391	1.10947
338.0	92.05	3.061	8742.0	10570.0	194.9	55.35	102.8	258.2	14.1	0.0386	1.10683
340.0	90.03	2.994	8904.0	10770.0	195.5	55.33	99.91	261.0	14.0	0.0382	1.10440
342.0	88.17	2.932	9061.0	10970.0	196.1	55.33	97.43	263.7	14.0	0.0379	1.10215
344.0	86.44	2.875	9216.0	11160.0	196.6	55.35	95.28	266.4	14.0	0.0376	1.10007
346.0	84.82	2.821	9367.0	11350.0	197.2	55.39	93.39	268.9	14.0	0.0375	1.09813
348.0	83.30	2.770	9516.0	11540.0	197.7	55.44	91.73	271.4	14.0	0.0373	1.09631
350.0	81.87	2.723	9663.0	11720.0	198.2	55.50	90.26	273.8	14.1	0.0372	1.09460
355.0	78.64	2.615	10020.0	12160.0	199.5	55.71	87.26	279.4	14.1	0.0371	1.09073
360.0	75.79	2.520	10370.0	12590.0	200.7	55.98	84.99	284.8	14.2	0.0372	1.08733
365.0	73.25	2.436	10710.0	13010.0	201.9	56.30	83.24	289.8	14.2	0.0374	1.08431
370.0	70.96	2.360	11050.0	13430.0	203.0	56.66	81.88	294.6	14.3	0.0377	1.08159
375.0	68.88	2.291	11390.0	13830.0	204.1	57.06	80.84	299.2	14.4	0.0381	1.07913
380.0	66.97	2.227	11720.0	14240.0	205.1	57.48	80.03	303.6	14.5	0.0386	1.07687
385.0	65.21	2.169	12050.0	14630.0	206.2	57.93	79.42	307.8	14.6	0.0391	1.07480
390.0	63.58	2.115	12380.0	15030.0	207.2	58.40	78.96	311.8	14.7	0.0396	1.07287
395.0	62.07	2.064	12710.0	15420.0	208.2	58.88	78.63	315.7	14.8	0.0401	1.07109
400.0	60.65	2.017	13040.0	15820.0	209.2	59.38	78.41	319.5	14.9	0.0407	1.06942
410.0	58.07	1.931	13700.0	16600.0	211.1	60.42	78.23	326.8	15.1	0.0420	1.06639
420.0	55.77	1.855	14360.0	17380.0	213.0	61.50	78.32	333.6	15.3	0.0433	1.06369
430.0	53.70	1.786	15030.0	18170.0	214.9	62.60	78.60	340.2	15.5	0.0447	1.06127
440.0	51.82	1.723	15700.0	18950.0	216.7	63.72	79.03	346.4	15.8	0.0462	1.05908
450.0	50.11	1.666	16390.0	19750.0	218.5	64.86	79.58	352.4	16.0	0.0477	1.05708
460.0	48.53	1.614	17080.0	20550.0	220.2	66.00	80.21	358.2	16.2	0.0492	1.05524
470.0	47.07	1.565	17770.0	21350.0	221.9	67.15	80.92	363.8	16.5	0.0508	1.05355
480.0	45.72	1.521	18480.0	22160.0	223.7	68.29	81.67	369.2	16.7	0.0524	1.05198
490.0	44.46	1.479	19200.0	22990.0	225.4	69.44	82.47	374.4	16.9	0.0541	1.05052
500.0	43.28	1.439	19920.0	23810.0	227.0	70.58	83.31	379.5	17.1	0.0557	1.04915
510.0	42.18	1.403	20660.0	24650.0	228.7	71.72	84.17	384.5	17.4	0.0574	1.04787
520.0	41.14	1.368	21400.0	25500.0	230.3	72.84	85.05	389.3	17.6	0.0591	1.04667
540.0	39.23	1.305	22920.0	27220.0	233.6	75.07	86.84	398.6	18.0	0.0626	1.04447
560.0	37.52	1.248	24480.0	28970.0	236.8	77.25	88.66	407.6	18.4	0.0661	1.04249
580.0	35.98	1.196	26080.0	30760.0	239.9	79.38	90.49	416.2	18.9	0.0697	1.04071
600.0	34.57	1.150	27720.0	32590.0	243.0	81.45	92.29	424.4	19.3	0.0733	1.03909
					5.80 MPa isobar						
91.28[a]	652.7	21.71	-14850.0	-14580.0	77.07	47.09	67.79	2002.0	1260.0	0.255	1.94566
150.0	589.2	19.59	-10800.0	-10500.0	111.5	43.70	69.95	1616.0	264.0	0.206	1.83328
200.0	530.6	17.65	-7258.0	-6930.0	132.1	43.21	73.79	1250.0	144.0	0.157	1.73409
220.0	504.6	16.78	-5771.0	-5425.0	139.2	43.85	76.88	1103.0	116.0	0.139	1.69136
240.0	476.1	15.83	-4211.0	-3845.0	146.1	44.93	81.44	951.7	93.9	0.123	1.64520
260.0	443.3	14.74	-2545.0	-2151.0	152.9	46.45	88.51	793.7	75.3	0.107	1.59330
270.0	424.4	14.11	-1652.0	-1241.0	156.3	47.41	93.76	710.6	66.8	0.0992	1.56386
280.0	402.8	13.40	-701.6	-268.6	159.9	48.54	101.2	623.0	58.7	0.0913	1.53071
285.0	390.6	12.99	-196.6	250.0	161.7	49.19	106.4	576.7	54.6	0.0871	1.51213
290.0	376.9	12.54	335.7	798.4	163.6	49.92	113.3	528.1	50.6	0.0830	1.49161
295.0	361.3	12.02	905.5	1388.0	165.6	50.78	123.2	476.0	46.4	0.0791	1.46836
300.0	342.6	11.39	1532.0	2041.0	167.8	51.81	139.3	418.8	41.9	0.0776	1.44085
302.0	333.8	11.10	1806.0	2329.0	168.8	52.31	149.2	393.9	40.0	0.0799	1.42799
304.0	323.8	10.77	2101.0	2640.0	169.8	52.88	162.8	367.4	37.9	0.0901	1.41353
306.0	312.1	10.38	2426.0	2984.0	170.9	53.56	183.1	338.9	35.7	0.110	1.39676
307.0	305.4	10.16	2603.0	3174.0	171.5	53.96	197.5	323.7	34.5	0.0955	1.38715
308.0	297.8	9.904	2795.0	3381.0	172.2	54.40	216.6	307.8	33.2	0.0901	1.37640
309.0	289.1	9.615	3007.0	3610.0	173.0	54.92	242.9	291.1	31.7	0.0866	1.36412
309.5	284.2	9.452	3122.0	3736.0	173.4	55.21	259.9	282.5	30.9	0.0850	1.35724
310.0	278.8	9.273	3245.0	3871.0	173.8	55.53	280.5	273.8	30.1	0.0834	1.34975
310.5	272.9	9.077	3378.0	4017.0	174.3	55.88	305.4	264.9	29.2	0.0817	1.34151
311.0	266.4	8.858	3522.0	4177.0	174.8	56.26	335.4	256.1	28.3	0.0799	1.33240

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
312.0	250.8	8.341	3853.0	4549.0	176.0	57.12	411.0	239.2	26.2	0.0760	1.31104
314.0	211.5	7.034	4683.0	5508.0	179.0	58.78	518.7	217.1	21.7	0.0680	1.25810
316.0	176.7	5.878	5492.0	6478.0	182.1	59.10	429.1	213.4	18.5	0.0628	1.21260
318.0	155.0	5.153	6084.0	7209.0	184.4	58.58	309.7	216.7	16.9	0.0586	1.18469
320.0	141.2	4.697	6516.0	7751.0	186.1	57.97	238.6	221.4	16.1	0.0549	1.16737
321.0	136.1	4.525	6696.0	7978.0	186.8	57.70	215.4	223.8	15.8	0.0532	1.16091
322.0	131.7	4.379	6859.0	8184.0	187.5	57.46	197.3	226.2	15.6	0.0517	1.15541
323.0	127.8	4.251	7009.0	8373.0	188.1	57.23	182.9	228.4	15.4	0.0503	1.15063
324.0	124.4	4.138	7149.0	8550.0	188.6	57.03	171.2	230.7	15.2	0.0491	1.14643
325.0	121.4	4.037	7280.0	8716.0	189.1	56.85	161.5	232.8	15.1	0.0479	1.14267
326.0	118.7	3.946	7404.0	8874.0	189.6	56.69	153.4	234.9	15.0	0.0469	1.13929
327.0	116.2	3.863	7522.0	9024.0	190.1	56.55	146.5	236.9	14.9	0.0460	1.13622
328.0	113.9	3.787	7636.0	9167.0	190.5	56.42	140.5	238.8	14.8	0.0452	1.13340
330.0	109.8	3.652	7850.0	9438.0	191.3	56.20	130.8	242.6	14.7	0.0437	1.12840
332.0	106.3	3.534	8050.0	9692.0	192.1	56.03	123.2	246.1	14.6	0.0426	1.12407
334.0	103.1	3.430	8241.0	9932.0	192.8	55.89	117.1	249.4	14.5	0.0416	1.12025
336.0	100.3	3.336	8422.0	10160.0	193.5	55.79	112.1	252.6	14.4	0.0408	1.11684
338.0	97.80	3.252	8597.0	10380.0	194.2	55.73	108.0	255.7	14.4	0.0402	1.11377
340.0	95.49	3.175	8767.0	10590.0	194.8	55.68	104.5	258.6	14.3	0.0397	1.11098
342.0	93.37	3.105	8931.0	10800.0	195.4	55.66	101.5	261.4	14.3	0.0392	1.10841
344.0	91.41	3.040	9091.0	11000.0	196.0	55.66	98.88	264.1	14.3	0.0389	1.10605
346.0	89.59	2.979	9248.0	11190.0	196.5	55.68	96.64	266.8	14.3	0.0386	1.10386
348.0	87.89	2.923	9402.0	11390.0	197.1	55.71	94.68	269.3	14.3	0.0384	1.10181
350.0	86.30	2.870	9553.0	11570.0	197.6	55.76	92.95	271.8	14.3	0.0382	1.09990
355.0	82.72	2.751	9921.0	12030.0	198.9	55.94	89.44	277.6	14.3	0.0380	1.09560
360.0	79.59	2.647	10280.0	12470.0	200.1	56.18	86.80	283.1	14.3	0.0380	1.09186
365.0	76.81	2.554	10630.0	12900.0	201.3	56.48	84.77	288.3	14.4	0.0381	1.08855
370.0	74.33	2.472	10970.0	13320.0	202.5	56.82	83.21	293.2	14.5	0.0383	1.08559
375.0	72.07	2.397	11310.0	13730.0	203.6	57.20	81.99	297.9	14.6	0.0386	1.08291
380.0	70.02	2.329	11650.0	14140.0	204.7	57.61	81.05	302.3	14.6	0.0390	1.08048
385.0	68.13	2.266	11980.0	14540.0	205.7	58.05	80.33	306.6	14.7	0.0395	1.07824
390.0	66.39	2.208	12310.0	14940.0	206.7	58.51	79.78	310.7	14.8	0.0400	1.07618
395.0	64.77	2.154	12650.0	15340.0	207.8	58.98	79.37	314.7	14.9	0.0405	1.07426
400.0	63.25	2.104	12980.0	15740.0	208.8	59.48	79.09	318.6	15.0	0.0411	1.07248
410.0	60.51	2.012	13640.0	16520.0	210.7	60.50	78.80	325.9	15.2	0.0423	1.06925
420.0	58.07	1.931	14310.0	17310.0	212.6	61.57	78.81	332.9	15.4	0.0436	1.06639
430.0	55.88	1.858	14980.0	18100.0	214.5	62.66	79.03	339.5	15.7	0.0450	1.06382
440.0	53.90	1.792	15660.0	18890.0	216.3	63.78	79.41	345.8	15.9	0.0464	1.06150
450.0	52.09	1.732	16340.0	19690.0	218.1	64.91	79.91	351.9	16.1	0.0479	1.05939
460.0	50.43	1.677	17030.0	20490.0	219.8	66.04	80.51	357.7	16.3	0.0494	1.05745
470.0	48.90	1.626	17730.0	21300.0	221.6	67.19	81.19	363.3	16.6	0.0510	1.05567
480.0	47.48	1.579	18440.0	22120.0	223.3	68.33	81.92	368.8	16.8	0.0526	1.05402
490.0	46.16	1.535	19160.0	22940.0	225.0	69.47	82.70	374.1	17.0	0.0542	1.05248
500.0	44.93	1.494	19890.0	23770.0	226.7	70.61	83.52	379.2	17.2	0.0559	1.05105
510.0	43.77	1.456	20630.0	24610.0	228.3	71.74	84.36	384.2	17.4	0.0576	1.04971
520.0	42.68	1.419	21370.0	25460.0	230.0	72.87	85.22	389.1	17.7	0.0593	1.04845
540.0	40.69	1.353	22890.0	27180.0	233.2	75.09	87.00	398.5	18.1	0.0627	1.04615
560.0	38.91	1.294	24450.0	28940.0	236.4	77.27	88.80	407.5	18.5	0.0662	1.04409
580.0	37.29	1.240	26060.0	30730.0	239.6	79.40	90.61	416.1	19.0	0.0698	1.04223
600.0	35.83	1.191	27690.0	32560.0	242.7	81.46	92.41	424.5	19.4	0.0734	1.04054
					6.00 MPa isobar						
91.31[a]	652.7	21.71	-14850.0	-14570.0	77.08	47.09	67.80	2003.0	1260.0	0.255	1.94572
150.0	589.3	19.60	-10800.0	-10500.0	111.5	43.72	69.94	1617.0	264.0	0.206	1.83348
200.0	530.8	17.65	-7264.0	-6924.0	132.0	43.23	73.75	1252.0	144.0	0.157	1.73445
220.0	504.9	16.79	-5777.0	-5420.0	139.2	43.87	76.81	1105.0	116.0	0.140	1.69182
240.0	476.5	15.85	-4221.0	-3842.0	146.1	44.94	81.31	954.4	94.2	0.123	1.64583
260.0	443.9	14.76	-2558.0	-2152.0	152.8	46.46	88.25	797.5	75.6	0.107	1.59424
270.0	425.2	14.14	-1669.0	-1245.0	156.3	47.41	93.36	715.1	67.1	0.0996	1.56506
280.0	403.9	13.43	-724.4	-277.7	159.8	48.53	100.5	628.6	59.1	0.0917	1.53233
285.0	391.9	13.03	-223.6	236.8	161.6	49.17	105.5	583.1	55.1	0.0876	1.51406
290.0	378.5	12.59	302.7	779.4	163.5	49.89	111.9	535.4	51.1	0.0835	1.49400

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
295.0	363.4	12.09	863.5	1360.0	165.5	50.71	120.9	484.8	47.0	0.0796	1.47145
300.0	345.6	11.49	1474.0	1996.0	167.6	51.70	134.9	429.9	42.6	0.0778	1.44515
302.0	337.3	11.22	1739.0	2274.0	168.5	52.17	143.0	406.2	40.8	0.0796	1.43307
304.0	328.1	10.91	2020.0	2570.0	169.5	52.69	153.9	381.4	38.9	0.0883	1.41970
306.0	317.6	10.56	2324.0	2892.0	170.6	53.29	168.9	355.0	36.8	0.106	1.40458
307.0	311.7	10.37	2487.0	3066.0	171.1	53.63	178.9	341.1	35.7	0.0933	1.39615
308.0	305.3	10.15	2660.0	3251.0	171.7	54.01	191.3	326.8	34.5	0.0888	1.38696
309.0	298.1	9.914	2844.0	3450.0	172.4	54.43	207.2	311.9	33.3	0.0861	1.37681
310.0	290.1	9.646	3045.0	3667.0	173.1	54.90	227.9	296.5	31.9	0.0838	1.36545
311.0	280.8	9.339	3265.0	3908.0	173.8	55.44	255.5	280.7	30.5	0.0814	1.35251
311.5	275.7	9.167	3385.0	4040.0	174.3	55.74	272.7	272.8	29.7	0.0801	1.34530
312.0	270.1	8.981	3513.0	4181.0	174.7	56.06	292.4	264.9	28.9	0.0787	1.33751
312.5	264.0	8.778	3649.0	4333.0	175.2	56.41	314.9	257.1	28.0	0.0773	1.32907
314.0	242.4	8.062	4117.0	4862.0	176.9	57.54	391.1	236.2	25.2	0.0722	1.29958
316.0	209.1	6.953	4847.0	5710.0	179.6	58.78	437.9	220.2	21.5	0.0659	1.25487
320.0	160.1	5.325	6086.0	7213.0	184.3	58.67	296.2	219.3	17.4	0.0581	1.19125
325.0	132.7	4.413	7006.0	8366.0	187.9	57.50	184.9	229.7	15.8	0.0510	1.15670
326.0	129.2	4.296	7148.0	8545.0	188.4	57.31	173.5	231.8	15.6	0.0499	1.15230
327.0	126.0	4.191	7282.0	8714.0	189.0	57.14	163.9	233.9	15.5	0.0489	1.14837
328.0	123.1	4.095	7408.0	8873.0	189.5	56.98	155.8	235.9	15.3	0.0479	1.14482
329.0	120.5	4.008	7529.0	9026.0	189.9	56.84	148.9	237.8	15.2	0.0470	1.14159
330.0	118.1	3.929	7644.0	9171.0	190.4	56.72	142.8	239.7	15.1	0.0462	1.13863
332.0	113.9	3.786	7862.0	9447.0	191.2	56.51	133.0	243.3	15.0	0.0448	1.13337
334.0	110.1	3.663	8066.0	9705.0	192.0	56.34	125.2	246.8	14.9	0.0437	1.12881
336.0	106.9	3.554	8260.0	9949.0	192.7	56.21	119.0	250.1	14.8	0.0427	1.12479
338.0	103.9	3.456	8445.0	10180.0	193.4	56.11	113.8	253.3	14.7	0.0419	1.12121
340.0	101.3	3.368	8623.0	10400.0	194.0	56.04	109.6	256.3	14.6	0.0412	1.11798
342.0	98.85	3.287	8795.0	10620.0	194.7	56.00	106.0	259.2	14.6	0.0407	1.11504
344.0	96.63	3.213	8961.0	10830.0	195.3	55.98	102.9	262.0	14.6	0.0402	1.11235
346.0	94.58	3.145	9124.0	11030.0	195.9	55.98	100.2	264.7	14.5	0.0399	1.10988
348.0	92.68	3.082	9283.0	11230.0	196.4	55.99	97.89	267.3	14.5	0.0395	1.10758
350.0	90.91	3.023	9439.0	11420.0	197.0	56.03	95.87	269.9	14.5	0.0393	1.10544
352.0	89.25	2.968	9592.0	11610.0	197.5	56.07	94.08	272.3	14.5	0.0391	1.10344
355.0	86.94	2.891	9817.0	11890.0	198.3	56.17	91.78	275.9	14.5	0.0389	1.10066
360.0	83.50	2.777	10180.0	12340.0	199.6	56.39	88.73	281.5	14.6	0.0388	1.09654
365.0	80.47	2.676	10540.0	12780.0	200.8	56.66	86.40	286.8	14.6	0.0388	1.09291
370.0	77.77	2.586	10890.0	13210.0	202.0	56.98	84.60	291.8	14.7	0.0389	1.08969
375.0	75.34	2.505	11230.0	13630.0	203.1	57.35	83.20	296.6	14.7	0.0392	1.08679
380.0	73.13	2.432	11570.0	14040.0	204.2	57.74	82.11	301.1	14.8	0.0395	1.08416
385.0	71.10	2.364	11910.0	14450.0	205.2	58.17	81.27	305.5	14.9	0.0399	1.08175
390.0	69.23	2.302	12250.0	14850.0	206.3	58.61	80.62	309.7	15.0	0.0404	1.07954
395.0	67.50	2.245	12580.0	15260.0	207.3	59.08	80.13	313.7	15.1	0.0409	1.07749
400.0	65.89	2.191	12920.0	15650.0	208.3	59.57	79.78	317.6	15.2	0.0414	1.07559
410.0	62.97	2.094	13590.0	16450.0	210.3	60.58	79.38	325.1	15.4	0.0426	1.07215
420.0	60.39	2.008	14260.0	17240.0	212.2	61.63	79.30	332.1	15.6	0.0439	1.06911
430.0	58.08	1.931	14930.0	18040.0	214.1	62.72	79.45	338.8	15.8	0.0452	1.06639
440.0	55.99	1.862	15610.0	18830.0	215.9	63.83	79.78	345.2	16.0	0.0467	1.06394
450.0	54.09	1.799	16300.0	19630.0	217.7	64.95	80.25	351.4	16.2	0.0481	1.06171
460.0	52.34	1.741	16990.0	20440.0	219.5	66.09	80.81	357.3	16.4	0.0496	1.05968
470.0	50.74	1.687	17690.0	21250.0	221.2	67.22	81.46	362.9	16.7	0.0512	1.05780
480.0	49.25	1.638	18400.0	22070.0	222.9	68.36	82.17	368.4	16.9	0.0528	1.05607
490.0	47.86	1.592	19120.0	22890.0	224.6	69.50	82.93	373.8	17.1	0.0544	1.05446
500.0	46.57	1.549	19850.0	23730.0	226.3	70.64	83.72	378.9	17.3	0.0560	1.05296
510.0	45.37	1.509	20590.0	24570.0	228.0	71.77	84.55	384.0	17.5	0.0577	1.05156
520.0	44.23	1.471	21340.0	25420.0	229.6	72.89	85.40	388.9	17.8	0.0594	1.05024
540.0	42.15	1.402	22860.0	27140.0	232.9	75.12	87.15	398.4	18.2	0.0629	1.04783
560.0	40.29	1.340	24430.0	28900.0	236.1	77.29	88.94	407.4	18.6	0.0664	1.04568
580.0	38.61	1.284	26030.0	30700.0	239.2	79.42	90.73	416.1	19.0	0.0699	1.04374
600.0	37.09	1.233	27670.0	32530.0	242.3	81.48	92.52	424.5	19.5	0.0735	1.04199

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					6.50 MPa isobar						
91.39[a]	652.8	21.71	-14850.0	-14550.0	77.10	47.11	67.81	2004.0	1260.0	0.256	1.94587
150.0	589.6	19.61	-10810.0	-10480.0	111.5	43.74	69.90	1619.0	265.0	0.206	1.83400
200.0	531.4	17.67	-7277.0	-6909.0	132.0	43.26	73.64	1256.0	145.0	0.158	1.73533
220.0	505.6	16.82	-5794.0	-5408.0	139.1	43.90	76.63	1110.0	117.0	0.140	1.69297
240.0	477.5	15.88	-4244.0	-3834.0	146.0	44.96	81.01	961.2	94.9	0.124	1.64740
260.0	445.4	14.81	-2591.0	-2153.0	152.7	46.47	87.64	806.6	76.3	0.108	1.59653
270.0	427.1	14.20	-1711.0	-1253.0	156.1	47.41	92.42	726.0	68.0	0.100	1.56797
280.0	406.4	13.52	-779.3	-298.4	159.6	48.50	98.96	642.0	60.0	0.0927	1.53620
290.0	382.3	12.71	225.1	736.4	163.2	49.81	108.8	552.8	52.2	0.0848	1.49959
295.0	368.2	12.24	766.7	1298.0	165.1	50.58	116.1	505.3	48.3	0.0809	1.47852
300.0	352.0	11.71	1347.0	1902.0	167.1	51.47	126.4	454.8	44.2	0.0785	1.45462
305.0	332.7	11.06	1984.0	2572.0	169.4	52.56	142.9	400.4	39.9	0.104	1.42640
306.0	328.3	10.92	2122.0	2717.0	169.8	52.81	147.5	388.9	39.0	0.0976	1.42000
308.0	318.7	10.60	2409.0	3023.0	170.8	53.35	158.7	365.2	37.2	0.0857	1.40620
310.0	307.9	10.24	2719.0	3354.0	171.9	53.97	173.7	340.5	35.2	0.0828	1.39067
311.0	301.8	10.04	2885.0	3533.0	172.5	54.32	183.3	327.8	34.1	0.0817	1.38208
312.0	295.3	9.820	3060.0	3721.0	173.1	54.70	194.7	315.0	33.0	0.0805	1.37280
313.0	288.1	9.582	3244.0	3923.0	173.7	55.10	208.4	302.0	31.8	0.0792	1.36273
314.0	280.3	9.321	3442.0	4139.0	174.4	55.55	224.7	289.1	30.6	0.0777	1.35171
315.0	271.6	9.032	3653.0	4373.0	175.2	56.03	243.7	276.5	29.3	0.0759	1.33963
316.0	262.0	8.713	3881.0	4627.0	176.0	56.55	264.9	264.5	28.0	0.0738	1.32638
320.0	216.8	7.211	4935.0	5836.0	179.8	58.47	324.6	232.0	22.6	0.0647	1.26515
325.0	169.4	5.635	6177.0	7330.0	184.4	58.75	256.6	226.9	18.5	0.0574	1.20316
326.0	162.9	5.416	6378.0	7578.0	185.2	58.61	238.3	228.0	18.0	0.0563	1.19473
327.0	157.1	5.223	6563.0	7808.0	185.9	58.46	221.7	229.4	17.6	0.0552	1.18736
328.0	152.0	5.053	6736.0	8022.0	186.5	58.30	207.0	231.0	17.3	0.0542	1.18087
329.0	147.4	4.902	6896.0	8222.0	187.1	58.14	194.3	232.6	17.0	0.0532	1.17512
330.0	143.3	4.767	7047.0	8411.0	187.7	57.98	183.2	234.3	16.8	0.0523	1.16999
331.0	139.7	4.644	7190.0	8589.0	188.2	57.84	173.6	236.0	16.6	0.0514	1.16537
332.0	136.3	4.533	7325.0	8758.0	188.8	57.70	165.2	237.8	16.4	0.0506	1.16120
333.0	133.3	4.432	7453.0	8920.0	189.2	57.57	157.9	239.5	16.2	0.0498	1.15739
334.0	130.5	4.339	7576.0	9074.0	189.7	57.46	151.4	241.2	16.1	0.0491	1.15391
336.0	125.5	4.174	7809.0	9366.0	190.6	57.26	140.7	244.6	15.9	0.0478	1.14772
338.0	121.2	4.030	8026.0	9639.0	191.4	57.09	132.2	247.9	15.7	0.0466	1.14237
340.0	117.4	3.903	8231.0	9896.0	192.1	56.96	125.2	251.1	15.6	0.0456	1.13768
342.0	114.0	3.791	8426.0	10140.0	192.9	56.86	119.5	254.2	15.5	0.0448	1.13351
344.0	110.9	3.689	8613.0	10370.0	193.5	56.79	114.8	257.1	15.4	0.0440	1.12977
346.0	108.2	3.597	8793.0	10600.0	194.2	56.74	110.7	260.0	15.3	0.0434	1.12637
348.0	105.6	3.513	8967.0	10820.0	194.8	56.71	107.3	262.7	15.3	0.0429	1.12328
350.0	103.3	3.435	9137.0	11030.0	195.4	56.71	104.3	265.4	15.2	0.0424	1.12043
352.0	101.1	3.363	9302.0	11240.0	196.0	56.72	101.7	268.0	15.2	0.0420	1.11780
354.0	99.12	3.296	9464.0	11440.0	196.6	56.74	99.43	270.6	15.2	0.0417	1.11536
356.0	97.24	3.234	9623.0	11630.0	197.1	56.79	97.43	273.0	15.1	0.0414	1.11308
358.0	95.48	3.175	9779.0	11830.0	197.7	56.84	95.66	275.4	15.1	0.0412	1.11095
360.0	93.82	3.120	9933.0	12020.0	198.2	56.91	94.09	277.7	15.1	0.0411	1.10894
365.0	90.06	2.995	10310.0	12480.0	199.5	57.12	90.86	283.3	15.1	0.0408	1.10440
370.0	86.75	2.885	10670.0	12930.0	200.7	57.40	88.38	288.5	15.1	0.0407	1.10043
375.0	83.81	2.787	11030.0	13360.0	201.9	57.72	86.45	293.5	15.2	0.0408	1.09689
380.0	81.16	2.699	11380.0	13790.0	203.0	58.08	84.95	298.3	15.2	0.0410	1.09372
385.0	78.75	2.619	11730.0	14210.0	204.1	58.47	83.77	302.8	15.3	0.0412	1.09084
390.0	76.54	2.546	12080.0	14630.0	205.2	58.89	82.84	307.2	15.4	0.0416	1.08821
395.0	74.52	2.478	12420.0	15040.0	206.2	59.34	82.13	311.4	15.4	0.0420	1.08580
400.0	72.64	2.416	12760.0	15450.0	207.3	59.80	81.58	315.5	15.5	0.0424	1.08357
405.0	70.89	2.358	13100.0	15860.0	208.3	60.28	81.17	319.4	15.6	0.0430	1.08149
410.0	69.26	2.303	13440.0	16260.0	209.3	60.78	80.88	323.2	15.7	0.0435	1.07956
420.0	66.29	2.205	14120.0	17070.0	211.2	61.81	80.58	330.4	15.9	0.0447	1.07605
430.0	63.65	2.117	14800.0	17870.0	213.1	62.87	80.56	337.3	16.1	0.0459	1.07294
440.0	61.28	2.038	15490.0	18680.0	215.0	63.96	80.75	343.9	16.3	0.0473	1.07014
450.0	59.13	1.966	16180.0	19490.0	216.8	65.07	81.10	350.2	16.5	0.0487	1.06761
460.0	57.17	1.901	16880.0	20300.0	218.6	66.19	81.57	356.2	16.7	0.0502	1.06531

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	55.36	1.841	17590.0	21120.0	220.3	67.32	82.14	362.0	16.9	0.0517	1.06320
480.0	53.70	1.786	18310.0	21950.0	222.1	68.45	82.79	367.7	17.1	0.0533	1.06125
490.0	52.16	1.734	19030.0	22780.0	223.8	69.58	83.50	373.1	17.3	0.0548	1.05945
500.0	50.72	1.687	19760.0	23620.0	225.5	70.71	84.25	378.4	17.6	0.0565	1.05778
510.0	49.38	1.642	20500.0	24460.0	227.2	71.84	85.03	383.5	17.8	0.0581	1.05621
520.0	48.12	1.600	21260.0	25320.0	228.8	72.96	85.85	388.5	18.0	0.0598	1.05475
540.0	45.82	1.524	22790.0	27050.0	232.1	75.17	87.54	398.1	18.4	0.0632	1.05207
560.0	43.76	1.455	24350.0	28820.0	235.3	77.34	89.28	407.3	18.8	0.0667	1.04969
580.0	41.92	1.394	25960.0	30620.0	238.5	79.47	91.04	416.1	19.2	0.0702	1.04755
600.0	40.24	1.338	27600.0	32460.0	241.6	81.53	92.79	424.6	19.7	0.0738	1.04562
					7.00 MPa isobar						
91.47[a]	652.9	21.71	-14840.0	-14520.0	77.12	47.12	67.83	2005.0	1260.0	0.256	1.94602
150.0	589.9	19.62	-10820.0	-10460.0	111.4	43.77	69.86	1622.0	266.0	0.207	1.83451
200.0	531.9	17.69	-7289.0	-6894.0	131.9	43.29	73.54	1260.0	145.0	0.158	1.73621
220.0	506.4	16.84	-5811.0	-5395.0	139.1	43.92	76.47	1115.0	118.0	0.141	1.69411
240.0	478.4	15.91	-4266.0	-3826.0	145.9	44.99	80.72	967.8	95.6	0.124	1.64893
260.0	446.8	14.86	-2624.0	-2153.0	152.6	46.48	87.07	815.5	77.1	0.109	1.59876
270.0	428.9	14.26	-1751.0	-1261.0	155.9	47.41	91.56	736.5	68.8	0.101	1.57077
280.0	408.8	13.60	-831.5	-316.7	159.4	48.48	97.55	654.8	60.9	0.0937	1.53988
290.0	385.7	12.83	153.3	699.1	162.9	49.74	106.2	569.1	53.3	0.0860	1.50474
295.0	372.4	12.39	679.4	1245.0	164.8	50.47	112.3	524.0	49.5	0.0822	1.48486
300.0	357.6	11.89	1236.0	1825.0	166.7	51.30	120.4	476.9	45.7	0.0794	1.46275
305.0	340.4	11.32	1836.0	2455.0	168.8	52.26	132.2	427.3	41.7	0.0964	1.43751
310.0	319.6	10.63	2499.0	3158.0	171.1	53.43	150.7	374.4	37.5	0.0814	1.40747
312.0	309.9	10.30	2790.0	3470.0	172.1	53.98	161.5	352.4	35.7	0.0801	1.39349
314.0	298.9	9.941	3102.0	3806.0	173.2	54.60	175.3	330.1	33.8	0.0788	1.37795
316.0	286.6	9.530	3439.0	4173.0	174.4	55.29	192.7	307.9	31.8	0.0769	1.36050
317.0	279.7	9.302	3619.0	4371.0	175.0	55.67	203.0	297.1	30.7	0.0757	1.35093
318.0	272.4	9.059	3807.0	4579.0	175.6	56.06	214.1	286.6	29.6	0.0743	1.34075
319.0	264.6	8.800	4004.0	4799.0	176.3	56.47	225.7	276.7	28.6	0.0728	1.32996
325.0	212.0	7.049	5319.0	6312.0	181.0	58.54	263.5	239.4	22.4	0.0627	1.25867
326.0	203.6	6.770	5540.0	6574.0	181.8	58.70	259.4	237.1	21.6	0.0613	1.24757
327.0	195.7	6.507	5755.0	6830.0	182.6	58.79	252.6	235.7	20.9	0.0601	1.23717
328.0	188.3	6.262	5961.0	7079.0	183.4	58.83	243.8	235.0	20.3	0.0591	1.22756
329.0	181.5	6.037	6158.0	7318.0	184.1	58.81	233.8	234.9	19.7	0.0581	1.21876
330.0	175.3	5.831	6346.0	7546.0	184.8	58.77	223.1	235.2	19.2	0.0572	1.21076
331.0	169.7	5.644	6524.0	7764.0	185.5	58.70	212.5	235.8	18.8	0.0563	1.20349
332.0	164.6	5.473	6692.0	7971.0	186.1	58.61	202.2	236.7	18.5	0.0555	1.19691
333.0	159.9	5.317	6852.0	8169.0	186.7	58.51	192.6	237.8	18.2	0.0547	1.19094
334.0	155.6	5.175	7004.0	8357.0	187.2	58.41	183.7	239.0	17.9	0.0540	1.18551
335.0	151.7	5.046	7149.0	8536.0	187.8	58.30	175.5	240.3	17.6	0.0532	1.18056
336.0	148.1	4.926	7287.0	8708.0	188.3	58.20	168.2	241.7	17.4	0.0526	1.17603
337.0	144.8	4.817	7419.0	8873.0	188.8	58.10	161.5	243.1	17.3	0.0519	1.17187
338.0	141.8	4.715	7546.0	9031.0	189.2	58.01	155.5	244.5	17.1	0.0513	1.16803
340.0	136.3	4.533	7787.0	9331.0	190.1	57.85	145.1	247.5	16.8	0.0501	1.16117
342.0	131.5	4.374	8013.0	9613.0	191.0	57.71	136.6	250.5	16.6	0.0491	1.15521
344.0	127.3	4.234	8225.0	9879.0	191.7	57.59	129.6	253.4	16.4	0.0481	1.14996
346.0	123.5	4.109	8428.0	10130.0	192.5	57.50	123.7	256.2	16.3	0.0473	1.14529
348.0	120.2	3.996	8622.0	10370.0	193.2	57.44	118.7	259.1	16.1	0.0465	1.14110
350.0	117.1	3.893	8809.0	10610.0	193.8	57.39	114.5	261.8	16.0	0.0459	1.13730
352.0	114.3	3.800	8990.0	10830.0	194.5	57.37	110.8	264.5	16.0	0.0453	1.13384
354.0	111.7	3.714	9166.0	11050.0	195.1	57.36	107.6	267.1	15.9	0.0448	1.13066
356.0	109.3	3.634	9337.0	11260.0	195.7	57.37	104.9	269.6	15.8	0.0444	1.12772
358.0	107.0	3.560	9504.0	11470.0	196.3	57.40	102.4	272.1	15.8	0.0440	1.12500
360.0	105.0	3.491	9668.0	11670.0	196.8	57.44	100.3	274.5	15.8	0.0437	1.12246
362.0	103.0	3.426	9829.0	11870.0	197.4	57.49	98.39	276.8	15.7	0.0435	1.12009
365.0	100.3	3.336	10060.0	12160.0	198.2	57.60	95.92	280.3	15.7	0.0431	1.11680
370.0	96.28	3.202	10450.0	12630.0	199.5	57.82	92.60	285.7	15.7	0.0428	1.11191
375.0	92.73	3.084	10820.0	13090.0	200.7	58.09	90.05	290.9	15.7	0.0426	1.10762
380.0	89.57	2.979	11190.0	13540.0	201.9	58.42	88.05	295.8	15.7	0.0426	1.10381
385.0	86.72	2.884	11540.0	13970.0	203.0	58.78	86.48	300.5	15.7	0.0427	1.10038

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
390.0	84.14	2.798	11900.0	14400.0	204.1	59.17	85.24	305.0	15.8	0.0430	1.09728
395.0	81.78	2.720	12250.0	14820.0	205.2	59.59	84.26	309.4	15.8	0.0433	1.09445
400.0	79.60	2.647	12600.0	15240.0	206.3	60.03	83.50	313.6	15.9	0.0436	1.09185
405.0	77.59	2.580	12950.0	15660.0	207.3	60.50	82.91	317.6	16.0	0.0440	1.08945
410.0	75.72	2.518	13290.0	16070.0	208.3	60.98	82.46	321.5	16.1	0.0445	1.08722
420.0	72.33	2.405	13980.0	16890.0	210.3	61.98	81.90	329.0	16.2	0.0455	1.08319
430.0	69.34	2.306	14680.0	17710.0	212.2	63.02	81.69	336.0	16.4	0.0467	1.07964
440.0	66.66	2.217	15370.0	18530.0	214.1	64.09	81.74	342.8	16.6	0.0480	1.07648
450.0	64.25	2.137	16070.0	19350.0	215.9	65.19	81.97	349.2	16.8	0.0494	1.07363
460.0	62.05	2.064	16780.0	20170.0	217.7	66.29	82.35	355.4	17.0	0.0508	1.07104
470.0	60.04	1.997	17490.0	21000.0	219.5	67.41	82.84	361.3	17.2	0.0522	1.06868
480.0	58.19	1.935	18210.0	21830.0	221.3	68.54	83.42	367.0	17.4	0.0538	1.06651
490.0	56.48	1.878	18940.0	22660.0	223.0	69.66	84.07	372.5	17.6	0.0553	1.06451
500.0	54.90	1.826	19670.0	23510.0	224.7	70.79	84.77	377.9	17.8	0.0569	1.06265
510.0	53.41	1.776	20420.0	24360.0	226.4	71.91	85.52	383.1	18.0	0.0586	1.06091
520.0	52.03	1.730	21170.0	25220.0	228.0	73.02	86.30	388.2	18.2	0.0602	1.05929
530.0	50.72	1.687	21940.0	26090.0	229.7	74.13	87.11	393.1	18.4	0.0619	1.05778
540.0	49.50	1.646	22710.0	26960.0	231.3	75.23	87.94	398.0	18.6	0.0636	1.05635
560.0	47.25	1.571	24280.0	28740.0	234.6	77.39	89.63	407.3	19.0	0.0670	1.05373
580.0	45.23	1.504	25890.0	30550.0	237.7	79.51	91.35	416.2	19.5	0.0706	1.05139
600.0	43.40	1.443	27540.0	32390.0	240.9	81.57	93.07	424.8	19.9	0.0741	1.04927
					7.50 MPa isobar						
91.55[a]	653.0	21.72	-14840.0	-14500.0	77.14	47.14	67.84	2007.0	1270.0	0.256	1.94617
150.0	590.2	19.63	-10820.0	-10440.0	111.4	43.80	69.82	1624.0	267.0	0.207	1.83502
200.0	532.4	17.71	-7302.0	-6878.0	131.8	43.32	73.44	1264.0	146.0	0.159	1.73708
220.0	507.0	16.86	-5827.0	-5383.0	139.0	43.95	76.31	1121.0	118.0	0.141	1.69523
240.0	479.4	15.94	-4288.0	-3818.0	145.8	45.01	80.44	974.3	96.2	0.125	1.65044
260.0	448.2	14.91	-2655.0	-2152.0	152.4	46.50	86.53	824.1	77.8	0.110	1.60093
270.0	430.6	14.32	-1790.0	-1267.0	155.8	47.41	90.77	746.7	69.6	0.102	1.57347
280.0	411.1	13.67	-881.2	-332.7	159.2	48.46	96.30	667.1	61.8	0.0947	1.54337
290.0	388.9	12.93	86.5	666.4	162.7	49.69	104.0	584.3	54.3	0.0871	1.50952
295.0	376.3	12.51	599.5	1199.0	164.5	50.38	109.2	541.3	50.7	0.0834	1.49063
300.0	362.4	12.05	1138.0	1761.0	166.4	51.16	115.8	496.9	47.0	0.0804	1.46993
305.0	346.7	11.53	1711.0	2361.0	168.4	52.04	124.8	450.8	43.2	0.0915	1.44683
310.0	328.6	10.93	2328.0	3015.0	170.5	53.06	137.6	402.7	39.3	0.0804	1.42035
312.0	320.3	10.65	2593.0	3297.0	171.4	53.52	144.4	383.0	37.7	0.0795	1.40849
314.0	311.4	10.36	2869.0	3593.0	172.4	54.03	152.5	363.1	36.1	0.0787	1.39571
316.0	301.7	10.03	3160.0	3908.0	173.4	54.57	162.2	343.2	34.4	0.0777	1.38184
318.0	291.0	9.677	3468.0	4243.0	174.4	55.16	173.6	323.6	32.6	0.0764	1.36671
320.0	279.2	9.284	3796.0	4603.0	175.5	55.80	186.8	304.7	30.8	0.0745	1.35017
322.0	266.2	8.854	4144.0	4991.0	176.8	56.47	200.9	287.4	29.0	0.0722	1.33218
324.0	252.3	8.389	4512.0	5406.0	178.0	57.13	214.1	272.5	27.1	0.0694	1.31296
326.0	237.6	7.903	4896.0	5845.0	179.4	57.75	223.6	260.7	25.4	0.0665	1.29307
328.0	223.0	7.415	5286.0	6297.0	180.8	58.25	227.4	252.4	23.8	0.0639	1.27333
330.0	208.9	6.948	5671.0	6750.0	182.1	58.59	224.7	247.1	22.4	0.0615	1.25463
331.0	202.3	6.728	5858.0	6973.0	182.8	58.69	221.2	245.5	21.8	0.0605	1.24589
332.0	196.0	6.518	6042.0	7192.0	183.5	58.77	216.5	244.4	21.2	0.0596	1.23761
333.0	190.1	6.321	6219.0	7406.0	184.1	58.80	210.9	243.7	20.7	0.0587	1.22985
334.0	184.5	6.136	6391.0	7614.0	184.7	58.81	204.6	243.5	20.3	0.0579	1.22260
335.0	179.3	5.963	6557.0	7815.0	185.3	58.80	198.0	243.6	19.9	0.0572	1.21585
336.0	174.5	5.802	6717.0	8010.0	185.9	58.76	191.2	243.9	19.5	0.0565	1.20959
337.0	169.9	5.652	6871.0	8198.0	186.5	58.72	184.5	244.5	19.2	0.0558	1.20380
338.0	165.8	5.513	7018.0	8379.0	187.0	58.66	178.1	245.2	18.9	0.0552	1.19843
339.0	161.9	5.383	7160.0	8554.0	187.5	58.60	171.9	246.1	18.6	0.0546	1.19345
340.0	158.2	5.263	7297.0	8723.0	188.0	58.54	166.0	247.1	18.4	0.0540	1.18883
342.0	151.7	5.045	7557.0	9044.0	189.0	58.42	155.4	249.3	18.0	0.0529	1.18054
344.0	146.0	4.855	7801.0	9345.0	189.9	58.30	146.3	251.7	17.7	0.0519	1.17332
346.0	141.0	4.687	8030.0	9630.0	190.7	58.19	138.5	254.3	17.4	0.0510	1.16698
348.0	136.5	4.538	8247.0	9900.0	191.5	58.11	131.9	256.8	17.2	0.0502	1.16135
350.0	132.4	4.404	8455.0	10160.0	192.2	58.04	126.2	259.4	17.0	0.0494	1.15631
352.0	128.8	4.283	8654.0	10410.0	192.9	57.99	121.3	262.0	16.9	0.0487	1.15177

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
354.0	125.5	4.172	8846.0	10640.0	193.6	57.96	117.0	264.6	16.8	0.0481	1.14764
356.0	122.4	4.071	9032.0	10870.0	194.2	57.94	113.4	267.1	16.7	0.0475	1.14388
358.0	119.6	3.978	9212.0	11100.0	194.9	57.95	110.2	269.6	16.6	0.0470	1.14041
360.0	117.0	3.891	9387.0	11310.0	195.5	57.96	107.3	272.0	16.5	0.0466	1.13721
362.0	114.6	3.811	9559.0	11530.0	196.1	57.99	104.8	274.4	16.4	0.0462	1.13424
364.0	112.3	3.736	9727.0	11730.0	196.6	58.04	102.6	276.7	16.4	0.0459	1.13148
366.0	110.2	3.666	9892.0	11940.0	197.2	58.09	100.6	279.0	16.3	0.0456	1.12889
368.0	108.3	3.600	10050.0	12140.0	197.7	58.16	98.87	281.2	16.3	0.0453	1.12646
370.0	106.4	3.538	10210.0	12330.0	198.3	58.24	97.29	283.4	16.3	0.0451	1.12418
375.0	102.1	3.396	10600.0	12810.0	199.5	58.47	93.99	288.7	16.2	0.0447	1.11900
380.0	98.38	3.272	10980.0	13270.0	200.8	58.76	91.42	293.8	16.2	0.0445	1.11445
385.0	95.04	3.161	11350.0	13730.0	201.9	59.09	89.40	298.6	16.2	0.0445	1.11040
390.0	92.03	3.060	11720.0	14170.0	203.1	59.45	87.80	303.2	16.2	0.0445	1.10676
395.0	89.29	2.969	12080.0	14600.0	204.2	59.85	86.53	307.7	16.3	0.0447	1.10346
400.0	86.78	2.886	12440.0	15030.0	205.3	60.27	85.53	311.9	16.3	0.0449	1.10044
405.0	84.48	2.809	12790.0	15460.0	206.3	60.71	84.73	316.1	16.4	0.0453	1.09767
410.0	82.34	2.738	13140.0	15880.0	207.4	61.17	84.11	320.1	16.4	0.0456	1.09512
415.0	80.36	2.672	13490.0	16300.0	208.4	61.65	83.64	324.0	16.5	0.0461	1.09274
420.0	78.50	2.611	13850.0	16720.0	209.4	62.15	83.29	327.7	16.6	0.0465	1.09053
430.0	75.13	2.498	14550.0	17550.0	211.3	63.17	82.87	335.0	16.7	0.0476	1.08651
440.0	72.13	2.399	15250.0	18380.0	213.2	64.22	82.76	341.8	16.9	0.0488	1.08295
450.0	69.44	2.309	15960.0	19210.0	215.1	65.30	82.86	348.4	17.1	0.0501	1.07976
460.0	67.00	2.228	16670.0	20040.0	216.9	66.40	83.14	354.7	17.3	0.0514	1.07687
470.0	64.78	2.154	17390.0	20870.0	218.7	67.51	83.55	360.7	17.5	0.0528	1.07424
480.0	62.73	2.086	18110.0	21710.0	220.5	68.62	84.06	366.5	17.7	0.0543	1.07184
490.0	60.85	2.024	18840.0	22550.0	222.2	69.74	84.65	372.1	17.9	0.0558	1.06962
500.0	59.10	1.966	19580.0	23400.0	223.9	70.86	85.31	377.6	18.1	0.0574	1.06757
510.0	57.48	1.911	20330.0	24260.0	225.6	71.97	86.01	382.9	18.3	0.0590	1.06566
520.0	55.96	1.861	21090.0	25120.0	227.3	73.08	86.75	388.0	18.5	0.0606	1.06388
530.0	54.54	1.814	21860.0	25990.0	229.0	74.19	87.53	393.0	18.7	0.0623	1.06222
540.0	53.20	1.769	22630.0	26870.0	230.6	75.28	88.33	397.9	18.9	0.0640	1.06065
560.0	50.75	1.688	24210.0	28650.0	233.9	77.44	89.97	407.3	19.3	0.0674	1.05779
580.0	48.55	1.615	25820.0	30470.0	237.0	79.56	91.65	416.3	19.7	0.0709	1.05523
600.0	46.56	1.549	27480.0	32320.0	240.2	81.61	93.34	425.0	20.1	0.0744	1.05293
					8.00 MPa isobar						
91.63[a]	653.1	21.72	-14840.0	-14470.0	77.16	47.15	67.85	2008.0	1270.0	0.256	1.94632
150.0	590.5	19.64	-10830.0	-10420.0	111.3	43.83	69.79	1627.0	269.0	0.207	1.83552
200.0	533.0	17.72	-7314.0	-6863.0	131.8	43.35	73.34	1269.0	[illegible]	0.159	1.73795
220.0	507.7	16.89	-5844.0	-5370.0	138.9	43.98	76.15	1126.0	119.0	0.142	1.69634
240.0	480.3	15.97	-4310.0	-3809.0	145.7	45.04	80.17	980.8	96.9	0.125	1.65193
260.0	449.6	14.95	-2686.0	-2151.0	152.3	46.51	86.03	832.6	78.5	0.110	1.60305
270.0	432.3	14.38	-1828.0	-1272.0	155.6	47.42	90.03	756.6	70.3	0.103	1.57608
280.0	413.3	13.75	-928.8	-346.7	159.0	48.45	95.17	678.8	62.7	0.0956	1.54671
290.0	391.8	13.03	23.7	637.6	162.5	49.64	102.1	598.7	55.3	0.0882	1.51399
300.0	366.8	12.20	1050.0	1705.0	166.1	51.05	112.2	515.2	48.2	0.0814	1.47638
305.0	352.3	11.71	1601.0	2284.0	168.0	51.86	119.4	471.8	44.6	0.0883	1.45492
310.0	335.9	11.17	2187.0	2903.0	170.0	52.79	128.9	427.3	41.0	0.0798	1.43093
312.0	328.6	10.93	2434.0	3166.0	170.8	53.20	133.7	409.2	39.5	0.0791	1.42043
314.0	320.9	10.67	2689.0	3438.0	171.7	53.63	139.1	391.0	38.0	0.0785	1.40932
316.0	312.7	10.40	2953.0	3723.0	172.6	54.09	145.4	372.9	36.5	0.0779	1.39750
318.0	303.8	10.10	3229.0	4021.0	173.6	54.58	152.6	354.8	34.9	0.0771	1.38489
320.0	294.3	9.788	3516.0	4334.0	174.5	55.10	160.7	337.1	33.3	0.0761	1.37141
322.0	284.1	9.447	3817.0	4664.0	175.6	55.65	169.7	320.2	31.7	0.0747	1.35699
324.0	273.1	9.081	4132.0	5013.0	176.6	56.22	179.0	304.4	30.1	0.0729	1.34164
326.0	261.4	8.692	4460.0	5380.0	177.8	56.79	188.1	290.2	28.5	0.0707	1.32545
330.0	236.7	7.872	5145.0	6161.0	180.2	57.84	200.7	268.6	25.5	0.0660	1.29178
332.0	224.4	7.461	5492.0	6565.0	181.4	58.24	202.3	261.5	24.2	0.0638	1.27518
334.0	212.5	7.067	5836.0	6968.0	182.6	58.54	200.4	256.6	23.0	0.0618	1.25936
336.0	201.4	6.698	6170.0	7364.0	183.8	58.74	195.4	253.6	22.0	0.0601	1.24469
338.0	191.2	6.360	6490.0	7748.0	184.9	58.83	188.0	252.2	21.1	0.0586	1.23136

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
340.0	182.1	6.055	6794.0	8115.0	186.0	58.86	179.2	251.8	20.4	0.0574	1.21944
342.0	173.9	5.784	7081.0	8464.0	187.0	58.83	169.9	252.4	19.8	0.0562	1.20888
344.0	166.7	5.542	7352.0	8795.0	188.0	58.78	160.9	253.6	19.3	0.0552	1.19956
346.0	160.2	5.328	7607.0	9108.0	188.9	58.72	152.6	255.2	18.9	0.0543	1.19132
348.0	154.5	5.137	7848.0	9406.0	189.7	58.65	145.0	257.0	18.5	0.0534	1.18401
350.0	149.3	4.966	8078.0	9689.0	190.6	58.59	138.3	259.1	18.2	0.0526	1.17750
352.0	144.7	4.812	8297.0	9959.0	191.3	58.53	132.3	261.3	18.0	0.0519	1.17167
354.0	140.5	4.673	8507.0	10220.0	192.1	58.49	127.1	263.6	17.8	0.0512	1.16640
356.0	136.7	4.546	8708.0	10470.0	192.8	58.47	122.6	265.9	17.6	0.0506	1.16162
358.0	133.2	4.430	8903.0	10710.0	193.4	58.45	118.5	268.2	17.5	0.0500	1.15727
360.0	130.0	4.323	9092.0	10940.0	194.1	58.45	115.0	270.5	17.3	0.0495	1.15327
362.0	127.0	4.225	9276.0	11170.0	194.7	58.47	111.8	272.8	17.2	0.0490	1.14959
364.0	124.3	4.133	9455.0	11390.0	195.3	58.49	109.1	275.1	17.1	0.0486	1.14618
366.0	121.7	4.048	9630.0	11610.0	195.9	58.53	106.6	277.4	17.1	0.0482	1.14301
368.0	119.3	3.968	9801.0	11820.0	196.5	58.58	104.4	279.6	17.0	0.0479	1.14005
370.0	117.1	3.894	9969.0	12020.0	197.1	58.64	102.4	281.8	16.9	0.0476	1.13728
375.0	112.0	3.725	10380.0	12520.0	198.4	58.84	98.25	287.1	16.8	0.0470	1.13106
380.0	107.6	3.578	10770.0	13010.0	199.7	59.09	95.04	292.2	16.8	0.0466	1.12566
385.0	103.7	3.448	11160.0	13480.0	200.9	59.39	92.52	297.1	16.7	0.0463	1.12089
390.0	100.2	3.332	11530.0	13930.0	202.1	59.73	90.52	301.8	16.7	0.0463	1.11664
395.0	97.05	3.228	11900.0	14380.0	203.2	60.10	88.93	306.3	16.7	0.0463	1.11282
400.0	94.18	3.132	12270.0	14820.0	204.3	60.50	87.66	310.7	16.8	0.0464	1.10935
405.0	91.56	3.045	12630.0	15260.0	205.4	60.93	86.64	314.9	16.8	0.0466	1.10618
410.0	89.13	2.964	12990.0	15690.0	206.5	61.37	85.84	318.9	16.8	0.0469	1.10326
415.0	86.89	2.890	13350.0	16120.0	207.5	61.84	85.20	322.9	16.9	0.0472	1.10056
420.0	84.80	2.820	13710.0	16540.0	208.5	62.32	84.72	326.7	16.9	0.0476	1.09806
430.0	81.03	2.695	14420.0	17390.0	210.5	63.31	84.08	334.1	17.1	0.0486	1.09354
440.0	77.69	2.584	15130.0	18230.0	212.4	64.35	83.80	341.1	17.2	0.0497	1.08955
450.0	74.70	2.484	15840.0	19060.0	214.3	65.41	83.77	347.7	17.4	0.0508	1.08599
460.0	72.01	2.395	16560.0	19900.0	216.2	66.50	83.94	354.1	17.6	0.0521	1.08279
470.0	69.56	2.313	17280.0	20740.0	218.0	67.60	84.27	360.2	17.8	0.0535	1.07988
480.0	67.31	2.239	18010.0	21590.0	219.8	68.70	84.71	366.1	17.9	0.0549	1.07723
490.0	65.25	2.170	18750.0	22440.0	221.5	69.81	85.24	371.8	18.1	0.0564	1.07479
500.0	63.34	2.106	19490.0	23290.0	223.2	70.93	85.84	377.4	18.3	0.0579	1.07254
510.0	61.56	2.047	20250.0	24150.0	224.9	72.04	86.50	382.7	18.5	0.0595	1.07045
520.0	59.91	1.992	21010.0	25020.0	226.6	73.14	87.21	387.9	18.7	0.0611	1.06851
530.0	58.36	1.941	21780.0	25900.0	228.3	74.24	87.95	393.0	18.9	0.0627	1.06669
540.0	56.91	1.893	22550.0	26780.0	229.9	75.34	88.72	397.9	19.1	0.0644	1.06499
560.0	54.25	1.804	24140.0	28570.0	233.2	77.49	90.31	407.5	19.5	0.0678	1.06188
580.0	51.87	1.725	25760.0	30390.0	236.4	79.60	91.96	416.6	19.9	0.0712	1.05910
600.0	49.73	1.654	27410.0	32250.0	239.5	81.65	93.61	425.3	20.3	0.0747	1.05660
					9.00 MPa isobar						
91.79[a]	653.3	21.73	-14840.0	-14420.0	77.21	47.18	67.88	2010.0	1270.0	0.256	1.94663
150.0	591.1	19.66	-10840.0	-10390.0	111.2	43.88	69.72	1632.0	271.0	0.208	1.83653
200.0	534.0	17.76	-7339.0	-6832.0	131.7	43.40	73.15	1277.0	148.0	0.160	1.73966
220.0	509.1	16.93	-5876.0	-5344.0	138.7	44.04	75.85	1136.0	120.0	0.143	1.69853
240.0	482.1	16.03	-4352.0	-3791.0	145.5	45.09	79.66	993.4	98.2	0.127	1.65483
260.0	452.2	15.04	-2745.0	-2147.0	152.1	46.54	85.10	848.9	79.9	0.112	1.60712
270.0	435.5	14.48	-1900.0	-1278.0	155.4	47.43	88.71	775.5	71.8	0.104	1.58106
280.0	417.4	13.88	-1018.0	-369.8	158.7	48.43	93.20	701.0	64.3	0.0973	1.55296
290.0	397.3	13.21	-91.5	589.7	162.0	49.57	98.96	625.3	57.2	0.0903	1.52216
300.0	374.4	12.45	893.1	1616.0	165.5	50.87	106.7	548.0	50.4	0.0836	1.48768
305.0	361.5	12.02	1413.0	2162.0	167.3	51.61	111.8	508.7	47.0	0.0855	1.46858
310.0	347.5	11.56	1957.0	2735.0	169.2	52.41	117.9	469.1	43.7	0.0799	1.44790
315.0	332.0	11.04	2528.0	3343.0	171.1	53.29	125.5	429.4	40.4	0.0782	1.42526
320.0	314.6	10.46	3133.0	3994.0	173.2	54.26	135.0	390.2	37.1	0.0771	1.40022
322.0	307.1	10.21	3387.0	4268.0	174.0	54.68	139.4	374.9	35.7	0.0765	1.38944
324.0	299.1	9.948	3647.0	4551.0	174.9	55.11	144.0	360.1	34.4	0.0758	1.37818
326.0	290.8	9.672	3914.0	4844.0	175.8	55.55	148.9	345.9	33.1	0.0749	1.36645
328.0	282.1	9.383	4188.0	5147.0	176.7	56.00	153.8	332.5	31.8	0.0737	1.35427
330.0	273.1	9.083	4469.0	5460.0	177.7	56.46	158.6	320.1	30.5	0.0723	1.34169

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
335.0	249.5	8.298	5194.0	6279.0	180.1	57.53	168.1	294.6	27.4	0.0681	1.30916
340.0	225.9	7.511	5930.0	7129.0	182.7	58.37	170.6	278.3	24.8	0.0639	1.27715
342.0	216.8	7.211	6221.0	7469.0	183.7	58.61	169.2	274.2	23.9	0.0625	1.26511
344.0	208.3	6.926	6505.0	7804.0	184.6	58.80	166.5	271.3	23.1	0.0612	1.25372
346.0	200.2	6.657	6782.0	8134.0	185.6	58.94	162.9	269.3	22.4	0.0600	1.24306
348.0	192.7	6.407	7051.0	8455.0	186.5	59.04	158.5	268.3	21.8	0.0590	1.23319
350.0	185.7	6.175	7310.0	8768.0	187.4	59.10	153.6	267.9	21.3	0.0581	1.22409
352.0	179.3	5.961	7560.0	9070.0	188.3	59.15	148.5	268.1	20.8	0.0572	1.21576
354.0	173.4	5.765	7800.0	9362.0	189.1	59.17	143.5	268.7	20.4	0.0565	1.20814
356.0	167.9	5.585	8032.0	9644.0	189.9	59.19	138.6	269.7	20.0	0.0558	1.20118
358.0	163.0	5.419	8255.0	9916.0	190.7	59.20	134.0	270.9	19.7	0.0552	1.19481
360.0	158.4	5.267	8471.0	10180.0	191.4	59.21	129.7	272.4	19.4	0.0546	1.18897
362.0	154.2	5.127	8680.0	10440.0	192.1	59.23	125.7	274.0	19.2	0.0541	1.18361
364.0	150.3	4.997	8882.0	10680.0	192.8	59.25	122.1	275.7	19.0	0.0536	1.17868
366.0	146.7	4.877	9078.0	10920.0	193.4	59.28	118.8	277.5	18.8	0.0531	1.17412
368.0	143.3	4.766	9270.0	11160.0	194.1	59.32	115.8	279.4	18.7	0.0527	1.16989
370.0	140.2	4.661	9456.0	11390.0	194.7	59.36	113.1	281.3	18.5	0.0523	1.16596
372.0	137.2	4.564	9639.0	11610.0	195.3	59.42	110.6	283.2	18.4	0.0520	1.16230
374.0	134.5	4.473	9818.0	11830.0	195.9	59.48	108.4	285.1	18.3	0.0516	1.15887
376.0	131.9	4.387	9993.0	12040.0	196.5	59.55	106.3	287.1	18.2	0.0513	1.15566
378.0	129.5	4.307	10170.0	12260.0	197.0	59.63	104.5	289.0	18.1	0.0511	1.15264
380.0	127.2	4.231	10330.0	12460.0	197.6	59.72	102.8	290.9	18.1	0.0508	1.14979
385.0	122.0	4.057	10750.0	12970.0	198.9	59.97	99.20	295.7	17.9	0.0503	1.14333
390.0	117.4	3.904	11150.0	13460.0	200.1	60.26	96.33	300.3	17.8	0.0500	1.13766
395.0	113.3	3.768	11540.0	13930.0	201.4	60.59	94.03	304.8	17.8	0.0498	1.13261
400.0	109.6	3.645	11930.0	14400.0	202.5	60.95	92.17	309.2	17.7	0.0497	1.12809
405.0	106.3	3.534	12310.0	14850.0	203.7	61.34	90.67	313.5	17.7	0.0497	1.12399
410.0	103.2	3.432	12680.0	15300.0	204.8	61.76	89.46	317.6	17.7	0.0497	1.12026
415.0	100.4	3.338	13050.0	15750.0	205.8	62.19	88.48	321.6	17.7	0.0499	1.11684
420.0	97.78	3.252	13420.0	16190.0	206.9	62.65	87.70	325.6	17.7	0.0501	1.11369
425.0	95.37	3.172	13790.0	16630.0	207.9	63.12	87.08	329.4	17.8	0.0504	1.11076
430.0	93.12	3.097	14150.0	17060.0	209.0	63.60	86.59	333.1	17.8	0.0508	1.10804
440.0	89.04	2.961	14880.0	17920.0	210.9	64.60	85.94	340.2	17.9	0.0516	1.10312
450.0	85.42	2.841	15610.0	18780.0	212.9	65.63	85.63	347.0	18.1	0.0526	1.09877
460.0	82.18	2.733	16340.0	19640.0	214.7	66.70	85.58	353.6	18.2	0.0537	1.09489
470.0	79.25	2.635	17080.0	20490.0	216.6	67.77	85.72	359.8	18.3	0.0550	1.09139
480.0	76.58	2.547	17820.0	21350.0	218.4	68.86	86.01	365.9	18.5	0.0563	1.08821
490.0	74.14	2.465	18560.0	22210.0	220.2	69.96	86.41	371.7	18.7	0.0576	1.08530
500.0	71.88	2.391	19310.0	23080.0	221.9	71.06	86.91	377.3	18.8	0.0591	1.08263
510.0	69.80	2.321	20070.0	23950.0	223.6	72.16	87.48	382.8	19.0	0.0606	1.08016
520.0	67.87	2.257	20840.0	24830.0	225.4	73.26	88.11	388.1	19.2	0.0621	1.07787
530.0	66.06	2.197	21620.0	25710.0	227.0	74.35	88.78	393.3	19.4	0.0637	1.07573
540.0	64.37	2.141	22400.0	26600.0	228.7	75.44	89.50	398.3	19.6	0.0653	1.07374
560.0	61.28	2.038	23990.0	28410.0	232.0	77.58	90.99	408.0	19.9	0.0686	1.07011
580.0	58.54	1.947	25620.0	30250.0	235.2	79.68	92.56	417.3	20.3	0.0720	1.06688
600.0	56.07	1.865	27290.0	32110.0	238.4	81.73	94.15	426.2	20.7	0.0754	1.06399
				10.00 MPa isobar							
91.95[a]	653.5	21.73	-14830.0	-14370.0	77.25	47.20	67.90	2013.0	1270.0	0.256	1.94693
150.0	591.7	19.68	-10860.0	-10350.0	111.1	43.93	69.65	1637.0	273.0	0.209	1.83753
200.0	535.0	17.79	-7363.0	-6801.0	131.5	43.46	72.96	1284.0	149.0	0.161	1.74134
220.0	510.4	16.97	-5907.0	-5318.0	138.6	44.09	75.56	1145.0	122.0	0.144	1.70067
240.0	483.9	16.09	-4394.0	-3772.0	145.3	45.13	79.19	1006.0	99.5	0.128	1.65764
260.0	454.6	15.12	-2802.0	-2140.0	151.8	46.57	84.26	864.6	81.3	0.113	1.61100
280.0	421.2	14.01	-1101.0	-387.1	158.3	48.42	91.54	721.8	65.8	0.0990	1.55874
290.0	402.1	13.37	-195.8	552.0	161.6	49.52	96.47	649.6	58.9	0.0922	1.52952
300.0	380.9	12.67	757.3	1547.0	165.0	50.75	102.7	577.1	52.3	0.0857	1.49740
310.0	356.7	11.86	1771.0	2614.0	168.5	52.15	111.0	504.4	46.0	0.0809	1.46145
315.0	343.2	11.41	2305.0	3181.0	170.3	52.93	116.2	468.3	43.0	0.0788	1.44165
320.0	328.6	10.93	2862.0	3777.0	172.2	53.77	122.2	432.9	39.9	0.0776	1.42037
325.0	312.7	10.40	3443.0	4404.0	174.1	54.66	129.1	398.8	37.0	0.0766	1.39745

Appendix G: Thermophysical Properties of Propane

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
330.0	295.4	9.822	4050.0	5068.0	176.2	55.60	136.6	367.1	34.1	0.0752	1.37283
335.0	276.8	9.204	4683.0	5770.0	178.3	56.56	143.8	339.3	31.3	0.0728	1.34672
340.0	257.3	8.557	5335.0	6504.0	180.5	57.47	149.4	316.8	28.8	0.0697	1.31981
345.0	237.8	7.908	5994.0	7258.0	182.7	58.25	151.8	300.6	26.5	0.0663	1.29323
350.0	219.3	7.292	6643.0	8015.0	184.8	58.84	150.1	290.3	24.6	0.0633	1.26833
352.0	212.3	7.061	6897.0	8313.0	185.7	59.02	148.3	287.6	24.0	0.0622	1.25907
354.0	205.7	6.840	7146.0	8607.0	186.5	59.17	146.1	285.6	23.4	0.0613	1.25029
356.0	199.4	6.631	7389.0	8897.0	187.3	59.30	143.4	284.3	22.9	0.0605	1.24200
358.0	193.5	6.434	7627.0	9181.0	188.1	59.41	140.5	283.5	22.4	0.0597	1.23421
360.0	187.9	6.248	7858.0	9459.0	188.9	59.50	137.4	283.2	22.0	0.0590	1.22692
362.0	182.6	6.074	8084.0	9731.0	189.7	59.58	134.2	283.2	21.6	0.0584	1.22011
364.0	177.7	5.910	8304.0	9996.0	190.4	59.65	131.1	283.6	21.3	0.0578	1.21376
366.0	173.1	5.758	8518.0	10250.0	191.1	59.72	128.0	284.2	21.0	0.0573	1.20784
368.0	168.8	5.615	8727.0	10510.0	191.8	59.79	125.0	285.1	20.7	0.0569	1.20231
370.0	164.8	5.481	8931.0	10750.0	192.5	59.85	122.1	286.2	20.5	0.0564	1.19716
372.0	161.0	5.356	9129.0	11000.0	193.1	59.92	119.4	287.4	20.2	0.0560	1.19235
374.0	157.5	5.238	9324.0	11230.0	193.7	59.99	116.9	288.7	20.0	0.0557	1.18784
376.0	154.2	5.128	9514.0	11460.0	194.4	60.06	114.5	290.1	19.9	0.0553	1.18362
378.0	151.1	5.024	9700.0	11690.0	195.0	60.14	112.4	291.6	19.7	0.0550	1.17966
380.0	148.1	4.925	9884.0	11910.0	195.5	60.22	110.3	293.1	19.6	0.0547	1.17593
385.0	141.4	4.703	10330.0	12450.0	197.0	60.45	105.9	297.1	19.3	0.0541	1.16752
390.0	135.6	4.509	10760.0	12970.0	198.3	60.72	102.3	301.3	19.1	0.0536	1.16018
395.0	130.4	4.336	11170.0	13480.0	199.6	61.03	99.28	305.5	18.9	0.0533	1.15372
400.0	125.8	4.182	11580.0	13970.0	200.8	61.36	96.85	309.6	18.8	0.0530	1.14797
405.0	121.6	4.044	11970.0	14450.0	202.0	61.72	94.86	313.7	18.7	0.0529	1.14282
410.0	117.8	3.918	12360.0	14920.0	203.2	62.11	93.22	317.8	18.7	0.0528	1.13815
415.0	114.4	3.803	12750.0	15380.0	204.3	62.52	91.88	321.7	18.6	0.0528	1.13390
420.0	111.2	3.698	13130.0	15840.0	205.4	62.96	90.79	325.6	18.6	0.0529	1.13001
425.0	108.3	3.600	13510.0	16290.0	206.4	63.41	89.89	329.4	18.6	0.0531	1.12643
430.0	105.6	3.510	13890.0	16740.0	207.5	63.87	89.17	333.1	18.6	0.0533	1.12311
435.0	103.0	3.426	14260.0	17180.0	208.5	64.35	88.60	336.8	18.6	0.0536	1.12003
440.0	100.7	3.347	14630.0	17620.0	209.5	64.84	88.14	340.3	18.7	0.0539	1.11716
450.0	96.35	3.204	15380.0	18500.0	211.5	65.85	87.53	347.2	18.8	0.0547	1.11194
460.0	92.52	3.077	16120.0	19370.0	213.4	66.88	87.24	353.8	18.9	0.0556	1.10731
470.0	89.08	2.962	16870.0	20250.0	215.3	67.94	87.19	360.1	19.0	0.0567	1.10316
480.0	85.96	2.859	17620.0	21120.0	217.1	69.02	87.32	366.2	19.1	0.0578	1.09941
490.0	83.12	2.764	18370.0	21990.0	218.9	70.10	87.60	372.1	19.3	0.0591	1.09600
500.0	80.51	2.677	19140.0	22870.0	220.7	71.19	87.99	377.9	19.4	0.0604	1.09288
510.0	78.10	2.597	19900.0	23750.0	222.5	72.28	88.46	383.4	19.6	0.0618	1.09001
520.0	75.87	2.523	20680.0	24640.0	224.2	73.37	89.01	388.8	19.7	0.0633	1.08735
530.0	73.80	2.454	21460.0	25530.0	225.9	74.46	89.62	394.0	19.9	0.0648	1.08488
540.0	71.86	2.390	22250.0	26430.0	227.6	75.54	90.27	399.1	20.1	0.0663	1.08258
550.0	70.04	2.329	23040.0	27340.0	229.2	76.61	90.95	404.1	20.2	0.0679	1.08043
560.0	68.34	2.273	23850.0	28250.0	230.9	77.67	91.67	408.9	20.4	0.0695	1.07841
580.0	65.21	2.169	25490.0	30100.0	234.1	79.76	93.15	418.3	20.8	0.0728	1.07472
600.0	62.41	2.076	27160.0	31980.0	237.3	81.80	94.68	427.3	21.1	0.0762	1.07142
					12.00 MPa isobar						
92.27[a]	653.9	21.74	-14820.0	-14270.0	77.33	47.25	67.95	2018.0	1270.0	0.257	1.94753
150.0	592.9	19.72	-10890.0	-10280.0	110.9	44.03	69.51	1647.0	277.0	0.210	1.83950
200.0	537.0	17.86	-7411.0	-6739.0	131.3	43.57	72.62	1300.0	152.0	0.162	1.74463
220.0	513.0	17.06	-5967.0	-5264.0	138.3	44.19	75.03	1164.0	124.0	0.145	1.70481
240.0	487.3	16.20	-4472.0	-3732.0	145.0	45.22	78.35	1029.0	102.0	0.130	1.66302
260.0	459.3	15.27	-2908.0	-2122.0	151.4	46.64	82.82	894.1	83.9	0.115	1.61829
280.0	428.0	14.23	-1251.0	-408.1	157.8	48.42	88.88	759.8	68.7	0.102	1.56920
290.0	410.6	13.65	-379.5	499.4	160.9	49.46	92.71	693.2	62.0	0.0957	1.54242
300.0	391.7	13.03	527.3	1448.0	164.2	50.59	97.24	627.4	55.7	0.0895	1.51373
310.0	371.1	12.34	1475.0	2447.0	167.4	51.85	102.6	562.9	49.9	0.0840	1.48274
315.0	360.0	11.97	1965.0	2967.0	169.1	52.51	105.6	531.5	47.1	0.0816	1.46626
320.0	348.3	11.58	2468.0	3504.0	170.8	53.21	108.9	500.8	44.4	0.0797	1.44906
325.0	336.0	11.18	2983.0	4057.0	172.5	53.94	112.5	471.1	41.8	0.0783	1.43111
330.0	323.1	10.75	3512.0	4629.0	174.3	54.70	116.2	442.8	39.3	0.0774	1.41240

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
335.0	309.6	10.30	4054.0	5219.0	176.0	55.47	120.0	416.4	36.9	0.0766	1.39297
340.0	295.5	9.827	4607.0	5828.0	177.8	56.25	123.6	392.3	34.7	0.0755	1.37296
350.0	266.3	8.856	5739.0	7094.0	181.5	57.74	129.1	353.2	30.6	0.0719	1.33219
355.0	251.8	8.372	6310.0	7743.0	183.3	58.41	130.3	338.9	28.9	0.0697	1.31217
360.0	237.6	7.903	6876.0	8395.0	185.2	59.00	130.1	328.0	27.3	0.0675	1.29296
365.0	224.3	7.458	7433.0	9042.0	186.9	59.51	128.6	320.3	26.0	0.0655	1.27496
370.0	211.9	7.046	7976.0	9679.0	188.7	59.95	126.0	315.3	24.9	0.0638	1.25843
375.0	200.6	6.670	8502.0	10300.0	190.4	60.33	122.6	312.6	24.0	0.0625	1.24348
380.0	190.4	6.331	9009.0	10900.0	192.0	60.67	118.8	311.6	23.2	0.0614	1.23013
385.0	181.2	6.027	9498.0	11490.0	193.5	60.99	115.0	312.0	22.6	0.0606	1.21826
390.0	173.1	5.756	9970.0	12050.0	194.9	61.30	111.4	313.3	22.1	0.0599	1.20774
395.0	165.8	5.514	10430.0	12600.0	196.3	61.62	108.0	315.3	21.7	0.0594	1.19840
400.0	159.3	5.297	10870.0	13140.0	197.7	61.96	105.1	317.8	21.4	0.0590	1.19007
405.0	153.4	5.102	11300.0	13650.0	199.0	62.31	102.5	320.7	21.1	0.0587	1.18261
410.0	148.1	4.926	11730.0	14160.0	200.2	62.68	100.3	323.8	20.9	0.0585	1.17589
415.0	143.3	4.765	12140.0	14660.0	201.4	63.07	98.40	327.0	20.7	0.0584	1.16982
420.0	138.9	4.619	12550.0	15150.0	202.6	63.48	96.79	330.3	20.6	0.0583	1.16429
425.0	134.8	4.484	12950.0	15630.0	203.7	63.91	95.42	333.6	20.5	0.0583	1.15923
430.0	131.1	4.360	13350.0	16100.0	204.8	64.34	94.27	337.0	20.4	0.0584	1.15458
435.0	127.7	4.245	13740.0	16570.0	205.9	64.80	93.31	340.3	20.4	0.0585	1.15029
440.0	124.5	4.139	14130.0	17030.0	207.0	65.26	92.51	343.6	20.3	0.0586	1.14632
445.0	121.5	4.039	14520.0	17500.0	208.0	65.74	91.85	347.0	20.3	0.0589	1.14262
450.0	118.7	3.946	14910.0	17950.0	209.0	66.23	91.32	350.2	20.3	0.0591	1.13916
460.0	113.6	3.777	15680.0	18860.0	211.0	67.23	90.55	356.6	20.3	0.0597	1.13289
470.0	109.0	3.626	16460.0	19770.0	213.0	68.26	90.11	362.9	20.3	0.0605	1.12733
480.0	105.0	3.490	17230.0	20670.0	214.9	69.30	89.93	368.9	20.4	0.0614	1.12235
490.0	101.3	3.368	18000.0	21560.0	216.7	70.36	89.94	374.8	20.5	0.0624	1.11786
500.0	97.90	3.256	18780.0	22460.0	218.5	71.43	90.10	380.5	20.6	0.0635	1.11377
510.0	94.81	3.153	19560.0	23370.0	220.3	72.50	90.39	386.1	20.7	0.0647	1.11004
520.0	91.96	3.058	20350.0	24270.0	222.1	73.58	90.78	391.5	20.8	0.0660	1.10660
530.0	89.33	2.971	21140.0	25180.0	223.8	74.65	91.25	396.8	20.9	0.0673	1.10342
540.0	86.87	2.889	21940.0	26100.0	225.5	75.72	91.78	401.9	21.1	0.0687	1.10048
550.0	84.59	2.813	22750.0	27020.0	227.2	76.78	92.36	407.0	21.2	0.0701	1.09773
560.0	82.44	2.742	23570.0	27950.0	228.9	77.84	92.98	411.9	21.4	0.0716	1.09517
580.0	78.54	2.612	25220.0	29820.0	232.2	79.91	94.31	421.4	21.7	0.0747	1.09050
600.0	75.06	2.496	26910.0	31720.0	235.4	81.94	95.71	430.5	22.0	0.0778	1.08636
					14.00 MPa isobar						
92.58[a]	654.2	21.76	-14820.0	-14170.0	77.42	47.30	68.00	2024.0	1280.0	0.257	1.94813
200.0	539.0	17.92	-7456.0	-6675.0	131.0	43.67	72.30	1315.0	155.0	0.164	1.74781
220.0	515.4	17.14	-6025.0	-5208.0	138.0	44.29	74.56	1183.0	127.0	0.147	1.70879
240.0	490.5	16.31	-4546.0	-3688.0	144.6	45.31	77.60	1051.0	104.0	0.132	1.66811
260.0	463.6	15.42	-3006.0	-2097.0	151.0	46.70	81.62	921.6	86.4	0.118	1.62502
280.0	434.0	14.43	-1385.0	-415.1	157.2	48.44	86.83	794.0	71.4	0.105	1.57849
300.0	400.7	13.32	335.1	1386.0	163.4	50.51	93.52	670.6	58.8	0.0930	1.52726
310.0	382.3	12.71	1239.0	2340.0	166.6	51.67	97.49	611.4	53.2	0.0875	1.49946
320.0	362.6	12.06	2176.0	3337.0	169.7	52.92	101.9	555.0	48.0	0.0827	1.47000
330.0	341.4	11.35	3146.0	4379.0	172.9	54.24	106.6	502.2	43.3	0.0794	1.43886
340.0	318.8	10.60	4148.0	5469.0	176.2	55.61	111.3	454.8	39.0	0.0778	1.40621
350.0	295.3	9.819	5177.0	6603.0	179.5	56.99	115.4	414.5	35.1	0.0763	1.37261
360.0	271.4	9.024	6221.0	7773.0	182.8	58.30	118.2	382.8	31.9	0.0738	1.33914
370.0	248.2	8.253	7263.0	8959.0	186.0	59.48	118.7	360.5	29.2	0.0706	1.30724
375.0	237.2	7.888	7777.0	9552.0	187.6	60.01	118.1	352.6	28.0	0.0691	1.29233
380.0	226.8	7.542	8283.0	10140.0	189.2	60.49	116.9	346.6	27.0	0.0677	1.27829
385.0	217.0	7.217	8780.0	10720.0	190.7	60.95	115.3	342.4	26.2	0.0665	1.26522
390.0	207.9	6.914	9267.0	11290.0	192.2	61.38	113.4	339.7	25.4	0.0656	1.25313
395.0	199.5	6.634	9744.0	11850.0	193.6	61.79	111.3	338.2	24.8	0.0648	1.24203
400.0	191.7	6.376	10210.0	12410.0	195.0	62.19	109.1	337.7	24.3	0.0642	1.23187
405.0	184.6	6.139	10670.0	12950.0	196.3	62.59	107.0	338.0	23.8	0.0637	1.22260
410.0	178.1	5.922	11110.0	13480.0	197.6	63.00	105.0	339.0	23.4	0.0634	1.21414
415.0	172.1	5.723	11550.0	14000.0	198.9	63.41	103.1	340.4	23.1	0.0632	1.20640
420.0	166.6	5.539	11980.0	14510.0	200.1	63.82	101.4	342.3	22.9	0.0630	1.19932

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
425.0	161.5	5.370	12400.0	15010.0	201.3	64.25	99.90	344.4	22.6	0.0629	1.19283
430.0	156.8	5.214	12820.0	15510.0	202.5	64.69	98.56	346.8	22.4	0.0629	1.18685
435.0	152.4	5.069	13230.0	16000.0	203.6	65.13	97.39	349.3	22.3	0.0629	1.18133
440.0	148.4	4.935	13640.0	16480.0	204.7	65.59	96.38	352.0	22.2	0.0630	1.17622
445.0	144.6	4.810	14050.0	16960.0	205.8	66.06	95.51	354.7	22.1	0.0632	1.17147
450.0	141.1	4.693	14450.0	17440.0	206.9	66.54	94.77	357.5	22.0	0.0633	1.16705
460.0	134.7	4.480	15250.0	18380.0	208.9	67.52	93.63	363.1	21.9	0.0638	1.15905
470.0	129.1	4.292	16050.0	19310.0	210.9	68.52	92.87	368.8	21.8	0.0644	1.15199
480.0	124.0	4.123	16840.0	20240.0	212.9	69.55	92.40	374.5	21.8	0.0651	1.14571
490.0	119.4	3.972	17630.0	21160.0	214.8	70.59	92.17	380.0	21.8	0.0659	1.14006
500.0	115.3	3.834	18430.0	22080.0	216.6	71.64	92.12	385.5	21.8	0.0669	1.13496
510.0	111.5	3.708	19220.0	23000.0	218.5	72.70	92.24	390.9	21.9	0.0679	1.13031
520.0	108.0	3.592	20030.0	23920.0	220.3	73.76	92.47	396.2	21.9	0.0690	1.12605
530.0	104.8	3.485	20830.0	24850.0	222.0	74.82	92.80	401.4	22.0	0.0701	1.12213
540.0	101.8	3.386	21650.0	25780.0	223.8	75.88	93.22	406.4	22.1	0.0714	1.11851
550.0	99.05	3.294	22470.0	26720.0	225.5	76.94	93.69	411.4	22.2	0.0727	1.11515
560.0	96.47	3.208	23290.0	27650.0	227.2	77.98	94.23	416.3	22.4	0.0740	1.11202
570.0	94.04	3.128	24120.0	28600.0	228.8	79.02	94.80	421.0	22.5	0.0754	1.10909
580.0	91.77	3.052	24960.0	29550.0	230.5	80.05	95.40	425.7	22.6	0.0768	1.10634
600.0	87.60	2.913	26670.0	31470.0	233.8	82.07	96.69	434.8	22.9	0.0798	1.10132
					16.00 MPa isobar						
92.90[a]	654.6	21.77	-14810.0	-14070.0	77.50	47.34	68.05	2030.0	1280.0	0.258	1.94873
200.0	540.9	17.99	-7500.0	-6611.0	130.8	43.77	72.00	1330.0	157.0	0.166	1.75091
220.0	517.8	17.22	-6080.0	-5151.0	137.8	44.39	74.12	1200.0	129.0	0.149	1.71263
240.0	493.5	16.41	-4616.0	-3641.0	144.3	45.40	76.95	1073.0	107.0	0.134	1.67295
260.0	467.5	15.55	-3096.0	-2067.0	150.6	46.77	80.59	947.4	88.8	0.120	1.63129
280.0	439.4	14.61	-1506.0	-411.3	156.8	48.46	85.18	825.5	73.9	0.108	1.58688
300.0	408.4	13.58	168.6	1347.0	162.8	50.47	90.80	708.8	61.5	0.0961	1.53892
320.0	373.8	12.43	1940.0	3227.0	168.9	52.75	97.36	600.9	51.1	0.0860	1.48674
330.0	355.2	11.81	2863.0	4218.0	171.9	53.98	100.8	551.8	46.6	0.0821	1.45904
340.0	335.6	11.16	3810.0	5244.0	175.0	55.25	104.3	507.1	42.4	0.0797	1.43044
360.0	294.9	9.807	5758.0	7390.0	181.1	57.80	109.9	434.6	35.6	0.0774	1.37206
370.0	274.6	9.131	6745.0	8497.0	184.2	59.02	111.4	408.2	32.8	0.0755	1.34355
380.0	255.0	8.480	7727.0	9614.0	187.1	60.15	111.7	388.5	30.5	0.0732	1.31652
390.0	236.7	7.873	8695.0	10730.0	190.0	61.19	110.7	375.1	28.7	0.0709	1.29166
395.0	228.2	7.590	9171.0	11280.0	191.4	61.68	109.9	370.4	27.9	0.0700	1.28019
400.0	220.2	7.322	9640.0	11830.0	192.8	62.15	108.8	366.9	27.2	0.0692	1.26941
405.0	212.6	7.070	10100.0	12370.0	194.2	62.62	107.6	364.4	26.6	0.0685	1.25932
410.0	205.5	6.833	10560.0	12900.0	195.5	63.07	106.3	362.8	26.1	0.0680	1.24990
415.0	198.8	6.612	11010.0	13430.0	196.8	63.52	105.0	362.0	25.6	0.0675	1.24113
420.0	192.6	6.405	11450.0	13950.0	198.0	63.97	103.7	361.9	25.2	0.0672	1.23298
425.0	186.8	6.212	11890.0	14470.0	199.2	64.43	102.4	362.2	24.9	0.0670	1.22541
430.0	181.4	6.032	12320.0	14980.0	200.4	64.88	101.2	363.0	24.6	0.0669	1.21838
435.0	176.3	5.864	12750.0	15480.0	201.6	65.34	100.2	364.2	24.3	0.0669	1.21184
440.0	171.6	5.707	13170.0	15980.0	202.7	65.81	99.17	365.7	24.1	0.0669	1.20575
445.0	167.2	5.559	13590.0	16470.0	203.8	66.28	98.27	367.4	23.9	0.0669	1.20006
450.0	163.0	5.421	14010.0	16960.0	204.9	66.76	97.48	369.3	23.8	0.0671	1.19476
460.0	155.5	5.170	14830.0	17930.0	207.1	67.73	96.19	373.6	23.5	0.0674	1.18513
470.0	148.7	4.947	15650.0	18890.0	209.1	68.73	95.24	378.2	23.3	0.0679	1.17663
480.0	142.7	4.747	16460.0	19830.0	211.1	69.75	94.58	383.0	23.2	0.0686	1.16906
490.0	137.3	4.567	17270.0	20780.0	213.1	70.78	94.17	387.9	23.1	0.0693	1.16227
500.0	132.4	4.404	18080.0	21720.0	215.0	71.82	93.97	392.9	23.1	0.0701	1.15615
510.0	127.9	4.255	18900.0	22660.0	216.8	72.87	93.93	397.9	23.1	0.0710	1.15058
520.0	123.8	4.119	19710.0	23600.0	218.6	73.92	94.03	402.9	23.1	0.0720	1.14550
530.0	120.1	3.993	20530.0	24540.0	220.4	74.98	94.25	407.8	23.2	0.0731	1.14083
540.0	116.6	3.877	21360.0	25480.0	222.2	76.03	94.56	412.6	23.2	0.0742	1.13653
550.0	113.3	3.769	22180.0	26430.0	223.9	77.08	94.95	417.4	23.3	0.0754	1.13254
560.0	110.3	3.668	23020.0	27380.0	225.6	78.12	95.40	422.1	23.4	0.0766	1.12883
570.0	107.5	3.574	23860.0	28340.0	227.3	79.15	95.89	426.8	23.5	0.0779	1.12537
580.0	104.8	3.486	24710.0	29300.0	229.0	80.17	96.44	431.3	23.6	0.0792	1.12213
600.0	99.96	3.324	26430.0	31240.0	232.3	82.18	97.61	440.2	23.8	0.0819	1.11623

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					18.00 MPa isobar						
93.21[a]	655.0	21.78	-14800.0	-13970.0	77.58	47.38	68.10	2036.0	1280.0	0.258	1.94933
200.0	542.7	18.05	-7543.0	-6546.0	130.6	43.87	71.73	1345.0	160.0	0.168	1.75393
250.0	484.0	16.10	-3940.0	-2821.0	147.2	46.12	77.94	1032.0	99.6	0.129	1.65761
260.0	471.2	15.67	-3182.0	-2033.0	150.3	46.83	79.71	971.8	91.0	0.122	1.63717
280.0	444.3	14.78	-1617.0	-399.0	156.3	48.50	83.83	854.5	76.3	0.110	1.59457
300.0	415.1	13.80	21.1	1325.0	162.3	50.45	88.70	743.3	64.0	0.0989	1.54922
320.0	383.3	12.75	1741.0	3153.0	168.2	52.65	94.15	641.2	53.8	0.0891	1.50081
330.0	366.3	12.18	2631.0	4108.0	171.1	53.82	96.95	594.8	49.4	0.0850	1.47551
340.0	348.8	11.60	3540.0	5092.0	174.0	55.03	99.69	552.3	45.4	0.0820	1.44965
360.0	312.6	10.40	5403.0	7135.0	179.9	57.48	104.4	481.0	38.7	0.0794	1.39723
380.0	276.8	9.204	7296.0	9252.0	185.6	59.84	106.9	430.6	33.6	0.0772	1.34656
390.0	259.8	8.638	8238.0	10320.0	188.4	60.95	107.0	413.3	31.6	0.0755	1.32302
400.0	243.8	8.108	9170.0	11390.0	191.1	62.00	106.5	400.7	30.0	0.0738	1.30122
410.0	229.1	7.620	10090.0	12450.0	193.7	63.01	105.4	392.2	28.7	0.0723	1.28138
415.0	222.3	7.393	10540.0	12970.0	195.0	63.50	104.6	389.3	28.1	0.0718	1.27223
420.0	215.8	7.178	10990.0	13500.0	196.2	63.99	103.8	387.2	27.6	0.0713	1.26358
425.0	209.7	6.973	11430.0	14010.0	197.4	64.47	103.0	385.7	27.2	0.0710	1.25543
430.0	203.9	6.780	11870.0	14530.0	198.6	64.96	102.2	384.8	26.8	0.0707	1.24776
435.0	198.4	6.598	12310.0	15040.0	199.8	65.44	101.4	384.4	26.4	0.0705	1.24055
440.0	193.2	6.426	12740.0	15540.0	201.0	65.92	100.6	384.5	26.1	0.0705	1.23377
450.0	183.7	6.110	13590.0	16540.0	203.2	66.90	99.19	385.7	25.6	0.0705	1.22139
460.0	175.3	5.828	14440.0	17520.0	205.4	67.89	97.99	388.0	25.2	0.0707	1.21043
470.0	167.7	5.576	15270.0	18500.0	207.5	68.89	97.04	391.0	25.0	0.0711	1.20068
480.0	160.9	5.349	16100.0	19470.0	209.5	69.91	96.33	394.6	24.7	0.0717	1.19196
490.0	154.7	5.144	16930.0	20430.0	211.5	70.93	95.84	398.6	24.6	0.0723	1.18413
500.0	149.1	4.958	17750.0	21380.0	213.4	71.97	95.54	402.8	24.5	0.0731	1.17704
510.0	144.0	4.788	18580.0	22340.0	215.3	73.01	95.41	407.1	24.4	0.0739	1.17060
520.0	139.3	4.633	19410.0	23290.0	217.2	74.06	95.42	411.5	24.3	0.0749	1.16472
530.0	135.0	4.489	20240.0	24250.0	219.0	75.11	95.55	416.0	24.3	0.0758	1.15933
540.0	131.0	4.357	21070.0	25200.0	220.8	76.16	95.78	420.5	24.3	0.0769	1.15435
550.0	127.3	4.233	21910.0	26160.0	222.5	77.20	96.09	424.9	24.4	0.0780	1.14975
560.0	123.8	4.119	22760.0	27130.0	224.3	78.24	96.47	429.4	24.4	0.0791	1.14548
570.0	120.6	4.012	23610.0	28090.0	226.0	79.27	96.90	433.8	24.5	0.0803	1.14149
580.0	117.6	3.911	24460.0	29060.0	227.7	80.29	97.39	438.2	24.5	0.0816	1.13777
600.0	112.1	3.728	26190.0	31020.0	231.0	82.29	98.46	446.8	24.7	0.0841	1.13099
					20.00 MPa isobar						
93.52[a]	655.3	21.79	-14790.0	-13870.0	77.66	47.41	68.15	2042.0	1280.0	0.259	1.94992
200.0	544.5	18.11	-7585.0	-6480.0	130.4	43.96	71.47	1359.0	163.0	0.169	1.75686
250.0	487.1	16.20	-4011.0	-2776.0	146.9	46.19	77.31	1053.0	102.0	0.131	1.66255
260.0	474.7	15.79	-3262.0	-1995.0	149.9	46.90	78.94	994.9	93.3	0.124	1.64272
280.0	448.9	14.93	-1720.0	-379.9	155.9	48.54	82.68	881.7	78.5	0.112	1.60167
300.0	421.1	14.01	-111.8	1316.0	161.8	50.45	87.01	775.0	66.4	0.102	1.55848
320.0	391.4	13.02	1567.0	3103.0	167.5	52.59	91.72	677.4	56.3	0.0921	1.51302
340.0	359.7	11.96	3313.0	4985.0	173.2	54.89	96.41	592.3	48.1	0.0846	1.46566
400.0	263.3	8.756	8782.0	11070.0	189.7	61.84	103.8	435.5	32.6	0.0776	1.32784
410.0	249.1	8.284	9689.0	12100.0	192.2	62.91	103.5	423.9	31.1	0.0763	1.30840
420.0	235.9	7.846	10590.0	13140.0	194.7	63.94	102.9	415.6	29.9	0.0752	1.29051
430.0	223.8	7.444	11470.0	14160.0	197.1	64.96	102.0	410.1	28.9	0.0744	1.27424
440.0	212.8	7.077	12350.0	15170.0	199.5	65.97	100.9	407.0	28.1	0.0739	1.25952
450.0	202.8	6.744	13210.0	16180.0	201.7	66.97	99.93	405.7	27.5	0.0737	1.24627
460.0	193.7	6.442	14070.0	17170.0	203.9	67.98	99.00	405.8	27.0	0.0738	1.23436
470.0	185.5	6.169	14920.0	18160.0	206.0	69.00	98.21	407.0	26.6	0.0741	1.22365
480.0	178.0	5.921	15760.0	19140.0	208.1	70.02	97.58	409.1	26.3	0.0745	1.21400
490.0	171.3	5.696	16600.0	20110.0	210.1	71.05	97.11	411.8	26.0	0.0751	1.20527
500.0	165.1	5.490	17440.0	21080.0	212.1	72.09	96.80	415.0	25.8	0.0758	1.19734
510.0	159.4	5.302	18280.0	22050.0	214.0	73.14	96.63	418.4	25.7	0.0766	1.19012
520.0	154.2	5.129	19110.0	23010.0	215.8	74.18	96.59	422.1	25.6	0.0774	1.18351
530.0	149.4	4.970	19960.0	23980.0	217.7	75.23	96.67	426.0	25.5	0.0784	1.17744

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	145.0	4.822	20800.0	24950.0	219.5	76.27	96.84	429.9	25.5	0.0794	1.17184
550.0	140.9	4.685	21650.0	25920.0	221.3	77.31	97.10	434.0	25.5	0.0804	1.16665
560.0	137.0	4.557	22500.0	26890.0	223.0	78.34	97.42	438.0	25.5	0.0815	1.16184
570.0	133.4	4.437	23360.0	27870.0	224.8	79.37	97.81	442.1	25.5	0.0827	1.15735
580.0	130.1	4.325	24220.0	28850.0	226.5	80.39	98.25	446.2	25.5	0.0839	1.15316
600.0	123.9	4.121	25970.0	30820.0	229.8	82.39	99.24	454.4	25.6	0.0863	1.14554
					25.00 MPa isobar						
94.30[a]	656.2	21.82	-14770.0	-13630.0	77.86	47.50	68.26	2058.0	1290.0	0.260	1.95139
200.0	548.8	18.25	-7683.0	-6313.0	129.8	44.18	70.90	1393.0	169.0	0.173	1.76389
250.0	494.2	16.44	-4174.0	-2653.0	146.1	46.37	75.99	1103.0	107.0	0.136	1.67394
260.0	482.7	16.05	-3444.0	-1887.0	149.1	47.07	77.37	1048.0	98.5	0.129	1.65538
280.0	458.9	15.26	-1947.0	-309.0	155.0	48.67	80.47	943.0	83.8	0.118	1.61745
300.0	434.0	14.43	-397.4	1335.0	160.6	50.51	83.94	844.8	71.7	0.108	1.57836
320.0	408.0	13.57	1207.0	3050.0	166.2	52.55	87.58	755.5	61.8	0.0987	1.53814
340.0	380.9	12.67	2864.0	4837.0	171.6	54.73	91.15	677.0	53.7	0.0912	1.49716
400.0	299.5	9.961	8050.0	10560.0	187.1	61.57	98.47	517.6	38.1	0.0836	1.37841
410.0	286.9	9.542	8927.0	11550.0	189.5	62.68	98.97	501.9	36.4	0.0833	1.36067
420.0	274.9	9.142	9804.0	12540.0	191.9	63.78	99.28	489.0	35.0	0.0829	1.34383
430.0	263.4	8.761	10680.0	13530.0	194.2	64.87	99.41	478.5	33.8	0.0823	1.32797
440.0	252.6	8.401	11550.0	14530.0	196.5	65.95	99.40	470.3	32.8	0.0818	1.31311
450.0	242.5	8.063	12420.0	15520.0	198.8	67.02	99.28	464.0	31.9	0.0814	1.29927
460.0	233.0	7.748	13290.0	16510.0	200.9	68.08	99.11	459.4	31.2	0.0812	1.28643
470.0	224.1	7.454	14150.0	17500.0	203.1	69.14	98.91	456.3	30.6	0.0811	1.27455
480.0	215.9	7.180	15010.0	18490.0	205.2	70.19	98.73	454.5	30.0	0.0812	1.26357
490.0	208.3	6.926	15870.0	19480.0	207.2	71.25	98.57	453.7	29.6	0.0815	1.25344
500.0	201.2	6.691	16730.0	20460.0	209.2	72.30	98.47	453.8	29.2	0.0820	1.24410
510.0	194.6	6.472	17580.0	21450.0	211.1	73.35	98.44	454.6	28.9	0.0825	1.23546
520.0	188.5	6.268	18440.0	22430.0	213.0	74.40	98.47	455.9	28.7	0.0832	1.22747
530.0	182.8	6.079	19300.0	23420.0	214.9	75.45	98.57	457.7	28.5	0.0840	1.22007
540.0	177.5	5.902	20170.0	24400.0	216.8	76.50	98.73	459.9	28.3	0.0849	1.21320
550.0	172.5	5.737	21030.0	25390.0	218.6	77.54	98.96	462.4	28.2	0.0858	1.20680
560.0	167.9	5.583	21900.0	26380.0	220.4	78.57	99.25	465.1	28.1	0.0868	1.20084
570.0	163.5	5.438	22780.0	27380.0	222.1	79.59	99.59	468.1	28.1	0.0878	1.19527
580.0	159.4	5.302	23660.0	28370.0	223.9	80.60	99.97	471.1	28.0	0.0889	1.19005
600.0	151.9	5.053	25430.0	30380.0	227.3	82.60	100.8	477.5	28.0	0.0912	1.18054
					30.00 MPa isobar						
95.06[a]	657.1	21.85	-14750.0	-13380.0	78.05	47.57	68.36	2075.0	1300.0	0.261	1.95284
200.0	552.8	18.38	-7774.0	-6142.0	129.3	44.38	70.41	1426.0	175.0	0.177	1.77051
250.0	500.6	16.65	-4321.0	-2519.0	145.5	46.55	74.95	1148.0	112.0	0.140	1.68423
300.0	444.7	14.79	-635.7	1393.0	159.7	50.60	81.83	905.1	76.5	0.113	1.59497
350.0	384.9	12.80	3332.0	5676.0	172.9	55.82	89.37	714.2	55.1	0.0942	1.50302
360.0	372.7	12.39	4156.0	6576.0	175.4	56.93	90.71	683.9	52.0	0.0915	1.48478
380.0	348.6	11.59	5827.0	8415.0	180.4	59.19	93.07	631.4	46.8	0.0879	1.44909
400.0	325.2	10.81	7522.0	10300.0	185.2	61.46	94.94	589.5	42.6	0.0869	1.41504
420.0	303.0	10.08	9232.0	12210.0	189.9	63.71	96.31	557.2	39.4	0.0872	1.38324
440.0	282.3	9.389	10950.0	14150.0	194.4	65.93	97.25	533.3	36.9	0.0875	1.35413
450.0	272.7	9.068	11810.0	15120.0	196.6	67.03	97.59	524.1	35.9	0.0874	1.34066
460.0	263.5	8.762	12670.0	16100.0	198.7	68.12	97.87	516.6	35.0	0.0874	1.32793
470.0	254.7	8.471	13540.0	17080.0	200.8	69.21	98.10	510.5	34.2	0.0874	1.31592
480.0	246.5	8.197	14400.0	18060.0	202.9	70.29	98.30	505.7	33.6	0.0874	1.30464
490.0	238.7	7.937	15260.0	19040.0	204.9	71.36	98.49	502.0	33.0	0.0875	1.29404
500.0	231.3	7.692	16130.0	20030.0	206.9	72.43	98.68	499.4	32.5	0.0878	1.28411
510.0	224.4	7.462	17000.0	21020.0	208.9	73.50	98.88	497.6	32.1	0.0881	1.27480
520.0	217.8	7.245	17870.0	22010.0	210.8	74.56	99.10	496.6	31.7	0.0886	1.26608
530.0	211.7	7.040	18740.0	23000.0	212.7	75.62	99.35	496.3	31.4	0.0892	1.25790
540.0	205.9	6.848	19610.0	23990.0	214.5	76.67	99.63	496.5	31.1	0.0899	1.25024

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
550.0	200.4	6.666	20490.0	24990.0	216.4	77.71	99.94	497.2	30.9	0.0907	1.24305
560.0	195.3	6.495	21370.0	25990.0	218.2	78.75	100.3	498.3	30.7	0.0915	1.23630
580.0	185.8	6.180	23150.0	28010.0	221.7	80.78	101.1	501.5	30.4	0.0934	1.22396
600.0	177.4	5.899	24950.0	30030.0	225.2	82.78	101.9	505.6	30.3	0.0955	1.21299
					35.00 MPa isobar						
95.82[a]	658.0	21.88	-14730.0	-13130.0	78.24	47.63	68.47	2093.0	1310.0	0.262	1.95427
200.0	556.6	18.51	-7860.0	-5969.0	128.8	44.57	69.99	1458.0	181.0	0.181	1.77677
250.0	506.5	16.84	-4454.0	-2376.0	144.8	46.72	74.12	1190.0	117.0	0.145	1.69365
300.0	453.9	15.10	-841.1	1477.0	158.9	50.72	80.28	958.6	80.9	0.118	1.60934
400.0	345.0	11.47	7109.0	10160.0	183.8	61.45	92.52	652.6	46.6	0.0903	1.44369
420.0	324.6	10.80	8785.0	12030.0	188.3	63.70	94.13	618.5	43.2	0.0901	1.41413
440.0	305.4	10.16	10480.0	13920.0	192.7	65.95	95.44	591.9	40.5	0.0909	1.38665
460.0	287.6	9.564	12180.0	15840.0	197.0	68.17	96.52	571.7	38.4	0.0918	1.36143
480.0	271.2	9.018	13900.0	17780.0	201.1	70.37	97.44	556.9	36.8	0.0924	1.33852
500.0	256.2	8.520	15630.0	19740.0	205.1	72.54	98.26	546.6	35.5	0.0929	1.31786
520.0	242.6	8.068	17380.0	21710.0	209.0	74.69	99.05	540.0	34.5	0.0937	1.29932
540.0	230.3	7.660	19130.0	23700.0	212.7	76.81	99.86	536.3	33.8	0.0947	1.28273
560.0	219.2	7.291	20910.0	25710.0	216.4	78.90	100.7	534.9	33.2	0.0960	1.26787
580.0	209.2	6.957	22700.0	27730.0	219.9	80.94	101.6	535.3	32.8	0.0976	1.25455
600.0	200.1	6.655	24510.0	29770.0	223.4	82.93	102.6	537.0	32.5	0.0995	1.24257
					40.00 MPa isobar						
96.57[a]	658.9	21.91	-14710.0	-12890.0	78.43	47.69	68.56	2111.0	1310.0	0.264	1.95567
200.0	560.2	18.63	-7940.0	-5793.0	128.3	44.75	69.62	1488.0	187.0	0.185	1.78273
300.0	462.1	15.37	-1022.0	1581.0	158.1	50.85	79.08	1007.0	85.0	0.123	1.62207
400.0	361.1	12.01	6771.0	10100.0	182.5	61.49	90.76	709.0	50.2	0.0944	1.46728
420.0	342.2	11.38	8420.0	11940.0	187.0	63.75	92.50	673.9	46.6	0.0931	1.43950
440.0	324.2	10.78	10090.0	13800.0	191.4	66.01	94.02	645.5	43.8	0.0935	1.41344
460.0	307.3	10.22	11780.0	15690.0	195.6	68.25	95.35	623.1	41.5	0.0947	1.38924
480.0	291.6	9.697	13490.0	17610.0	199.7	70.46	96.56	605.8	39.7	0.0959	1.36696
500.0	277.0	9.212	15210.0	19560.0	203.6	72.65	97.67	592.8	38.3	0.0970	1.34656
520.0	263.6	8.767	16960.0	21520.0	207.5	74.82	98.72	583.3	37.1	0.0980	1.32799
540.0	251.3	8.358	18720.0	23510.0	211.2	76.95	99.76	576.9	36.2	0.0991	1.31111
560.0	240.1	7.983	20500.0	25510.0	214.9	79.04	100.8	572.8	35.5	0.100	1.29580
580.0	229.8	7.641	22300.0	27540.0	218.4	81.09	101.9	570.8	35.0	0.102	1.28191
600.0	220.3	7.328	24130.0	29590.0	221.9	83.08	102.9	570.3	34.6	0.103	1.26928
					50.00 MPa isobar						
98.06[a]	660.6	21.97	-14670.0	-12390.0	78.79	47.80	68.74	2148.0	1320.0	0.266	1.95842
150.0	612.2	20.36	-11300.0	-8846.0	107.8	45.42	67.82	1832.0	354.0	0.233	1.87199
200.0	566.9	18.85	-8088.0	-5435.0	127.5	45.08	69.01	1546.0	198.0	0.192	1.79384
400.0	386.4	12.85	6235.0	10130.0	180.6	61.68	88.36	807.2	56.4	0.103	1.50489
420.0	369.6	12.29	7845.0	11910.0	185.0	63.94	90.24	770.9	52.6	0.100	1.47980
440.0	353.5	11.76	9483.0	13740.0	189.2	66.20	91.98	740.6	49.5	0.0992	1.45600
460.0	338.2	11.25	11150.0	15590.0	193.3	68.45	93.59	715.6	47.0	0.0994	1.43359
480.0	323.7	10.77	12830.0	17480.0	197.3	70.68	95.10	695.1	44.9	0.101	1.41262
500.0	310.1	10.31	14550.0	19390.0	201.2	72.89	96.53	678.6	43.2	0.102	1.39309
520.0	297.4	9.889	16280.0	21340.0	205.1	75.07	97.91	665.5	41.8	0.104	1.37496
540.0	285.4	9.492	18040.0	23310.0	208.8	77.21	99.24	655.2	40.7	0.106	1.35819
560.0	274.3	9.123	19830.0	25310.0	212.4	79.31	100.5	647.5	39.8	0.107	1.34269
580.0	264.0	8.779	21640.0	27330.0	216.0	81.36	101.8	641.7	39.1	0.109	1.32838
600.0	254.4	8.459	23470.0	29380.0	219.4	83.36	103.1	637.8	38.5	0.110	1.31517

Thermophysical properties of ethane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					60.00 MPa isobar						
99.52[a]	662.2	22.02	-14630.0	-11910.0	79.14	47.90	68.90	2186.0	1330.0	0.269	1.96108
150.0	616.5	20.50	-11390.0	-8464.0	107.1	45.69	67.55	1879.0	373.0	0.239	1.87927
200.0	573.0	19.06	-8220.0	-5071.0	126.6	45.39	68.52	1600.0	209.0	0.199	1.80404
300.0	487.7	16.22	-1588.0	2112.0	155.7	51.42	76.17	1167.0	99.4	0.139	1.66264
350.0	446.0	14.83	2008.0	6053.0	167.8	56.41	81.53	1009.0	76.2	0.122	1.59641
400.0	406.0	13.50	5819.0	10260.0	179.0	61.93	86.79	891.4	61.9	0.111	1.53451
420.0	390.8	12.99	7401.0	12020.0	183.3	64.18	88.74	854.7	57.9	0.108	1.51135
440.0	376.0	12.51	9014.0	13810.0	187.5	66.44	90.60	823.3	54.5	0.106	1.48925
460.0	361.9	12.04	10660.0	15640.0	191.6	68.70	92.36	796.7	51.8	0.105	1.46828
480.0	348.5	11.59	12330.0	17510.0	195.5	70.93	94.03	774.3	49.5	0.105	1.44847
500.0	335.7	11.16	14030.0	19400.0	199.4	73.15	95.64	755.7	47.6	0.106	1.42983
520.0	323.6	10.76	15760.0	21330.0	203.2	75.33	97.19	740.2	46.0	0.108	1.41234
540.0	312.2	10.38	17510.0	23290.0	206.9	77.47	98.69	727.6	44.7	0.110	1.39598
560.0	301.5	10.03	19290.0	25280.0	210.5	79.58	100.2	717.4	43.6	0.112	1.38069
580.0	291.4	9.690	21100.0	27300.0	214.0	81.63	101.6	709.2	42.7	0.114	1.36641
600.0	281.9	9.374	22940.0	29340.0	217.5	83.63	103.0	702.9	42.0	0.116	1.35309
					70.00 MPa isobar						
100.90[a]	663.8	22.08	-14590.0	-11420.0	79.47	48.01	69.04	2224.0	1340.0	0.272	1.96364
150.0	620.6	20.64	-11470.0	-8079.0	106.5	45.94	67.34	1924.0	393.0	0.244	1.88615
200.0	578.7	19.24	-8340.0	-4702.0	125.9	45.69	68.13	1651.0	220.0	0.205	1.81348
300.0	497.9	16.56	-1808.0	2419.0	154.7	51.71	75.31	1233.0	106.0	0.146	1.67892
350.0	459.1	15.27	1727.0	6312.0	166.7	56.69	80.46	1081.0	81.8	0.129	1.61685
400.0	422.1	14.04	5480.0	10470.0	177.7	62.19	85.68	965.7	66.9	0.118	1.55907
420.0	408.0	13.57	7041.0	12200.0	182.0	64.45	87.68	928.8	62.6	0.115	1.53739
440.0	394.3	13.11	8636.0	13970.0	186.1	66.71	89.61	896.8	59.1	0.113	1.51662
460.0	381.2	12.68	10260.0	15780.0	190.1	68.96	91.45	869.2	56.1	0.112	1.49681
480.0	368.6	12.26	11920.0	17630.0	194.0	71.20	93.23	845.5	53.6	0.111	1.47799
500.0	356.5	11.86	13610.0	19510.0	197.9	73.41	94.95	825.4	51.6	0.111	1.46016
520.0	345.1	11.48	15330.0	21430.0	201.6	75.59	96.61	808.4	49.8	0.112	1.44331
540.0	334.2	11.11	17080.0	23380.0	205.3	77.74	98.22	794.1	48.4	0.113	1.42743
560.0	323.8	10.77	18860.0	25360.0	208.9	79.84	99.78	782.1	47.1	0.115	1.41247
580.0	314.0	10.44	20660.0	27370.0	212.4	81.90	101.3	772.2	46.1	0.118	1.39839
600.0	304.7	10.13	22500.0	29410.0	215.9	83.89	102.8	764.1	45.2	0.120	1.38516

[a]At melting line
[b]At liquid-vapor boundary

Thermophysical properties of coexisting gaseous and liquid propane

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
85.470[a]	0.00000	733.6	16.64	-21870.0	-21870.0	82.84	58.79	83.91	2171.0	11100.0	0.212	2.09087
85.470[a]	0.00000	0.0000	0.00000	2239.0	4203000.0	373.2	30.66	38.98	143.1	2.63	0.00259	1.00000
90.0	0.00000	728.9	16.53	-21490.0	-21490.0	87.18	59.33	84.46	2129.0	7510.0	0.211	2.08069
90.0	0.00000	0.0000	0.00000	2380.0	775400.0	360.7	31.45	39.76	146.5	2.77	0.00281	1.00000
100.0	0.00000	718.7	16.30	-20640.0	-20640.0	96.13	59.68	85.20	2044.0	3770.0	0.207	2.05884
100.0	0.00000	0.0000	0.00000	2703.0	36610.0	337.9	33.15	41.46	153.6	3.05	0.00327	1.00000
110.0	0.00000	708.5	16.07	-19790.0	-19790.0	104.3	59.55	85.71	1967.0	2250.0	0.203	2.03773
110.0	0.00000	0.0000	0.00000	3043.0	6608.0	320.2	34.74	43.05	160.3	3.31	0.00373	1.00000
120.0	0.00000	698.4	15.84	-18920.0	-18920.0	111.8	59.30	86.19	1894.0	1500.0	0.199	2.01720
120.0	0.00000	0.0001	0.00000	3398.0	4733.0	306.2	36.22	44.54	166.8	3.56	0.00420	1.00000
130.0	0.00002	688.3	15.61	-18060.0	-18060.0	118.8	59.07	86.70	1823.0	1080.0	0.194	1.99715
130.0	0.00002	0.0007	0.00002	3767.0	4909.0	294.9	37.63	45.95	173.0	3.80	0.00469	1.00000
140.0	0.00008	678.1	15.38	-17190.0	-17190.0	125.2	58.94	87.30	1754.0	827.0	0.188	1.97747
140.0	0.00008	0.0030	0.00007	4149.0	5328.0	285.9	39.01	47.33	178.9	4.05	0.00519	1.00000
150.0	0.00028	667.9	15.15	-16310.0	-16310.0	131.3	58.93	88.00	1686.0	656.0	0.182	1.95809
150.0	0.00028	0.0100	0.00023	4545.0	5797.0	278.6	40.38	48.72	184.6	4.29	0.00572	1.00001
160.0	0.00085	657.7	14.92	-15420.0	-15420.0	137.0	59.06	88.81	1619.0	536.0	0.176	1.93892
160.0	0.00085	0.0281	0.00064	4953.0	6284.0	272.6	41.79	50.16	190.1	4.54	0.00628	1.00003
170.0	0.00220	647.4	14.68	-14530.0	-14530.0	142.4	59.34	89.76	1554.0	448.0	0.169	1.91990
170.0	0.00220	0.0687	0.00156	5372.0	6783.0	267.8	43.25	51.68	195.2	4.80	0.00686	1.00008
180.0	0.00505	637.0	14.45	-13630.0	-13630.0	147.6	59.77	90.85	1488.0	381.0	0.163	1.90096
180.0	0.00505	0.1494	0.00339	5802.0	7292.0	263.8	44.80	53.32	200.1	5.06	0.00749	1.00016
190.0	0.01051	626.5	14.21	-12710.0	-12710.0	152.5	60.34	92.09	1423.0	329.0	0.156	1.88203
190.0	0.01051	0.2955	0.00670	6241.0	7809.0	260.5	46.44	55.10	204.6	5.32	0.00815	1.00033
200.0	0.02013	615.8	13.97	-11780.0	-11780.0	157.3	61.04	93.50	1359.0	287.0	0.149	1.86304
200.0	0.02013	0.5401	0.01225	6689.0	8332.0	257.8	48.18	57.05	208.7	5.59	0.00885	1.00059
210.0	0.03593	605.0	13.72	-10840.0	-10840.0	161.9	61.88	95.10	1294.0	253.0	0.143	1.84392
210.0	0.03593	0.9241	0.02096	7144.0	8859.0	255.7	50.04	59.18	212.3	5.87	0.00961	1.00101
220.0	0.06044	593.9	13.47	-9882.0	-9877.0	166.3	62.84	96.88	1230.0	224.0	0.136	1.82461
220.0	0.06044	1.496	0.03392	7606.0	9387.0	253.9	52.01	61.51	215.5	6.15	0.0104	1.00164
230.0	0.09663	582.5	13.21	-8903.0	-8895.0	170.7	63.91	98.88	1165.0	200.0	0.130	1.80503
230.0	0.09663	2.312	0.05242	8072.0	9916.0	252.5	54.08	64.05	218.0	6.44	0.0113	1.00253
240.0	0.1479	570.7	12.94	-7903.0	-7892.0	174.9	65.09	101.1	1100.0	179.0	0.124	1.78510
240.0	0.1479	3.435	0.07789	8543.0	10440.0	251.3	56.25	66.82	220.0	6.73	0.0122	1.00376
250.0	0.2179	558.6	12.67	-6882.0	-6864.0	179.1	66.37	103.6	1035.0	160.0	0.118	1.76472
250.0	0.2179	4.938	0.1120	9016.0	10960.0	250.4	58.52	69.85	221.2	7.04	0.0132	1.00540
260.0	0.3107	546.1	12.38	-5835.0	-5810.0	183.2	67.74	106.4	969.9	144.0	0.112	1.74379
260.0	0.3107	6.905	0.1566	9490.0	11470.0	249.7	60.88	73.18	221.7	7.35	0.0143	1.00755
270.0	0.4306	533.0	12.09	-4762.0	-4726.0	187.3	69.20	109.6	904.5	130.0	0.107	1.72218
270.0	0.4306	9.432	0.2139	9962.0	11970.0	249.1	63.32	76.87	221.3	7.69	0.0154	1.01032
280.0	0.5819	519.2	11.77	-3659.0	-3609.0	191.3	70.75	113.1	838.7	117.0	0.102	1.69976
280.0	0.5819	12.64	0.2866	10430.0	12460.0	248.7	65.84	81.00	220.0	8.04	0.0166	1.01383
290.0	0.7694	504.7	11.45	-2523.0	-2456.0	195.3	72.37	117.2	772.8	106.0	0.0968	1.67635
290.0	0.7694	16.67	0.3779	10890.0	12920.0	248.3	68.44	85.73	217.7	8.41	0.0180	1.01826

Thermophysical properties of coexisting gaseous and liquid propane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
300.0	0.9978	489.3	11.10	-1352.0	-1262.0	199.2	74.07	122.0	706.5	95.1	0.0919	1.65170
300.0	0.9978	21.70	0.4921	11340.0	13360.0	248.0	71.14	91.30	214.2	8.82	0.0195	1.02382
310.0	1.272	472.6	10.72	-139.6	-20.9	203.2	75.86	127.8	639.8	85.3	0.0872	1.62549
310.0	1.272	27.99	0.6348	11760.0	13760.0	247.7	73.93	98.12	209.5	9.26	0.0211	1.03080
320.0	1.598	454.5	10.31	1121.0	1276.0	207.2	77.74	135.0	572.4	76.2	0.0826	1.59728
320.0	1.598	35.89	0.8139	12160.0	14120.0	247.4	76.83	106.9	203.4	9.77	0.0231	1.03962
330.0	1.982	434.4	9.851	2440.0	2641.0	211.3	79.74	144.6	503.6	67.5	0.0780	1.56633
330.0	1.982	45.93	1.042	12510.0	14410.0	247.0	79.88	119.1	195.9	10.4	0.0255	1.05090
340.0	2.431	411.3	9.328	3836.0	4096.0	215.5	81.90	158.9	432.1	59.1	0.0738	1.53139
340.0	2.431	59.01	1.338	12790.0	14610.0	246.4	83.13	138.1	186.6	11.1	0.0289	1.06577
350.0	2.954	383.4	8.695	5347.0	5686.0	220.0	84.36	185.0	355.0	50.7	0.0711	1.48988
350.0	2.954	76.99	1.746	12950.0	14640.0	245.6	86.69	173.8	175.4	12.1	0.0348	1.08647
360.0	3.564	345.6	7.837	7073.0	7528.0	225.0	87.45	260.1	267.2	41.5	0.0733	1.43490
360.0	3.564	105.0	2.382	12850.0	14340.0	243.9	90.80	276.1	161.3	13.7	0.0482	1.11940
369.85[b]	4.248	220.5	5.000	10600.0	11450.0	235.4						1.26352

[a]Triple point
[b]Critical point

Thermophysical properties of propane on the melting line

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
85.47[a]	0.00000	733.6	16.64	-21870.0	-21870.0	82.84	58.79	83.91	2171.0	11100.0	0.212	2.09087
85.6	1.400	733.5	16.63	-21860.0	-21780.0	82.97	58.81	83.93	2169.0	11000.0	0.212	2.09049
85.8	3.557	733.9	16.64	-21860.0	-21640.0	82.98	59.01	83.96	2171.0	11100.0	0.212	2.09110
86.0	5.716	734.3	16.65	-21860.0	-21510.0	82.99	59.19	84.00	2172.0	11100.0	0.213	2.09170
86.2	7.876	734.8	16.66	-21860.0	-21380.0	83.01	59.37	84.04	2174.0	11200.0	0.213	2.09230
86.4	10.04	735.2	16.67	-21850.0	-21250.0	83.02	59.53	84.07	2176.0	11300.0	0.213	2.09290
86.6	12.20	735.7	16.68	-21850.0	-21120.0	83.04	59.69	84.11	2179.0	11300.0	0.213	2.09350
86.8	14.36	736.1	16.69	-21850.0	-20990.0	83.05	59.84	84.14	2182.0	11400.0	0.214	2.09410
87.0	16.53	736.5	16.70	-21850.0	-20860.0	83.07	59.98	84.18	2185.0	11500.0	0.214	2.09469
87.2	18.70	737.0	16.71	-21850.0	-20730.0	83.09	60.11	84.21	2188.0	11500.0	0.214	2.09528
87.4	20.87	737.4	16.72	-21840.0	-20600.0	83.10	60.24	84.25	2192.0	11600.0	0.215	2.09586
87.6	23.04	737.8	16.73	-21840.0	-20470.0	83.12	60.36	84.28	2196.0	11700.0	0.215	2.09644
87.8	25.21	738.3	16.74	-21840.0	-20330.0	83.14	60.47	84.32	2200.0	11700.0	0.215	2.09702
88.0	27.38	738.7	16.75	-21840.0	-20200.0	83.16	60.58	84.35	2204.0	11800.0	0.215	2.09760
88.2	29.55	739.1	16.76	-21830.0	-20070.0	83.18	60.68	84.39	2209.0	11900.0	0.216	2.09817
88.4	31.73	739.6	16.77	-21830.0	-19940.0	83.20	60.77	84.42	2213.0	11900.0	0.216	2.09874
88.6	33.91	740.0	16.78	-21830.0	-19810.0	83.22	60.86	84.45	2218.0	12000.0	0.216	2.09930
88.8	36.09	740.4	16.79	-21820.0	-19680.0	83.24	60.95	84.49	2223.0	12100.0	0.217	2.09986
89.0	38.27	740.8	16.80	-21820.0	-19540.0	83.27	61.03	84.52	2229.0	12100.0	0.217	2.10042
89.2	40.45	741.2	16.81	-21820.0	-19410.0	83.29	61.11	84.55	2234.0	12200.0	0.217	2.10097
89.4	42.63	741.6	16.82	-21820.0	-19280.0	83.31	61.19	84.59	2239.0	12200.0	0.217	2.10152
89.6	44.81	742.0	16.83	-21810.0	-19150.0	83.34	61.26	84.62	2245.0	12300.0	0.218	2.10206
89.8	47.00	742.5	16.84	-21810.0	-19020.0	83.36	61.32	84.66	2251.0	12300.0	0.218	2.10260
90.0	49.18	742.9	16.85	-21800.0	-18880.0	83.38	61.39	84.69	2257.0	12400.0	0.218	2.10314
90.2	51.37	743.3	16.86	-21800.0	-18750.0	83.41	61.45	84.72	2262.0	12400.0	0.219	2.10367
90.4	53.56	743.7	16.86	-21800.0	-18620.0	83.43	61.51	84.76	2269.0	12500.0	0.219	2.10419
90.6	55.75	744.1	16.87	-21790.0	-18490.0	83.46	61.56	84.79	2275.0	12500.0	0.219	2.10472
90.8	57.94	744.5	16.88	-21790.0	-18360.0	83.48	61.62	84.82	2281.0	12600.0	0.220	2.10524
91.0	60.14	744.9	16.89	-21780.0	-18220.0	83.51	61.67	84.86	2287.0	12600.0	0.220	2.10575
91.2	62.33	745.3	16.90	-21780.0	-18090.0	83.54	61.72	84.89	2293.0	12700.0	0.220	2.10626
91.4	64.53	745.6	16.91	-21780.0	-17960.0	83.56	61.77	84.93	2300.0	12700.0	0.221	2.10677
91.6	66.73	746.0	16.92	-21770.0	-17830.0	83.59	61.82	84.96	2306.0	12800.0	0.221	2.10727
91.8	68.93	746.4	16.93	-21770.0	-17690.0	83.62	61.86	84.99	2313.0	12800.0	0.221	2.10777
92.0	71.13	746.8	16.94	-21760.0	-17560.0	83.65	61.91	85.03	2319.0	12900.0	0.222	2.10826
92.2	73.33	747.2	16.94	-21760.0	-17430.0	83.67	61.95	85.06	2326.0	12900.0	0.222	2.10875
92.4	75.53	747.6	16.95	-21750.0	-17300.0	83.70	61.99	85.09	2333.0	12900.0	0.222	2.10924
92.6	77.74	747.9	16.96	-21750.0	-17160.0	83.73	62.03	85.13	2339.0	13000.0	0.223	2.10972
92.8	79.94	748.3	16.97	-21740.0	-17030.0	83.76	62.08	85.16	2346.0	13000.0	0.223	2.11019
93.0	82.15	748.7	16.98	-21740.0	-16900.0	83.79	62.12	85.20	2353.0	13000.0	0.223	2.11067
93.2	84.36	749.0	16.99	-21730.0	-16770.0	83.82	62.15	85.23	2359.0	13100.0	0.224	2.11113
93.4	86.57	749.4	16.99	-21730.0	-16630.0	83.85	62.19	85.27	2366.0	13100.0	0.224	2.11160
93.6	88.78	749.8	17.00	-21720.0	-16500.0	83.88	62.23	85.30	2373.0	13100.0	0.224	2.11206
93.8	90.99	750.1	17.01	-21720.0	-16370.0	83.91	62.27	85.33	2380.0	13200.0	0.225	2.11252
94.0	93.20	750.5	17.02	-21710.0	-16230.0	83.94	62.31	85.37	2386.0	13200.0	0.225	2.11297
94.2	95.42	750.9	17.03	-21700.0	-16100.0	83.97	62.34	85.40	2393.0	13200.0	0.225	2.11342
94.4	97.63	751.2	17.04	-21700.0	-15970.0	84.01	62.38	85.44	2400.0	13300.0	0.226	2.11386
94.6	99.85	751.6	17.04	-21690.0	-15830.0	84.04	62.42	85.47	2407.0	13300.0	0.226	2.11430

[a]Triple point

Thermophysical properties of propane

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.01 MPa isobar						
85.47[a]	733.2	16.63	-21860.0	-21860.0	82.96	58.68	83.90	2169.0	10900.0	0.212	2.09010
90.0	728.5	16.52	-21480.0	-21480.0	87.31	59.22	84.46	2126.0	7380.0	0.210	2.07984
100.0	718.2	16.29	-20630.0	-20630.0	96.25	59.60	85.22	2041.0	3720.0	0.207	2.05801
110.0	708.1	16.06	-19780.0	-19770.0	104.4	59.50	85.73	1964.0	2230.0	0.203	2.03704
120.0	698.1	15.83	-18920.0	-18910.0	111.9	59.27	86.21	1891.0	1490.0	0.198	2.01668
130.0	688.0	15.60	-18050.0	-18050.0	118.8	59.05	86.72	1821.0	1080.0	0.193	1.99677
140.0	678.0	15.37	-17180.0	-17180.0	125.2	58.92	87.32	1752.0	824.0	0.188	1.97720
150.0	667.8	15.14	-16300.0	-16300.0	131.3	58.92	88.01	1685.0	654.0	0.182	1.95788
160.0	657.6	14.91	-15420.0	-15420.0	137.0	59.05	88.82	1618.0	535.0	0.176	1.93875
170.0	647.3	14.68	-14530.0	-14530.0	142.4	59.33	89.77	1553.0	447.0	0.169	1.91974
180.0	637.0	14.44	-13620.0	-13620.0	147.6	59.76	90.86	1487.0	381.0	0.163	1.90080
189.284[b]	627.3	14.23	-12780.0	-12780.0	152.2	60.29	92.00	1428.0	332.0	0.156	1.88338
189.284[b]	0.2822	0.006401	6209.0	7772.0	260.7	46.32	54.97	204.3	5.30	0.00810	1.00031
190.0	0.2812	0.006378	6243.0	7811.0	260.9	46.42	55.06	204.6	5.32	0.00815	1.00031
200.0	0.2668	0.006051	6716.0	8368.0	263.8	47.91	56.49	209.6	5.58	0.00883	1.00029
210.0	0.2539	0.005758	7204.0	8941.0	266.6	49.47	58.00	214.4	5.84	0.00956	1.00028
220.0	0.2421	0.005492	7708.0	9529.0	269.3	51.10	59.60	219.0	6.11	0.0103	1.00027
230.0	0.2315	0.005250	8228.0	10130.0	272.0	52.79	61.26	223.5	6.37	0.0111	1.00025
240.0	0.2217	0.005029	8765.0	10750.0	274.6	54.54	62.98	227.9	6.64	0.0120	1.00024
260.0	0.2045	0.004638	9893.0	12050.0	279.8	58.18	66.59	236.3	7.17	0.0138	1.00022
280.0	0.1898	0.004305	11100.0	13420.0	284.9	61.97	70.36	244.3	7.71	0.0157	1.00021
300.0	0.1771	0.004016	12370.0	14860.0	289.9	65.87	74.24	252.1	8.24	0.0179	1.00019
320.0	0.1660	0.003764	13730.0	16390.0	294.8	69.82	78.18	259.6	8.78	0.0201	1.00018
340.0	0.1562	0.003542	15170.0	17990.0	299.7	73.80	82.15	266.9	9.31	0.0225	1.00017
360.0	0.1475	0.003345	16680.0	19670.0	304.5	77.78	86.12	273.9	9.84	0.0251	1.00016
380.0	0.1397	0.003168	18280.0	21440.0	309.2	81.72	90.07	280.8	10.4	0.0277	1.00015
400.0	0.1327	0.003010	19950.0	23280.0	314.0	85.63	93.97	287.5	10.9	0.0305	1.00014
420.0	0.1263	0.002866	21700.0	25190.0	318.6	89.47	97.81	294.1	11.4	0.0333	1.00014
440.0	0.1206	0.002736	23530.0	27190.0	323.3	93.25	101.6	300.5	11.9	0.0362	1.00013
460.0	0.1153	0.002617	25430.0	29260.0	327.9	96.95	105.3	306.8	12.4	0.0393	1.00013
480.0	0.1105	0.002508	27410.0	31400.0	332.4	100.6	108.9	312.9	12.9	0.0423	1.00012
500.0	0.1061	0.002407	29460.0	33610.0	336.9	104.1	112.4	319.0	13.4	0.0455	1.00012
520.0	0.1020	0.002315	31570.0	35900.0	341.4	107.5	115.8	324.9	13.9	0.0487	1.00011
540.0	0.09824	0.002229	33760.0	38250.0	345.8	110.9	119.2	330.8	14.4	0.0519	1.00011
560.0	0.09473	0.002149	36010.0	40660.0	350.2	114.1	122.5	336.5	14.8	0.0552	1.00010
580.0	0.09146	0.002075	38320.0	43140.0	354.6	117.3	125.6	342.2	15.3	0.0585	1.00010
600.0	0.08841	0.002006	40700.0	45690.0	358.9	120.4	128.7	347.7	15.8	0.0619	1.00010
					0.05 MPa isobar						
85.47[a]	733.2	16.63	-21860.0	-21860.0	82.96	58.68	83.90	2169.0	10900.0	0.212	2.09011
90.0	728.5	16.52	-21480.0	-21480.0	87.30	59.22	84.46	2126.0	7380.0	0.210	2.07986
200.0	615.8	13.96	-11780.0	-11780.0	157.3	61.04	93.51	1358.0	287.0	0.149	1.86293
216.231[b]	598.1	13.56	-10250.0	-10240.0	164.7	62.46	96.19	1254.0	234.0	0.139	1.83192
216.231[b]	1.255	0.02846	7431.0	9188.0	254.5	51.25	60.60	214.3	6.04	0.0101	1.00137
220.0	1.233	0.02795	7627.0	9416.0	255.6	51.81	61.09	216.2	6.14	0.0104	1.00135
230.0	1.175	0.02665	8157.0	10030.0	258.3	53.37	62.49	221.0	6.40	0.0112	1.00129
240.0	1.123	0.02547	8703.0	10670.0	261.0	55.02	64.00	225.7	6.67	0.0120	1.00123
260.0	1.033	0.02342	9844.0	11980.0	266.3	58.51	67.31	234.5	7.20	0.0138	1.00113
280.0	0.9564	0.02169	11050.0	13360.0	271.4	62.20	70.88	242.9	7.73	0.0158	1.00104
300.0	0.8909	0.02020	12340.0	14820.0	276.4	66.03	74.63	250.9	8.27	0.0179	1.00097
320.0	0.8340	0.01891	13700.0	16350.0	281.3	69.94	78.48	258.6	8.80	0.0202	1.00091
340.0	0.7841	0.01778	15140.0	17950.0	286.2	73.89	82.39	266.0	9.33	0.0226	1.00085
360.0	0.7399	0.01678	16660.0	19640.0	291.0	77.84	86.31	273.1	9.86	0.0251	1.00080
380.0	0.7004	0.01588	18260.0	21410.0	295.8	81.77	90.22	280.1	10.4	0.0278	1.00076
400.0	0.6650	0.01508	19940.0	23250.0	300.5	85.67	94.10	286.9	10.9	0.0305	1.00072
420.0	0.6331	0.01436	21690.0	25170.0	305.2	89.50	97.92	293.6	11.4	0.0333	1.00069
440.0	0.6041	0.01370	23520.0	27170.0	309.8	93.27	101.7	300.0	11.9	0.0363	1.00065
460.0	0.5776	0.01310	25420.0	29240.0	314.5	96.96	105.4	306.4	12.4	0.0393	1.00062
480.0	0.5534	0.01255	27400.0	31380.0	319.0	100.6	109.0	312.6	12.9	0.0424	1.00060

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
500.0	0.5312	0.01205	29440.0	33600.0	323.5	104.1	112.5	318.7	13.4	0.0455	1.00057
520.0	0.5106	0.01158	31560.0	35880.0	328.0	107.5	115.9	324.7	13.9	0.0487	1.00055
540.0	0.4916	0.01115	33750.0	38230.0	332.4	110.9	119.2	330.5	14.4	0.0519	1.00053
560.0	0.4740	0.01075	36000.0	40650.0	336.8	114.1	122.5	336.3	14.8	0.0552	1.00051
580.0	0.4576	0.01038	38310.0	43130.0	341.2	117.3	125.7	342.0	15.3	0.0585	1.00049
600.0	0.4423	0.01003	40690.0	45670.0	345.5	120.4	128.7	347.6	15.8	0.0619	1.00048
				0.10 MPa isobar							
85.48[a]	733.2	16.63	-21860.0	-21850.0	82.96	58.69	83.90	2169.0	10900.0	0.212	2.09012
200.0	615.8	13.97	-11780.0	-11780.0	157.3	61.04	93.51	1359.0	287.0	0.149	1.86300
230.772[b]	581.6	13.19	-8826.0	-8819.0	171.0	64.00	99.05	1160.0	198.0	0.130	1.80351
230.772[b]	2.387	0.05412	8109.0	9956.0	252.4	54.24	64.25	218.2	6.46	0.0113	1.00261
235.0	2.341	0.05308	8343.0	10230.0	253.5	54.87	64.75	220.3	6.57	0.0117	1.00256
240.0	2.286	0.05183	8623.0	10550.0	254.9	55.63	65.38	222.8	6.70	0.0121	1.00250
260.0	2.093	0.04745	9780.0	11890.0	260.2	58.92	68.26	232.2	7.23	0.0139	1.00228
280.0	1.932	0.04382	11000.0	13290.0	265.4	62.49	71.57	241.0	7.76	0.0159	1.00211
300.0	1.796	0.04073	12300.0	14750.0	270.5	66.24	75.14	249.3	8.29	0.0180	1.00195
320.0	1.679	0.03807	13670.0	16290.0	275.5	70.09	78.88	257.2	8.82	0.0202	1.00182
340.0	1.576	0.03575	15110.0	17910.0	280.3	74.00	82.70	264.8	9.35	0.0226	1.00171
360.0	1.486	0.03370	16630.0	19600.0	285.2	77.92	86.56	272.2	9.88	0.0252	1.00161
380.0	1.406	0.03189	18230.0	21370.0	290.0	81.84	90.42	279.3	10.4	0.0278	1.00152
400.0	1.334	0.03026	19910.0	23220.0	294.7	85.72	94.26	286.2	10.9	0.0306	1.00144
420.0	1.270	0.02879	21670.0	25140.0	299.4	89.54	98.06	292.9	11.4	0.0334	1.00137
440.0	1.211	0.02746	23500.0	27140.0	304.0	93.30	101.8	299.5	11.9	0.0363	1.00131
460.0	1.158	0.02625	25400.0	29210.0	308.6	96.99	105.5	305.9	12.4	0.0393	1.00125
480.0	1.109	0.02514	27380.0	31360.0	313.2	100.6	109.0	312.2	12.9	0.0424	1.00120
500.0	1.064	0.02413	29430.0	33570.0	317.7	104.1	112.6	318.3	13.4	0.0455	1.00115
520.0	1.023	0.02319	31550.0	35860.0	322.2	107.5	116.0	324.3	13.9	0.0487	1.00110
540.0	0.9843	0.02232	33730.0	38210.0	326.7	110.9	119.3	330.2	14.4	0.0520	1.00106
560.0	0.9489	0.02152	35980.0	40630.0	331.1	114.1	122.6	336.1	14.9	0.0552	1.00102
580.0	0.9160	0.02077	38300.0	43110.0	335.4	117.3	125.7	341.8	15.3	0.0586	1.00099
600.0	0.8852	0.02008	40680.0	45660.0	339.7	120.4	128.8	347.4	15.8	0.0619	1.00095
				0.101325 MPa isobar							
85.48[a]	733.2	16.63	-21860.0	-21850.0	82.96	58.69	83.90	2169.0	10900.0	0.212	2.09013
200.0	615.8	13.97	-11780.0	-11780.0	157.3	61.04	93.51	1359.0	287.0	0.149	1.86300
231.070[b]	581.2	13.18	-8797.0	-8789.0	171.1	64.03	99.11	1158.0	197.0	0.129	1.80292
231.070[b]	2.416	0.05479	8123.0	9972.0	252.3	54.31	64.33	218.3	6.47	0.0114	1.00264
235.0	2.373	0.05381	8340.0	10220.0	253.4	54.89	64.79	220.3	6.57	0.0117	1.00259
240.0	2.317	0.05255	8621.0	10550.0	254.8	55.65	65.42	222.7	6.70	0.0121	1.00253
260.0	2.121	0.04810	9779.0	11890.0	260.1	58.94	68.29	232.2	7.23	0.0139	1.00231
280.0	1.958	0.04441	11000.0	13280.0	265.3	62.50	71.59	241.0	7.76	0.0159	1.00213
300.0	1.820	0.04128	12300.0	14750.0	270.4	66.24	75.16	249.3	8.29	0.0180	1.00198
320.0	1.701	0.03858	13660.0	16290.0	275.3	70.09	78.89	257.2	8.82	0.0202	1.00185
340.0	1.598	0.03623	15110.0	17910.0	280.2	74.00	82.71	264.8	9.35	0.0226	1.00173
360.0	1.506	0.03416	16630.0	19600.0	285.1	77.93	86.57	272.2	9.88	0.0252	1.00163
380.0	1.425	0.03231	18230.0	21370.0	289.9	81.84	90.43	279.3	10.4	0.0278	1.00154
400.0	1.352	0.03066	19910.0	23220.0	294.6	85.72	94.27	286.2	10.9	0.0306	1.00146
420.0	1.286	0.02917	21670.0	25140.0	299.3	89.54	98.06	292.9	11.4	0.0334	1.00139
440.0	1.227	0.02783	23500.0	27140.0	303.9	93.30	101.8	299.5	11.9	0.0363	1.00133
460.0	1.173	0.02660	25400.0	29210.0	308.5	96.99	105.5	305.9	12.4	0.0393	1.00127
480.0	1.123	0.02548	27380.0	31360.0	313.1	100.6	109.1	312.2	12.9	0.0424	1.00121
500.0	1.078	0.02445	29430.0	33570.0	317.6	104.1	112.6	318.3	13.4	0.0455	1.00116
520.0	1.036	0.02350	31550.0	35860.0	322.1	107.5	116.0	324.3	13.9	0.0487	1.00112
540.0	0.9974	0.02262	33730.0	38210.0	326.5	110.9	119.3	330.2	14.4	0.0520	1.00108
560.0	0.9615	0.02181	35980.0	40630.0	330.9	114.1	122.6	336.0	14.9	0.0553	1.00104
580.0	0.9281	0.02105	38300.0	43110.0	335.3	117.3	125.7	341.8	15.3	0.0586	1.00100
600.0	0.8970	0.02034	40680.0	45660.0	339.6	120.4	128.8	347.4	15.8	0.0619	1.00097

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.20 MPa isobar						
85.49[a]	733.2	16.63	-21860.0	-21850.0	82.96	58.70	83.91	2169.0	10900.0	0.212	2.09015
200.0	615.9	13.97	-11790.0	-11770.0	157.3	61.04	93.49	1359.0	287.0	0.149	1.86314
220.0	594.0	13.47	-9885.0	-9870.0	166.3	62.84	96.86	1230.0	224.0	0.136	1.82478
247.712[b]	561.4	12.73	-7118.0	-7102.0	178.2	66.07	103.0	1050.0	164.0	0.119	1.76942
247.712[b]	4.556	0.1033	8908.0	10840.0	250.6	57.99	69.14	221.0	6.97	0.0130	1.00498
250.0	4.511	0.1023	9044.0	11000.0	251.2	58.32	69.35	222.2	7.03	0.0132	1.00493
260.0	4.302	0.09757	9647.0	11700.0	254.0	59.81	70.39	227.4	7.29	0.0141	1.00470
280.0	3.947	0.08950	10900.0	13130.0	259.3	63.10	73.07	237.1	7.82	0.0160	1.00430
300.0	3.652	0.08282	12210.0	14620.0	264.4	66.66	76.24	246.1	8.34	0.0181	1.00398
320.0	3.402	0.07716	13590.0	16180.0	269.5	70.40	79.70	254.6	8.87	0.0204	1.00370
340.0	3.187	0.07228	15050.0	17810.0	274.4	74.23	83.34	262.6	9.40	0.0228	1.00346
360.0	2.999	0.06802	16580.0	19520.0	279.3	78.09	87.07	270.2	9.92	0.0253	1.00325
380.0	2.833	0.06425	18180.0	21300.0	284.1	81.97	90.84	277.6	10.4	0.0279	1.00307
400.0	2.685	0.06090	19870.0	23150.0	288.8	85.82	94.60	284.7	10.9	0.0307	1.00291
420.0	2.553	0.05789	21620.0	25080.0	293.5	89.62	98.35	291.6	11.5	0.0335	1.00276
440.0	2.433	0.05517	23460.0	27080.0	298.2	93.36	102.0	298.4	12.0	0.0364	1.00263
460.0	2.324	0.05271	25370.0	29160.0	302.8	97.04	105.7	304.9	12.5	0.0394	1.00251
480.0	2.225	0.05046	27350.0	31310.0	307.4	100.6	109.2	311.3	13.0	0.0425	1.00240
500.0	2.134	0.04839	29400.0	33530.0	311.9	104.1	112.7	317.5	13.4	0.0456	1.00230
520.0	2.050	0.04650	31520.0	35820.0	316.4	107.6	116.1	323.7	13.9	0.0488	1.00221
540.0	1.973	0.04474	33700.0	38170.0	320.8	110.9	119.4	329.7	14.4	0.0520	1.00213
560.0	1.901	0.04312	35960.0	40590.0	325.2	114.2	122.7	335.5	14.9	0.0553	1.00205
580.0	1.835	0.04161	38270.0	43080.0	329.6	117.3	125.8	341.3	15.3	0.0586	1.00198
600.0	1.773	0.04021	40650.0	45630.0	333.9	120.4	128.9	347.0	15.8	0.0620	1.00191
					0.30 MPa isobar						
85.50[a]	733.2	16.63	-21860.0	-21840.0	82.96	58.71	83.91	2169.0	10900.0	0.212	2.09018
200.0	616.0	13.97	-11790.0	-11770.0	157.2	61.05	93.48	1360.0	288.0	0.149	1.86327
250.0	558.9	12.67	-6889.0	-6865.0	179.1	66.38	103.5	1037.0	161.0	0.118	1.76511
258.973[b]	547.4	12.41	-5944.0	-5919.0	182.8	67.60	106.1	976.6	146.0	0.113	1.74596
258.973[b]	6.679	0.1515	9441.0	11420.0	249.8	60.63	72.83	221.7	7.32	0.0141	1.00730
260.0	6.652	0.1508	9505.0	11490.0	250.0	60.77	72.90	222.2	7.35	0.0142	1.00727
270.0	6.335	0.1437	10140.0	12230.0	252.8	62.20	73.69	227.8	7.61	0.0152	1.00692
280.0	6.054	0.1373	10780.0	12970.0	255.5	63.75	74.75	233.0	7.87	0.0162	1.00661
300.0	5.574	0.1264	12120.0	14490.0	260.7	67.12	77.43	242.8	8.40	0.0182	1.00607
320.0	5.174	0.1173	13510.0	16070.0	265.8	70.72	80.59	251.8	8.92	0.0205	1.00563
340.0	4.834	0.1096	14980.0	17710.0	270.8	74.46	84.02	260.2	9.44	0.0229	1.00526
360.0	4.540	0.1030	16520.0	19430.0	275.7	78.27	87.60	268.2	9.96	0.0254	1.00493
380.0	4.283	0.09712	18130.0	21220.0	280.6	82.10	91.27	275.9	10.5	0.0280	1.00465
390.0	4.165	0.09445	18970.0	22140.0	283.0	84.01	93.11	279.6	10.7	0.0294	1.00452
400.0	4.054	0.09194	19820.0	23080.0	285.3	85.92	94.96	283.2	11.0	0.0307	1.00439
420.0	3.850	0.08731	21580.0	25020.0	290.1	89.70	98.64	290.3	11.5	0.0336	1.00417
440.0	3.667	0.08315	23420.0	27030.0	294.7	93.42	102.3	297.2	12.0	0.0365	1.00397
460.0	3.500	0.07938	25330.0	29110.0	299.4	97.09	105.9	303.9	12.5	0.0395	1.00378
480.0	3.349	0.07595	27310.0	31260.0	303.9	100.7	109.4	310.4	13.0	0.0425	1.00362
500.0	3.211	0.07281	29360.0	33490.0	308.5	104.2	112.9	316.8	13.5	0.0457	1.00347
520.0	3.083	0.06992	31490.0	35780.0	313.0	107.6	116.3	323.0	13.9	0.0489	1.00333
540.0	2.966	0.06726	33680.0	38140.0	317.4	110.9	119.6	329.1	14.4	0.0521	1.00320
560.0	2.858	0.06480	35930.0	40560.0	321.8	114.2	122.8	335.0	14.9	0.0554	1.00308
580.0	2.757	0.06252	38250.0	43050.0	326.2	117.3	125.9	340.9	15.4	0.0587	1.00297
600.0	2.663	0.06040	40630.0	45600.0	330.5	120.4	129.0	346.6	15.8	0.0620	1.00287
					0.40 MPa isobar						
85.51[a]	733.2	16.63	-21860.0	-21840.0	82.96	58.72	83.91	2169.0	11000.0	0.212	2.09021
200.0	616.1	13.97	-11790.0	-11760.0	157.2	61.05	93.47	1361.0	288.0	0.149	1.86340
250.0	559.0	12.68	-6893.0	-6862.0	179.1	66.38	103.5	1038.0	161.0	0.118	1.76534
267.671[b]	536.1	12.16	-5014.0	-4981.0	186.3	68.86	108.8	919.7	133.0	0.108	1.72728
267.671[b]	8.788	0.1993	9852.0	11860.0	249.2	62.74	75.97	221.5	7.61	0.0151	1.00961

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
270.0	8.689	0.1970	10000.0	12030.0	249.9	63.05	76.06	222.9	7.67	0.0154	1.00950
280.0	8.270	0.1875	10660.0	12800.0	252.7	64.44	76.67	228.7	7.93	0.0163	1.00903
290.0	7.900	0.1791	11340.0	13570.0	255.4	65.96	77.60	234.2	8.19	0.0173	1.00862
300.0	7.569	0.1716	12020.0	14350.0	258.0	67.59	78.76	239.3	8.45	0.0184	1.00826
320.0	6.999	0.1587	13430.0	15950.0	263.2	71.06	81.55	248.9	8.97	0.0206	1.00762
340.0	6.521	0.1479	14910.0	17620.0	268.2	74.70	84.74	257.8	9.48	0.0230	1.00709
360.0	6.111	0.1386	16460.0	19340.0	273.2	78.45	88.17	266.2	10.00	0.0255	1.00664
380.0	5.755	0.1305	18080.0	21140.0	278.0	82.23	91.72	274.1	10.5	0.0282	1.00625
390.0	5.593	0.1268	18910.0	22070.0	280.4	84.13	93.52	278.0	10.8	0.0295	1.00607
400.0	5.441	0.1234	19770.0	23010.0	282.8	86.02	95.32	281.7	11.0	0.0308	1.00590
420.0	5.162	0.1171	21540.0	24960.0	287.6	89.78	98.94	289.0	11.5	0.0337	1.00559
440.0	4.912	0.1114	23380.0	26970.0	292.2	93.49	102.5	296.1	12.0	0.0366	1.00532
460.0	4.686	0.1063	25290.0	29060.0	296.9	97.14	106.1	302.9	12.5	0.0396	1.00507
480.0	4.481	0.1016	27280.0	31210.0	301.5	100.7	109.6	309.6	13.0	0.0426	1.00484
500.0	4.293	0.09736	29330.0	33440.0	306.0	104.2	113.0	316.0	13.5	0.0458	1.00464
520.0	4.122	0.09347	31460.0	35740.0	310.5	107.6	116.4	322.3	14.0	0.0489	1.00445
540.0	3.964	0.08988	33650.0	38100.0	315.0	111.0	119.7	328.5	14.4	0.0522	1.00428
560.0	3.817	0.08657	35900.0	40520.0	319.4	114.2	122.9	334.5	14.9	0.0554	1.00412
580.0	3.682	0.08350	38220.0	43010.0	323.8	117.4	126.0	340.4	15.4	0.0588	1.00397
600.0	3.556	0.08064	40600.0	45560.0	328.1	120.4	129.1	346.2	15.8	0.0621	1.00383
					0.50 MPa isobar						
85.52[a]	733.3	16.63	-21860.0	-21830.0	82.96	58.72	83.91	2169.0	11000.0	0.212	2.09024
200.0	616.2	13.97	-11790.0	-11760.0	157.2	61.06	93.45	1361.0	288.0	0.150	1.86354
250.0	559.2	12.68	-6898.0	-6858.0	179.0	66.38	103.5	1039.0	161.0	0.118	1.76557
260.0	546.6	12.39	-5850.0	-5810.0	183.2	67.75	106.3	973.6	145.0	0.113	1.74460
274.867[b]	526.4	11.94	-4229.0	-4187.0	189.2	69.94	111.2	872.5	124.0	0.104	1.71139
274.867[b]	10.90	0.2472	10190.0	12210.0	248.9	64.53	78.82	220.8	7.85	0.0160	1.01192
275.0	10.90	0.2471	10200.0	12220.0	248.9	64.55	78.82	220.9	7.86	0.0160	1.01192
280.0	10.61	0.2406	10540.0	12620.0	250.3	65.18	78.89	224.1	7.99	0.0165	1.01160
290.0	10.10	0.2290	11220.0	13410.0	253.1	66.57	79.39	230.1	8.24	0.0175	1.01103
300.0	9.646	0.2188	11920.0	14210.0	255.8	68.09	80.23	235.7	8.50	0.0185	1.01053
320.0	8.880	0.2014	13350.0	15830.0	261.1	71.41	82.59	246.0	9.02	0.0208	1.00968
340.0	8.248	0.1870	14840.0	17510.0	266.2	74.95	85.51	255.4	9.53	0.0231	1.00898
360.0	7.713	0.1749	16400.0	19260.0	271.1	78.63	88.76	264.1	10.0	0.0257	1.00839
380.0	7.251	0.1644	18020.0	21060.0	276.0	82.37	92.18	272.4	10.5	0.0283	1.00788
390.0	7.042	0.1597	18860.0	22000.0	278.4	84.25	93.94	276.4	10.8	0.0296	1.00765
400.0	6.847	0.1553	19720.0	22940.0	280.8	86.12	95.70	280.2	11.1	0.0309	1.00743
410.0	6.662	0.1511	20600.0	23910.0	283.2	88.00	97.48	284.0	11.3	0.0323	1.00723
420.0	6.489	0.1471	21490.0	24890.0	285.6	89.86	99.26	287.7	11.6	0.0338	1.00703
440.0	6.169	0.1399	23340.0	26910.0	290.3	93.55	102.8	295.0	12.1	0.0367	1.00668
460.0	5.881	0.1334	25260.0	29000.0	294.9	97.19	106.3	301.9	12.5	0.0396	1.00637
480.0	5.620	0.1275	27240.0	31170.0	299.5	100.8	109.8	308.7	13.0	0.0427	1.00608
500.0	5.383	0.1221	29300.0	33400.0	304.1	104.2	113.2	315.3	13.5	0.0458	1.00582
520.0	5.165	0.1171	31430.0	35690.0	308.6	107.7	116.6	321.7	14.0	0.0490	1.00558
540.0	4.965	0.1126	33620.0	38060.0	313.1	111.0	119.8	327.9	14.5	0.0522	1.00536
560.0	4.781	0.1084	35880.0	40490.0	317.5	114.2	123.0	334.0	14.9	0.0555	1.00516
580.0	4.610	0.1045	38200.0	42980.0	321.9	117.4	126.1	340.0	15.4	0.0588	1.00497
600.0	4.451	0.1009	40580.0	45530.0	326.2	120.4	129.2	345.9	15.9	0.0622	1.00480
					0.60 MPa isobar						
85.53[a]	733.3	16.63	-21860.0	-21820.0	82.96	58.73	83.91	2169.0	11000.0	0.212	2.09027
200.0	616.2	13.97	-11800.0	-11750.0	157.2	61.06	93.44	1362.0	288.0	0.150	1.86367
250.0	559.3	12.68	-6902.0	-6855.0	179.0	66.39	103.4	1040.0	161.0	0.118	1.76580
260.0	546.7	12.40	-5855.0	-5807.0	183.1	67.76	106.2	974.8	145.0	0.113	1.74486
281.061[b]	517.7	11.74	-3540.0	-3489.0	191.7	70.91	113.5	831.7	116.0	0.101	1.69733
281.061[b]	13.02	0.2953	10480.0	12510.0	248.6	66.11	81.47	219.8	8.07	0.0168	1.01426
285.0	12.74	0.2890	10750.0	12830.0	249.8	66.58	81.39	222.5	8.17	0.0172	1.01394
290.0	12.41	0.2815	11110.0	13240.0	251.2	67.22	81.44	225.7	8.30	0.0177	1.01358
300.0	11.82	0.2679	11820.0	14050.0	253.9	68.62	81.87	231.9	8.56	0.0187	1.01291
310.0	11.29	0.2561	12530.0	14880.0	256.6	70.15	82.67	237.6	8.81	0.0198	1.01233

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
320.0	10.82	0.2455	13260.0	15710.0	259.3	71.77	83.72	242.9	9.07	0.0209	1.01181
340.0	10.03	0.2272	14770.0	17410.0	264.4	75.21	86.34	252.9	9.58	0.0233	1.01092
360.0	9.347	0.2120	16330.0	19170.0	269.4	78.82	89.38	262.0	10.1	0.0258	1.01017
380.0	8.772	0.1989	17970.0	20990.0	274.4	82.51	92.67	270.6	10.6	0.0284	1.00953
390.0	8.513	0.1931	18810.0	21920.0	276.8	84.37	94.37	274.7	10.8	0.0297	1.00925
400.0	8.271	0.1876	19670.0	22870.0	279.2	86.23	96.09	278.7	11.1	0.0311	1.00898
410.0	8.044	0.1824	20550.0	23840.0	281.6	88.09	97.83	282.6	11.3	0.0324	1.00873
420.0	7.831	0.1776	21450.0	24830.0	284.0	89.94	99.58	286.4	11.6	0.0339	1.00849
440.0	7.438	0.1687	23300.0	26860.0	288.7	93.61	103.1	293.8	12.1	0.0367	1.00806
460.0	7.086	0.1607	25220.0	28950.0	293.4	97.24	106.6	300.9	12.6	0.0397	1.00767
480.0	6.768	0.1535	27210.0	31120.0	298.0	100.8	110.0	307.8	13.1	0.0428	1.00732
500.0	6.479	0.1469	29270.0	33350.0	302.5	104.3	113.4	314.5	13.5	0.0459	1.00701
520.0	6.214	0.1409	31400.0	35650.0	307.0	107.7	116.7	321.0	14.0	0.0491	1.00672
540.0	5.972	0.1354	33590.0	38020.0	311.5	111.0	120.0	327.3	14.5	0.0523	1.00645
560.0	5.748	0.1304	35850.0	40450.0	315.9	114.2	123.1	333.5	15.0	0.0556	1.00620
580.0	5.541	0.1257	38170.0	42950.0	320.3	117.4	126.2	339.6	15.4	0.0589	1.00598
600.0	5.349	0.1213	40550.0	45500.0	324.6	120.5	129.3	345.5	15.9	0.0622	1.00577
					0.80 MPa isobar						
85.54[a]	733.3	16.63	-21860.0	-21810.0	82.96	58.75	83.92	2169.0	11000.0	0.212	2.09032
200.0	616.4	13.98	-11800.0	-11740.0	157.2	61.07	93.42	1363.0	289.0	0.150	1.86394
250.0	559.6	12.69	-6911.0	-6848.0	179.0	66.39	103.4	1042.0	162.0	0.119	1.76626
260.0	547.1	12.41	-5865.0	-5800.0	183.1	67.76	106.1	977.2	146.0	0.113	1.74538
280.0	520.0	11.79	-3682.0	-3614.0	191.2	70.75	112.8	844.0	118.0	0.102	1.70102
291.457[b]	502.5	11.40	-2355.0	-2285.0	195.8	72.61	117.9	763.1	104.0	0.0961	1.67284
291.457[b]	17.33	0.3930	10950.0	12990.0	248.3	68.83	86.49	217.3	8.47	0.0182	1.01900
295.0	16.96	0.3845	11220.0	13300.0	249.3	69.21	86.15	220.0	8.55	0.0186	1.01858
300.0	16.49	0.3738	11590.0	13730.0	250.8	69.79	85.88	223.6	8.68	0.0191	1.01805
310.0	15.65	0.3549	12330.0	14590.0	253.6	71.10	85.86	230.3	8.93	0.0201	1.01712
320.0	14.92	0.3384	13080.0	15450.0	256.3	72.56	86.32	236.5	9.18	0.0212	1.01631
330.0	14.28	0.3239	13840.0	16310.0	259.0	74.12	87.12	242.2	9.43	0.0224	1.01560
340.0	13.71	0.3109	14620.0	17190.0	261.6	75.76	88.16	247.6	9.68	0.0235	1.01496
360.0	12.72	0.2885	16210.0	18980.0	266.7	79.22	90.74	257.7	10.2	0.0261	1.01387
380.0	11.89	0.2697	17860.0	20820.0	271.7	82.80	93.71	267.0	10.7	0.0286	1.01295
390.0	11.52	0.2613	18710.0	21770.0	274.1	84.62	95.30	271.3	10.9	0.0299	1.01254
400.0	11.18	0.2536	19570.0	22730.0	276.6	86.45	96.92	275.6	11.2	0.0313	1.01216
410.0	10.86	0.2463	20460.0	23710.0	279.0	88.28	98.58	279.7	11.4	0.0326	1.01180
420.0	10.56	0.2395	21360.0	24700.0	281.4	90.11	100.3	283.8	11.7	0.0341	1.01147
430.0	10.28	0.2331	22280.0	25710.0	283.7	91.93	101.9	287.7	11.9	0.0355	1.01116
440.0	10.01	0.2271	23220.0	26740.0	286.1	93.74	103.6	291.5	12.2	0.0369	1.01087
460.0	9.526	0.2160	25140.0	28850.0	290.8	97.34	107.0	298.9	12.6	0.0399	1.01033
480.0	9.088	0.2061	27140.0	31020.0	295.4	100.9	110.4	306.1	13.1	0.0429	1.00984
500.0	8.691	0.1971	29200.0	33260.0	300.0	104.3	113.7	313.0	13.6	0.0461	1.00941
520.0	8.329	0.1889	31330.0	35570.0	304.5	107.7	117.0	319.7	14.1	0.0492	1.00901
540.0	7.998	0.1814	33530.0	37940.0	309.0	111.0	120.2	326.2	14.5	0.0524	1.00865
560.0	7.694	0.1745	35790.0	40380.0	313.4	114.3	123.4	332.5	15.0	0.0557	1.00831
580.0	7.413	0.1681	38120.0	42880.0	317.8	117.4	126.5	338.7	15.5	0.0590	1.00800
600.0	7.153	0.1622	40500.0	45440.0	322.1	120.5	129.5	344.7	15.9	0.0623	1.00772
					1.00 MPa isobar						
85.56[a]	733.4	16.63	-21860.0	-21800.0	82.97	58.77	83.92	2169.0	11000.0	0.212	2.09038
200.0	616.6	13.98	-11810.0	-11730.0	157.2	61.08	93.39	1365.0	289.0	0.150	1.86421
250.0	559.9	12.70	-6919.0	-6840.0	179.0	66.40	103.3	1045.0	162.0	0.119	1.76672
260.0	547.4	12.41	-5875.0	-5794.0	183.1	67.77	106.0	979.6	146.0	0.113	1.74590
280.0	520.5	11.80	-3695.0	-3610.0	191.1	70.76	112.7	847.0	118.0	0.102	1.70172
300.0	489.6	11.10	-1360.0	-1270.0	199.2	74.07	121.9	708.3	95.3	0.0920	1.65216
300.087[b]	489.1	11.09	-1342.0	-1251.0	199.3	74.09	122.1	705.9	95.0	0.0919	1.65148
300.087[b]	21.75	0.4932	11340.0	13370.0	248.0	71.16	91.36	214.2	8.82	0.0195	1.02388
305.0	21.05	0.4774	11720.0	13820.0	249.5	71.63	90.49	218.3	8.93	0.0200	1.02310
310.0	20.44	0.4635	12110.0	14270.0	250.9	72.18	89.96	222.2	9.05	0.0205	1.02241
320.0	19.36	0.4390	12890.0	15170.0	253.8	73.43	89.53	229.5	9.30	0.0216	1.02121

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
330.0	18.43	0.4180	13670.0	16060.0	256.6	74.83	89.71	236.0	9.54	0.0227	1.02017
340.0	17.62	0.3996	14460.0	16960.0	259.2	76.36	90.29	242.1	9.78	0.0239	1.01927
360.0	16.25	0.3685	16070.0	18790.0	264.5	79.64	92.26	253.2	10.3	0.0264	1.01774
380.0	15.13	0.3431	17740.0	20660.0	269.5	83.11	94.86	263.2	10.8	0.0289	1.01649
390.0	14.63	0.3319	18600.0	21610.0	272.0	84.89	96.30	267.9	11.0	0.0302	1.01594
400.0	14.18	0.3215	19470.0	22580.0	274.4	86.68	97.81	272.4	11.3	0.0315	1.01544
410.0	13.75	0.3119	20360.0	23570.0	276.9	88.48	99.37	276.8	11.5	0.0329	1.01497
420.0	13.36	0.3029	21270.0	24570.0	279.3	90.28	101.0	281.1	11.7	0.0343	1.01453
430.0	12.99	0.2946	22190.0	25590.0	281.7	92.08	102.6	285.2	12.0	0.0357	1.01412
440.0	12.64	0.2867	23130.0	26620.0	284.1	93.88	104.2	289.2	12.2	0.0371	1.01374
460.0	12.01	0.2723	25070.0	28740.0	288.8	97.44	107.5	296.9	12.7	0.0401	1.01303
480.0	11.44	0.2594	27070.0	30920.0	293.4	101.0	110.8	304.4	13.2	0.0431	1.01241
500.0	10.93	0.2478	29140.0	33170.0	298.0	104.4	114.1	311.5	13.7	0.0462	1.01184
520.0	10.47	0.2373	31270.0	35490.0	302.5	107.8	117.3	318.4	14.1	0.0494	1.01133
540.0	10.04	0.2277	33470.0	37860.0	307.0	111.1	120.5	325.1	14.6	0.0526	1.01087
560.0	9.654	0.2189	35740.0	40310.0	311.5	114.3	123.6	331.6	15.1	0.0558	1.01044
580.0	9.296	0.2108	38070.0	42810.0	315.9	117.5	126.7	337.9	15.5	0.0591	1.01005
600.0	8.966	0.2033	40460.0	45370.0	320.2	120.5	129.7	344.0	16.0	0.0625	1.00968
					1.20 MPa isobar						
85.58[a]	733.4	16.63	-21860.0	-21790.0	82.97	58.79	83.92	2169.0	11000.0	0.212	2.09043
200.0	616.7	13.99	-11810.0	-11730.0	157.1	61.09	93.36	1366.0	290.0	0.150	1.86447
250.0	560.2	12.70	-6928.0	-6833.0	178.9	66.41	103.2	1047.0	163.0	0.119	1.76717
260.0	547.7	12.42	-5884.0	-5788.0	183.0	67.77	105.9	981.9	146.0	0.113	1.74642
280.0	520.9	11.81	-3708.0	-3606.0	191.1	70.76	112.5	850.0	119.0	0.103	1.70241
300.0	490.2	11.12	-1379.0	-1271.0	199.2	74.07	121.6	712.1	95.8	0.0923	1.65317
307.532[b]	476.9	10.81	-443.0	-332.0	202.2	75.41	126.3	656.3	87.7	0.0884	1.63213
307.532[b]	26.31	0.5966	11660.0	13670.0	247.8	73.23	96.29	210.8	9.15	0.0207	1.02893
310.0	25.80	0.5851	11860.0	13910.0	248.6	73.41	95.49	213.2	9.20	0.0209	1.02836
320.0	24.22	0.5493	12670.0	14860.0	251.6	74.40	93.61	221.8	9.43	0.0220	1.02659
330.0	22.91	0.5196	13480.0	15790.0	254.4	75.62	92.86	229.4	9.67	0.0231	1.02512
340.0	21.79	0.4942	14290.0	16720.0	257.2	77.00	92.81	236.3	9.90	0.0242	1.02387
350.0	20.82	0.4721	15110.0	17650.0	259.9	78.50	93.24	242.6	10.1	0.0254	1.02279
360.0	19.96	0.4526	15930.0	18580.0	262.5	80.09	93.98	248.5	10.4	0.0267	1.02182
380.0	18.49	0.4192	17620.0	20480.0	267.7	83.43	96.12	259.4	10.9	0.0292	1.02018
390.0	17.85	0.4048	18490.0	21450.0	270.2	85.16	97.40	264.4	11.1	0.0304	1.01947
400.0	17.27	0.3915	19370.0	22430.0	272.7	86.92	98.78	269.2	11.3	0.0317	1.01882
410.0	16.73	0.3793	20260.0	23430.0	275.1	88.68	100.2	273.9	11.6	0.0331	1.01823
420.0	16.23	0.3680	21180.0	24440.0	277.6	90.46	101.7	278.3	11.8	0.0345	1.01767
430.0	15.76	0.3574	22100.0	25460.0	280.0	92.24	103.3	282.7	12.1	0.0359	1.01715
440.0	15.32	0.3475	23050.0	26500.0	282.4	94.01	104.8	286.9	12.3	0.0373	1.01667
450.0	14.92	0.3383	24010.0	27560.0	284.7	95.79	106.4	291.0	12.5	0.0388	1.01622
460.0	14.53	0.3296	24990.0	28630.0	287.1	97.55	108.0	294.9	12.8	0.0403	1.01579
480.0	13.83	0.3136	27000.0	30820.0	291.8	101.0	111.3	302.6	13.2	0.0433	1.01501
500.0	13.20	0.2992	29070.0	33080.0	296.4	104.5	114.5	310.0	13.7	0.0464	1.01431
520.0	12.62	0.2863	31210.0	35400.0	300.9	107.8	117.7	317.1	14.2	0.0495	1.01368
540.0	12.10	0.2745	33420.0	37790.0	305.4	111.1	120.8	323.9	14.6	0.0527	1.01311
560.0	11.63	0.2637	35680.0	40230.0	309.9	114.4	123.9	330.6	15.1	0.0560	1.01259
580.0	11.19	0.2538	38010.0	42740.0	314.3	117.5	126.9	337.0	15.6	0.0593	1.01211
600.0	10.79	0.2447	40410.0	45310.0	318.6	120.5	129.9	343.3	16.0	0.0626	1.01166
					1.40 MPa isobar						
85.60[a]	733.5	16.63	-21860.0	-21780.0	82.97	58.81	83.93	2169.0	11000.0	0.212	2.09049
200.0	616.9	13.99	-11820.0	-11720.0	157.1	61.09	93.34	1368.0	290.0	0.150	1.86474
250.0	560.4	12.71	-6936.0	-6826.0	178.9	66.41	103.2	1049.0	163.0	0.119	1.76762
260.0	548.0	12.43	-5894.0	-5781.0	183.0	67.78	105.8	984.3	147.0	0.113	1.74693
280.0	521.3	11.82	-3721.0	-3602.0	191.1	70.76	112.4	852.9	119.0	0.103	1.70310
300.0	490.9	11.13	-1397.0	-1271.0	199.1	74.06	121.3	716.0	96.2	0.0925	1.65417
310.0	473.4	10.73	-159.6	-29.2	203.2	75.85	127.4	643.8	85.8	0.0875	1.62661
314.118[b]	465.4	10.55	373.0	505.7	204.9	76.62	130.6	612.2	81.5	0.0853	1.61415
314.118[b]	31.03	0.7036	11930.0	13920.0	247.6	75.11	101.4	207.2	9.46	0.0219	1.03418
315.0	30.74	0.6971	12010.0	14020.0	247.9	75.15	100.9	208.2	9.48	0.0220	1.03386

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
320.0	29.65	0.6723	12430.0	14520.0	249.5	75.52	99.06	213.2	9.59	0.0225	1.03263
330.0	27.80	0.6304	13270.0	15490.0	252.5	76.50	96.83	222.1	9.81	0.0235	1.03056
340.0	26.28	0.5959	14110.0	16460.0	255.3	77.71	95.86	230.0	10.0	0.0246	1.02885
350.0	24.98	0.5666	14940.0	17410.0	258.1	79.08	95.65	237.1	10.3	0.0258	1.02740
360.0	23.86	0.5411	15780.0	18370.0	260.8	80.56	95.96	243.6	10.5	0.0271	1.02614
370.0	22.87	0.5186	16630.0	19330.0	263.5	82.14	96.61	249.7	10.7	0.0324	1.02503
380.0	21.98	0.4985	17500.0	20300.0	266.0	83.77	97.52	255.4	11.0	0.0296	1.02404
390.0	21.18	0.4803	18370.0	21280.0	268.6	85.45	98.60	260.8	11.2	0.0307	1.02315
400.0	20.45	0.4638	19260.0	22280.0	271.1	87.16	99.82	265.9	11.4	0.0320	1.02233
410.0	19.78	0.4486	20160.0	23280.0	273.6	88.90	101.1	270.9	11.7	0.0333	1.02159
420.0	19.17	0.4347	21080.0	24300.0	276.0	90.64	102.5	275.6	11.9	0.0347	1.02090
430.0	18.60	0.4217	22010.0	25330.0	278.5	92.40	104.0	280.1	12.1	0.0361	1.02027
440.0	18.06	0.4096	22960.0	26380.0	280.9	94.16	105.5	284.5	12.4	0.0375	1.01967
450.0	17.57	0.3984	23930.0	27440.0	283.3	95.91	107.0	288.8	12.6	0.0390	1.01912
460.0	17.10	0.3878	24910.0	28520.0	285.6	97.66	108.6	292.9	12.8	0.0405	1.01860
470.0	16.66	0.3779	25910.0	29610.0	288.0	99.40	110.1	297.0	13.1	0.0420	1.01812
480.0	16.25	0.3685	26920.0	30720.0	290.3	101.1	111.7	300.9	13.3	0.0435	1.01766
500.0	15.49	0.3513	29000.0	32990.0	294.9	104.5	114.9	308.5	13.8	0.0465	1.01682
520.0	14.81	0.3358	31150.0	35320.0	299.5	107.9	118.0	315.8	14.2	0.0497	1.01606
540.0	14.19	0.3217	33360.0	37710.0	304.0	111.2	121.1	322.8	14.7	0.0529	1.01538
560.0	13.62	0.3089	35630.0	40160.0	308.5	114.4	124.2	329.6	15.2	0.0561	1.01475
580.0	13.10	0.2971	37960.0	42670.0	312.9	117.5	127.1	336.2	15.6	0.0594	1.01418
600.0	12.62	0.2863	40360.0	45250.0	317.2	120.6	130.1	342.6	16.1	0.0627	1.01366
					1.60 MPa isobar						
85.62[a]	733.5	16.63	-21860.0	-21760.0	82.97	58.83	83.93	2169.0	11000.0	0.212	2.09055
200.0	617.1	13.99	-11820.0	-11710.0	157.1	61.10	93.31	1369.0	291.0	0.150	1.86500
250.0	560.7	12.72	-6945.0	-6819.0	178.9	66.42	103.1	1051.0	163.0	0.119	1.76807
260.0	548.4	12.44	-5904.0	-5775.0	182.9	67.79	105.8	986.6	147.0	0.114	1.74744
280.0	521.8	11.83	-3733.0	-3598.0	191.0	70.77	112.2	855.8	120.0	0.103	1.70379
300.0	491.5	11.15	-1415.0	-1271.0	199.0	74.06	121.0	719.8	96.6	0.0927	1.65516
310.0	474.2	10.75	-181.7	-32.9	203.1	75.84	126.9	648.3	86.2	0.0877	1.62784
320.046[b]	454.5	10.31	1127.0	1282.0	207.3	77.75	135.1	572.1	76.2	0.0826	1.59714
320.046[b]	35.93	0.8148	12160.0	14120.0	247.4	76.84	107.0	203.4	9.77	0.0231	1.03966
325.0	34.45	0.7812	12610.0	14650.0	249.0	77.11	104.0	209.1	9.87	0.0235	1.03799
330.0	33.22	0.7533	13040.0	15170.0	250.6	77.49	102.0	214.2	9.97	0.0240	1.03660
340.0	31.15	0.7063	13910.0	16170.0	253.6	78.49	99.62	223.3	10.2	0.0251	1.03427
350.0	29.44	0.6677	14770.0	17160.0	256.5	79.70	98.53	231.3	10.4	0.0263	1.03235
360.0	27.99	0.6348	15630.0	18150.0	259.3	81.08	98.24	238.5	10.6	0.0276	1.03073
370.0	26.74	0.6063	16490.0	19130.0	261.9	82.56	98.48	245.2	10.8	0.0342	1.02932
380.0	25.63	0.5812	17370.0	20120.0	264.6	84.13	99.07	251.3	11.1	0.0300	1.02807
390.0	24.64	0.5587	18250.0	21110.0	267.2	85.75	99.92	257.1	11.3	0.0311	1.02697
400.0	23.75	0.5385	19150.0	22120.0	269.7	87.42	101.0	262.6	11.5	0.0323	1.02597
410.0	22.93	0.5200	20060.0	23130.0	272.2	89.12	102.1	267.8	11.8	0.0336	1.02506
420.0	22.19	0.5031	20980.0	24160.0	274.7	90.83	103.4	272.8	12.0	0.0350	1.02423
430.0	21.50	0.4875	21920.0	25200.0	277.1	92.56	104.8	277.6	12.2	0.0363	1.02346
440.0	20.86	0.4731	22870.0	26260.0	279.6	94.30	106.2	282.2	12.5	0.0378	1.02275
450.0	20.27	0.4596	23840.0	27330.0	282.0	96.04	107.6	286.6	12.7	0.0392	1.02209
460.0	19.72	0.4471	24830.0	28410.0	284.3	97.77	109.1	290.9	12.9	0.0407	1.02148
470.0	19.20	0.4353	25830.0	29510.0	286.7	99.50	110.6	295.1	13.2	0.0421	1.02090
480.0	18.71	0.4242	26850.0	30620.0	289.1	101.2	112.2	299.2	13.4	0.0437	1.02036
500.0	17.81	0.4039	28940.0	32900.0	293.7	104.6	115.3	307.0	13.8	0.0467	1.01936
520.0	17.01	0.3857	31080.0	35230.0	298.3	108.0	118.3	314.5	14.3	0.0498	1.01847
540.0	16.28	0.3693	33300.0	37630.0	302.8	111.2	121.4	321.7	14.8	0.0530	1.01767
560.0	15.62	0.3543	35570.0	40090.0	307.3	114.4	124.4	328.7	15.2	0.0563	1.01694
580.0	15.02	0.3406	37910.0	42610.0	311.7	117.5	127.4	335.4	15.7	0.0595	1.01628
600.0	14.47	0.3281	40310.0	45180.0	316.1	120.6	130.3	341.9	16.1	0.0628	1.01566

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					1.80 MPa isobar						
85.64[a]	733.5	16.63	-21860.0	-21750.0	82.97	58.85	83.93	2170.0	11000.0	0.212	2.09060
200.0	617.2	14.00	-11830.0	-11700.0	157.1	61.11	93.29	1370.0	292.0	0.150	1.86527
250.0	561.0	12.72	-6953.0	-6812.0	178.8	66.43	103.0	1053.0	164.0	0.119	1.76852
260.0	548.7	12.44	-5913.0	-5768.0	182.9	67.79	105.7	989.0	148.0	0.114	1.74795
280.0	522.2	11.84	-3746.0	-3594.0	191.0	70.77	112.1	858.7	120.0	0.103	1.70447
300.0	492.1	11.16	-1433.0	-1271.0	199.0	74.06	120.7	723.5	97.1	0.0930	1.65613
310.0	475.0	10.77	-203.6	-36.5	203.0	75.83	126.5	652.7	86.7	0.0880	1.62906
320.0	455.6	10.33	1091.0	1265.0	207.2	77.72	134.3	578.1	76.8	0.0829	1.59896
325.452[b]	443.9	10.07	1831.0	2010.0	209.5	78.81	139.9	535.1	71.4	0.0801	1.58081
325.452[b]	41.05	0.9309	12360.0	14290.0	247.2	78.47	113.0	199.5	10.1	0.0243	1.04541
330.0	39.36	0.8926	12790.0	14800.0	248.8	78.63	109.2	205.3	10.2	0.0247	1.04349
335.0	37.84	0.8580	13240.0	15340.0	250.4	78.95	106.4	210.9	10.2	0.0252	1.04177
340.0	36.50	0.8278	13690.0	15870.0	251.9	79.36	104.4	216.0	10.3	0.0257	1.04026
350.0	34.25	0.7767	14580.0	16900.0	254.9	80.39	102.0	225.1	10.5	0.0268	1.03772
360.0	32.39	0.7346	15460.0	17910.0	257.8	81.63	100.9	233.2	10.8	0.0281	1.03563
370.0	30.82	0.6988	16340.0	18920.0	260.5	83.01	100.6	240.5	11.0	0.0366	1.03385
380.0	29.44	0.6677	17230.0	19930.0	263.2	84.50	100.8	247.2	11.2	0.0304	1.03231
390.0	28.24	0.6403	18130.0	20940.0	265.9	86.07	101.4	253.4	11.4	0.0314	1.03095
400.0	27.15	0.6158	19030.0	21950.0	268.4	87.69	102.2	259.2	11.6	0.0326	1.02974
410.0	26.18	0.5936	19950.0	22980.0	271.0	89.34	103.2	264.7	11.9	0.0339	1.02865
420.0	25.29	0.5735	20880.0	24020.0	273.5	91.03	104.3	270.0	12.1	0.0352	1.02765
430.0	24.47	0.5550	21820.0	25070.0	275.9	92.73	105.6	275.0	12.3	0.0366	1.02674
440.0	23.72	0.5379	22780.0	26130.0	278.4	94.45	106.9	279.8	12.5	0.0380	1.02590
450.0	23.03	0.5222	23760.0	27210.0	280.8	96.17	108.3	284.4	12.8	0.0394	1.02513
460.0	22.38	0.5074	24750.0	28300.0	283.2	97.88	109.7	288.9	13.0	0.0409	1.02440
470.0	21.77	0.4937	25760.0	29400.0	285.6	99.60	111.2	293.3	13.2	0.0423	1.02373
480.0	21.20	0.4808	26780.0	30520.0	287.9	101.3	112.7	297.5	13.5	0.0438	1.02310
500.0	20.16	0.4573	28870.0	32800.0	292.6	104.7	115.7	305.6	13.9	0.0469	1.02194
520.0	19.24	0.4363	31020.0	35150.0	297.2	108.0	118.7	313.3	14.4	0.0500	1.02091
540.0	18.40	0.4173	33240.0	37550.0	301.7	111.3	121.7	320.7	14.8	0.0532	1.01999
560.0	17.65	0.4001	35520.0	40010.0	306.2	114.5	124.7	327.7	15.3	0.0564	1.01915
580.0	16.95	0.3845	37860.0	42540.0	310.6	117.6	127.6	334.6	15.7	0.0597	1.01839
600.0	16.32	0.3701	40260.0	45120.0	315.0	120.6	130.5	341.2	16.1	0.0630	1.01769
					2.00 MPa isobar						
85.66[a]	733.6	16.64	-21860.0	-21740.0	82.97	58.87	83.94	2170.0	11000.0	0.212	2.09066
200.0	617.4	14.00	-11830.0	-11690.0	157.0	61.12	93.26	1372.0	292.0	0.150	1.86553
250.0	561.3	12.73	-6961.0	-6804.0	178.8	66.43	102.9	1055.0	164.0	0.120	1.76897
260.0	549.0	12.45	-5923.0	-5762.0	182.9	67.80	105.6	991.3	148.0	0.114	1.74846
280.0	522.6	11.85	-3758.0	-3590.0	190.9	70.77	111.9	861.6	120.0	0.103	1.70514
300.0	492.7	11.17	-1450.0	-1271.0	198.9	74.06	120.4	727.2	97.5	0.0932	1.65709
310.0	475.7	10.79	-225.1	-39.7	203.0	75.83	126.1	657.0	87.2	0.0882	1.63026
320.0	456.7	10.36	1064.0	1257.0	207.1	77.70	133.6	583.3	77.3	0.0832	1.60052
330.0	434.4	9.851	2440.0	2643.0	211.3	79.74	144.7	503.5	67.5	0.0780	1.56628
330.429[b]	433.5	9.830	2498.0	2701.0	211.5	79.83	145.1	500.6	67.2	0.0779	1.56492
330.429[b]	46.42	1.053	12520.0	14420.0	247.0	80.02	119.8	195.5	10.4	0.0256	1.05146
335.0	44.35	1.006	12970.0	14960.0	248.6	80.10	114.7	201.8	10.5	0.0259	1.04911
340.0	42.50	0.9637	13450.0	15530.0	250.3	80.35	110.9	207.9	10.5	0.0264	1.04700
345.0	40.90	0.9274	13920.0	16070.0	251.9	80.71	108.3	213.4	10.6	0.0269	1.04519
350.0	39.49	0.8956	14380.0	16610.0	253.4	81.15	106.4	218.5	10.7	0.0274	1.04360
360.0	37.11	0.8415	15280.0	17660.0	256.4	82.23	104.1	227.5	10.9	0.0288	1.04090
370.0	35.13	0.7967	16190.0	18700.0	259.2	83.50	103.1	235.6	11.1	0.0397	1.03867
375.0	34.26	0.7769	16640.0	19210.0	260.6	84.19	102.8	239.3	11.2	0.0308	1.03769
380.0	33.45	0.7585	17090.0	19730.0	262.0	84.90	102.8	242.8	11.3	0.0309	1.03677
390.0	31.98	0.7253	18000.0	20750.0	264.6	86.40	103.0	249.5	11.5	0.0318	1.03512
400.0	30.69	0.6959	18910.0	21790.0	267.2	87.97	103.5	255.8	11.8	0.0330	1.03367
410.0	29.53	0.6696	19840.0	22830.0	269.8	89.58	104.3	261.6	12.0	0.0342	1.03236
420.0	28.48	0.6458	20780.0	23870.0	272.3	91.23	105.3	267.1	12.2	0.0355	1.03119
430.0	27.52	0.6241	21730.0	24930.0	274.8	92.91	106.5	272.4	12.4	0.0368	1.03012

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	26.65	0.6043	22690.0	26000.0	277.3	94.60	107.7	277.4	12.6	0.0382	1.02914
450.0	25.84	0.5859	23670.0	27090.0	279.7	96.30	109.0	282.3	12.9	0.0396	1.02823
460.0	25.09	0.5689	24670.0	28180.0	282.1	98.00	110.3	286.9	13.1	0.0411	1.02739
470.0	24.39	0.5531	25680.0	29290.0	284.5	99.70	111.7	291.4	13.3	0.0426	1.02661
480.0	23.74	0.5383	26700.0	30420.0	286.9	101.4	113.2	295.8	13.5	0.0440	1.02589
490.0	23.12	0.5244	27740.0	31560.0	289.2	103.1	114.6	300.0	13.8	0.0456	1.02520
500.0	22.55	0.5113	28800.0	32710.0	291.6	104.8	116.1	304.1	14.0	0.0471	1.02456
520.0	21.49	0.4873	30960.0	35060.0	296.2	108.1	119.0	312.0	14.4	0.0502	1.02339
540.0	20.54	0.4658	33180.0	37470.0	300.7	111.3	122.0	319.6	14.9	0.0533	1.02233
560.0	19.68	0.4463	35460.0	39940.0	305.2	114.5	125.0	326.8	15.3	0.0566	1.02138
580.0	18.90	0.4286	37800.0	42470.0	309.7	117.6	127.9	333.8	15.8	0.0598	1.02051
600.0	18.18	0.4123	40200.0	45060.0	314.0	120.6	130.7	340.6	16.2	0.0631	1.01972
					2.50 MPa isobar						
85.70[a]	733.7	16.64	-21860.0	-21710.0	82.97	58.91	83.95	2170.0	11000.0	0.212	2.09080
200.0	617.8	14.01	-11840.0	-11660.0	157.0	61.14	93.20	1375.0	293.0	0.151	1.86619
250.0	562.0	12.74	-6982.0	-6786.0	178.7	66.45	102.8	1060.0	165.0	0.120	1.77007
260.0	549.8	12.47	-5946.0	-5746.0	182.8	67.81	105.4	997.0	149.0	0.114	1.74971
280.0	523.7	11.88	-3789.0	-3579.0	190.8	70.78	111.6	868.6	121.0	0.104	1.70680
300.0	494.2	11.21	-1493.0	-1270.0	198.8	74.06	119.7	736.4	98.5	0.0938	1.65944
310.0	477.6	10.83	-277.4	-46.6	202.8	75.81	125.1	667.6	88.3	0.0889	1.63317
320.0	459.1	10.41	997.2	1237.0	206.9	77.67	132.0	596.0	78.5	0.0840	1.60427
330.0	437.8	9.928	2351.0	2603.0	211.1	79.66	141.7	519.5	69.0	0.0789	1.57146
335.0	425.6	9.651	3069.0	3328.0	213.2	80.73	148.7	478.3	64.2	0.0764	1.55284
340.0	411.7	9.336	3826.0	4094.0	215.5	81.89	158.5	433.6	59.3	0.0739	1.53194
341.416[b]	407.7	9.246	4041.0	4312.0	216.1	82.23	161.6	421.6	57.9	0.0733	1.52600
341.416[b]	61.20	1.388	12820.0	14620.0	246.3	83.62	141.8	185.2	11.2	0.0295	1.06827
345.0	58.53	1.327	13230.0	15110.0	247.8	83.49	132.9	191.5	11.2	0.0296	1.06520
350.0	55.43	1.257	13760.0	15750.0	249.6	83.50	124.7	199.1	11.3	0.0300	1.06164
355.0	52.90	1.200	14280.0	16360.0	251.3	83.69	119.4	205.9	11.3	0.0305	1.05874
360.0	50.75	1.151	14780.0	16950.0	253.0	84.00	115.8	211.9	11.4	0.0313	1.05629
365.0	48.89	1.109	15270.0	17520.0	254.6	84.40	113.2	217.3	11.4	0.0327	1.05417
370.0	47.25	1.071	15750.0	18080.0	256.1	84.88	111.3	222.4	11.5	0.0525	1.05230
375.0	45.78	1.038	16230.0	18630.0	257.6	85.42	110.0	227.0	11.6	0.0331	1.05063
380.0	44.45	1.008	16700.0	19180.0	259.0	86.01	109.0	231.4	11.7	0.0326	1.04912
385.0	43.24	0.9806	17180.0	19720.0	260.4	86.65	108.3	235.6	11.8	0.0328	1.04774
390.0	42.13	0.9553	17650.0	20270.0	261.8	87.31	107.9	239.5	11.9	0.0331	1.04648
395.0	41.10	0.9320	18120.0	20800.0	263.2	88.00	107.6	243.3	12.0	0.0335	1.04531
400.0	40.14	0.9103	18600.0	21340.0	264.6	88.72	107.5	246.9	12.1	0.0340	1.04423
410.0	38.41	0.8710	19550.0	22420.0	267.2	90.22	107.7	253.7	12.3	0.0351	1.04227
420.0	36.87	0.8362	20510.0	23500.0	269.8	91.77	108.1	260.0	12.5	0.0363	1.04054
430.0	35.50	0.8051	21480.0	24580.0	272.4	93.37	108.9	265.9	12.7	0.0376	1.03899
440.0	34.26	0.7769	22460.0	25670.0	274.9	95.00	109.8	271.5	12.9	0.0389	1.03759
450.0	33.13	0.7512	23450.0	26780.0	277.4	96.64	110.8	276.9	13.1	0.0403	1.03632
460.0	32.09	0.7276	24460.0	27890.0	279.8	98.30	112.0	282.0	13.3	0.0417	1.03515
470.0	31.13	0.7059	25480.0	29020.0	282.2	99.96	113.2	286.9	13.5	0.0431	1.03407
480.0	30.24	0.6857	26510.0	30160.0	284.6	101.6	114.5	291.6	13.7	0.0446	1.03308
490.0	29.41	0.6669	27560.0	31310.0	287.0	103.3	115.8	296.1	14.0	0.0461	1.03215
500.0	28.63	0.6493	28620.0	32470.0	289.4	104.9	117.2	300.5	14.2	0.0476	1.03128
510.0	27.90	0.6328	29700.0	33650.0	291.7	106.6	118.6	304.8	14.4	0.0491	1.03047
520.0	27.22	0.6173	30790.0	34840.0	294.0	108.2	120.0	309.0	14.6	0.0506	1.02970
540.0	25.96	0.5888	33030.0	37270.0	298.6	111.4	122.8	317.0	15.0	0.0538	1.02830
560.0	24.84	0.5632	35320.0	39760.0	303.1	114.6	125.7	324.6	15.5	0.0569	1.02704
580.0	23.81	0.5401	37670.0	42300.0	307.6	117.7	128.5	331.9	15.9	0.0602	1.02591
600.0	22.88	0.5190	40080.0	44900.0	312.0	120.7	131.3	339.0	16.3	0.0635	1.02487

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					3.00 MPa isobar						
85.75[a]	733.8	16.64	-21860.0	-21680.0	82.98	58.96	83.95	2170.0	11000.0	0.212	2.09094
200.0	618.2	14.02	-11860.0	-11640.0	156.9	61.16	93.14	1379.0	295.0	0.151	1.86684
250.0	562.7	12.76	-7003.0	-6768.0	178.6	66.47	102.6	1066.0	166.0	0.120	1.77116
260.0	550.6	12.49	-5969.0	-5729.0	182.7	67.83	105.2	1003.0	150.0	0.115	1.75094
280.0	524.7	11.90	-3819.0	-3567.0	190.7	70.79	111.2	875.6	122.0	0.104	1.70843
300.0	495.7	11.24	-1535.0	-1268.0	198.6	74.06	119.1	745.2	99.6	0.0943	1.66172
310.0	479.4	10.87	-327.9	-52.0	202.6	75.80	124.2	677.9	89.4	0.0895	1.63597
320.0	461.5	10.46	934.0	1221.0	206.7	77.64	130.6	608.2	79.7	0.0847	1.60783
330.0	441.0	10.00	2267.0	2567.0	210.8	79.59	139.3	534.6	70.4	0.0798	1.57626
340.0	416.5	9.446	3705.0	4023.0	215.1	81.75	153.0	453.9	61.0	0.0749	1.53913
345.0	401.8	9.111	4485.0	4814.0	217.5	82.95	164.4	408.5	56.1	0.0727	1.51703
350.0	383.9	8.706	5336.0	5680.0	219.9	84.34	184.1	356.7	50.8	0.0711	1.49057
350.5	381.8	8.659	5426.0	5773.0	220.2	84.49	187.0	351.0	50.2	0.0710	1.48755
350.6	381.4	8.650	5445.0	5792.0	220.3	84.52	187.6	349.8	50.1	0.0710	1.48694
350.8	380.6	8.631	5482.0	5829.0	220.4	84.59	188.8	347.5	49.9	0.0709	1.48570
350.819[b]	380.8	8.636	5478.0	5825.0	220.4	84.58	188.3	348.4	50.0	0.0710	1.48604
350.819[b]	78.79	1.787	12950.0	14630.0	245.5	87.00	178.2	174.4	12.2	0.0355	1.08856
355.0	73.67	1.671	13500.0	15300.0	247.4	86.58	155.0	183.5	12.1	0.0354	1.08259
356.0	72.58	1.646	13630.0	15450.0	247.8	86.51	151.2	185.5	12.1	0.0354	1.08133
360.0	68.85	1.561	14110.0	16030.0	249.4	86.36	139.8	192.8	12.1	0.0360	1.07700
365.0	65.14	1.477	14680.0	16710.0	251.3	86.40	130.9	200.5	12.1	0.0380	1.07271
370.0	62.11	1.408	15220.0	17350.0	253.0	86.60	125.1	207.4	12.1	0.0777	1.06922
372.0	61.04	1.384	15430.0	17600.0	253.7	86.72	123.3	209.9	12.1	0.0411	1.06799
375.0	59.55	1.351	15740.0	17960.0	254.7	86.92	121.1	213.4	12.1	0.0371	1.06628
380.0	57.34	1.300	16250.0	18560.0	256.2	87.33	118.2	219.0	12.2	0.0353	1.06374
385.0	55.40	1.256	16760.0	19150.0	257.8	87.82	116.1	224.1	12.2	0.0349	1.06151
390.0	53.66	1.217	17260.0	19720.0	259.3	88.36	114.6	228.9	12.3	0.0349	1.05952
395.0	52.09	1.181	17750.0	20290.0	260.7	88.94	113.5	233.4	12.4	0.0351	1.05772
400.0	50.66	1.149	18250.0	20860.0	262.1	89.57	112.7	237.6	12.4	0.0354	1.05609
405.0	49.34	1.119	18740.0	21420.0	263.5	90.23	112.1	241.7	12.5	0.0358	1.05459
410.0	48.13	1.091	19230.0	21980.0	264.9	90.92	111.8	245.5	12.6	0.0363	1.05321
415.0	47.00	1.066	19720.0	22540.0	266.3	91.63	111.6	249.2	12.7	0.0368	1.05193
420.0	45.95	1.042	20220.0	23100.0	267.6	92.36	111.5	252.7	12.8	0.0373	1.05073
430.0	44.04	0.9987	21210.0	24210.0	270.2	93.87	111.7	259.4	13.0	0.0385	1.04856
440.0	42.34	0.9602	22210.0	25330.0	272.8	95.42	112.2	265.6	13.2	0.0397	1.04663
450.0	40.81	0.9255	23220.0	26460.0	275.3	97.01	112.9	271.5	13.4	0.0410	1.04490
460.0	39.43	0.8941	24240.0	27590.0	277.8	98.61	113.8	277.1	13.6	0.0424	1.04334
470.0	38.16	0.8653	25270.0	28730.0	280.3	100.2	114.8	282.4	13.8	0.0438	1.04191
480.0	36.99	0.8389	26310.0	29890.0	282.7	101.9	116.0	287.5	14.0	0.0452	1.04059
490.0	35.91	0.8144	27370.0	31050.0	285.1	103.5	117.1	292.4	14.2	0.0466	1.03938
500.0	34.91	0.7917	28440.0	32230.0	287.5	105.1	118.4	297.1	14.4	0.0481	1.03825
510.0	33.98	0.7705	29530.0	33420.0	289.8	106.8	119.7	301.7	14.6	0.0496	1.03720
520.0	33.10	0.7507	30630.0	34620.0	292.2	108.4	121.0	306.1	14.8	0.0511	1.03622
540.0	31.51	0.7145	32870.0	37070.0	296.8	111.6	123.7	314.5	15.2	0.0542	1.03443
560.0	30.08	0.6822	35170.0	39570.0	301.3	114.7	126.4	322.5	15.6	0.0574	1.03284
580.0	28.81	0.6532	37530.0	42130.0	305.8	117.8	129.1	330.2	16.1	0.0606	1.03141
600.0	27.65	0.6269	39950.0	44740.0	310.2	120.8	131.8	337.5	16.5	0.0638	1.03012
					3.50 MPa isobar						
85.79[a]	733.9	16.64	-21860.0	-21650.0	82.98	59.00	83.96	2171.0	11100.0	0.212	2.09108
200.0	618.6	14.03	-11870.0	-11620.0	156.8	61.18	93.08	1382.0	296.0	0.151	1.86748
250.0	563.3	12.77	-7023.0	-6749.0	178.5	66.49	102.5	1071.0	167.0	0.121	1.77224
260.0	551.3	12.50	-5992.0	-5712.0	182.6	67.85	105.0	1008.0	151.0	0.115	1.75216
280.0	525.7	11.92	-3849.0	-3556.0	190.6	70.80	110.9	882.4	123.0	0.105	1.71003
300.0	497.1	11.27	-1575.0	-1265.0	198.5	74.06	118.5	753.9	101.0	0.0949	1.66395
310.0	481.2	10.91	-376.7	-56.0	202.5	75.79	123.4	687.8	90.4	0.0901	1.63867
320.0	463.7	10.51	873.6	1206.0	206.5	77.61	129.3	619.8	80.9	0.0854	1.61123
330.0	443.9	10.07	2189.0	2537.0	210.6	79.54	137.2	548.7	71.7	0.0806	1.58074
340.0	420.8	9.543	3596.0	3962.0	214.8	81.63	148.8	472.2	62.6	0.0759	1.54556

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
345.0	407.3	9.236	4348.0	4727.0	217.0	82.77	157.6	430.4	58.0	0.0737	1.52520
350.0	391.5	8.879	5152.0	5546.0	219.4	84.04	170.9	384.6	53.1	0.0720	1.50179
352.0	384.3	8.716	5494.0	5895.0	220.4	84.59	178.7	364.4	51.0	0.0716	1.49116
354.0	376.4	8.535	5852.0	6262.0	221.4	85.19	188.9	342.9	48.9	0.0715	1.47948
356.0	367.4	8.331	6234.0	6654.0	222.5	85.86	203.5	319.3	46.5	0.0716	1.46632
358.0	356.7	8.090	6649.0	7082.0	223.7	86.63	226.8	292.6	44.0	0.0722	1.45092
359.0	350.5	7.948	6877.0	7317.0	224.4	87.07	245.1	277.6	42.5	0.0727	1.44191
359.020[b]	350.1	7.939	6888.0	7329.0	224.4	87.09	246.7	276.5	42.4	0.0727	1.44134
359.020[b]	101.5	2.301	12880.0	14400.0	244.1	90.36	257.9	162.9	13.5	0.0462	1.11519
360.0	99.61	2.259	13030.0	14580.0	244.6	90.19	239.2	165.4	13.4	0.0464	1.11297
362.0	94.46	2.142	13390.0	15020.0	245.8	89.69	204.6	171.6	13.2	0.0465	1.10687
364.0	90.47	2.052	13700.0	15410.0	246.9	89.35	184.3	176.9	13.1	0.0475	1.10217
366.0	87.21	1.978	13990.0	15760.0	247.9	89.12	170.8	181.5	13.0	0.0500	1.09833
368.0	84.43	1.915	14270.0	16090.0	248.8	88.96	161.0	185.7	12.9	0.0571	1.09507
370.0	82.02	1.860	14530.0	16410.0	249.6	88.86	153.6	189.5	12.9	0.127	1.09224
372.0	79.88	1.811	14780.0	16710.0	250.4	88.81	147.8	193.0	12.9	0.0525	1.08973
374.0	77.95	1.768	15020.0	17000.0	251.2	88.80	143.1	196.4	12.8	0.0456	1.08749
376.0	76.20	1.728	15260.0	17280.0	252.0	88.82	139.3	199.5	12.8	0.0426	1.08545
378.0	74.60	1.692	15490.0	17560.0	252.7	88.86	136.0	202.4	12.8	0.0408	1.08359
380.0	73.13	1.658	15720.0	17830.0	253.4	88.94	133.3	205.3	12.8	0.0397	1.08187
382.0	71.76	1.627	15940.0	18090.0	254.1	89.03	131.0	207.9	12.8	0.0389	1.08028
384.0	70.48	1.598	16160.0	18350.0	254.8	89.14	129.0	210.5	12.8	0.0384	1.07880
390.0	67.10	1.522	16810.0	19110.0	256.7	89.57	124.3	217.6	12.8	0.0375	1.07489
395.0	64.68	1.467	17340.0	19720.0	258.3	90.02	121.6	223.1	12.9	0.0373	1.07209
400.0	62.54	1.418	17860.0	20330.0	259.8	90.53	119.6	228.1	12.9	0.0373	1.06962
405.0	60.62	1.375	18370.0	20920.0	261.3	91.09	118.1	232.8	13.0	0.0375	1.06741
410.0	58.88	1.335	18890.0	21510.0	262.7	91.69	117.0	237.2	13.0	0.0378	1.06541
415.0	57.29	1.299	19400.0	22090.0	264.2	92.33	116.2	241.4	13.1	0.0382	1.06359
420.0	55.83	1.266	19910.0	22670.0	265.5	93.00	115.7	245.4	13.2	0.0386	1.06192
425.0	54.48	1.235	20420.0	23250.0	266.9	93.69	115.3	249.2	13.2	0.0391	1.06037
430.0	53.22	1.207	20920.0	23820.0	268.3	94.40	115.1	252.9	13.3	0.0396	1.05893
440.0	50.95	1.155	21950.0	24970.0	270.9	95.87	115.0	259.8	13.5	0.0407	1.05633
450.0	48.93	1.110	22970.0	26130.0	273.5	97.39	115.3	266.3	13.7	0.0419	1.05404
460.0	47.13	1.069	24010.0	27280.0	276.0	98.94	115.9	272.3	13.9	0.0432	1.05199
470.0	45.50	1.032	25050.0	28440.0	278.5	100.5	116.6	278.1	14.0	0.0445	1.05014
480.0	44.01	0.9981	26110.0	29620.0	281.0	102.1	117.5	283.6	14.2	0.0459	1.04845
490.0	42.65	0.9672	27180.0	30800.0	283.4	103.7	118.6	288.8	14.4	0.0473	1.04691
500.0	41.39	0.9386	28260.0	31990.0	285.8	105.3	119.7	293.8	14.6	0.0487	1.04548
510.0	40.22	0.9122	29350.0	33190.0	288.2	106.9	120.8	298.7	14.8	0.0502	1.04417
520.0	39.14	0.8875	30460.0	34400.0	290.6	108.5	122.0	303.3	15.0	0.0517	1.04294
530.0	38.12	0.8645	31580.0	35630.0	292.9	110.1	123.3	307.8	15.2	0.0532	1.04179
540.0	37.17	0.8429	32720.0	36870.0	295.2	111.7	124.5	312.2	15.4	0.0547	1.04072
560.0	35.43	0.8034	35030.0	39390.0	299.8	114.8	127.1	320.6	15.8	0.0578	1.03876
580.0	33.87	0.7680	37400.0	41950.0	304.3	117.9	129.8	328.6	16.2	0.0610	1.03702
600.0	32.46	0.7362	39820.0	44580.0	308.8	120.9	132.4	336.2	16.6	0.0642	1.03544
					4.00 MPa isobar						
85.84[a]	734.0	16.64	-21860.0	-21620.0	82.98	59.04	83.97	2171.0	11100.0	0.212	2.09122
200.0	619.0	14.04	-11880.0	-11590.0	156.8	61.20	93.02	1386.0	297.0	0.152	1.86813
250.0	564.0	12.79	-7043.0	-6730.0	178.5	66.50	102.3	1076.0	168.0	0.121	1.77331
260.0	552.1	12.52	-6015.0	-5695.0	182.5	67.86	104.8	1014.0	152.0	0.116	1.75336
280.0	526.7	11.94	-3878.0	-3543.0	190.5	70.81	110.6	889.2	124.0	0.105	1.71160
300.0	498.5	11.31	-1615.0	-1261.0	198.4	74.06	118.0	762.3	102.0	0.0954	1.66611
320.0	465.8	10.56	815.6	1194.0	206.3	77.59	128.2	631.0	82.0	0.0861	1.61448
330.0	446.7	10.13	2116.0	2510.0	210.3	79.49	135.4	562.1	73.0	0.0814	1.58495
340.0	424.7	9.632	3496.0	3911.0	214.5	81.53	145.4	489.1	64.1	0.0768	1.55140
345.0	412.1	9.346	4227.0	4655.0	216.7	82.63	152.6	450.0	59.7	0.0746	1.53238
350.0	397.9	9.022	4998.0	5441.0	218.9	83.81	162.5	408.2	55.1	0.0729	1.51109
355.0	381.1	8.642	5826.0	6289.0	221.3	85.14	177.9	362.0	50.3	0.0721	1.48632
356.0	377.3	8.556	6001.0	6469.0	221.9	85.43	182.2	352.0	49.2	0.0722	1.48075
358.0	369.1	8.370	6366.0	6844.0	222.9	86.04	192.9	330.9	47.1	0.0726	1.46877
360.0	359.8	8.159	6753.0	7244.0	224.0	86.72	208.2	307.9	44.8	0.0735	1.45526

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
362.0	348.8	7.910	7176.0	7682.0	225.2	87.51	232.1	282.3	42.3	0.0753	1.43946
363.0	342.4	7.764	7407.0	7923.0	225.9	87.96	250.7	268.0	40.9	0.0766	1.43023
364.0	334.9	7.595	7659.0	8186.0	226.6	88.48	278.0	252.2	39.3	0.0783	1.41963
365.0	325.9	7.391	7943.0	8485.0	227.4	89.10	323.9	234.3	37.5	0.0805	1.40687
365.5	320.5	7.267	8105.0	8655.0	227.9	89.47	361.9	224.1	36.5	0.0819	1.39918
366.0	313.9	7.119	8288.0	8850.0	228.4	89.92	423.0	212.7	35.3	0.0835	1.39002
366.211[b]	306.8	6.956	8458.0	9033.0	228.9	90.39	534.5	200.4	34.0	0.0839	1.38001
366.211[b]	137.5	3.118	12390.0	13670.0	241.6	93.93	628.2	150.0	15.7	0.0728	1.15856
370.0	116.0	2.631	13410.0	14930.0	245.0	92.31	266.2	165.4	14.6	0.217	1.13248
371.0	112.5	2.550	13610.0	15180.0	245.7	92.04	241.5	168.6	14.4	0.0908	1.12821
372.0	109.4	2.481	13800.0	15410.0	246.3	91.81	223.6	171.6	14.3	0.0726	1.12458
373.0	106.8	2.421	13980.0	15630.0	246.9	91.63	210.0	174.3	14.2	0.0641	1.12141
374.0	104.4	2.368	14140.0	15830.0	247.4	91.47	199.2	176.8	14.1	0.0589	1.11861
375.0	102.3	2.320	14300.0	16030.0	248.0	91.34	190.4	179.2	14.0	0.0553	1.11608
376.0	100.4	2.276	14460.0	16210.0	248.5	91.23	183.1	181.5	13.9	0.0527	1.11379
378.0	96.97	2.199	14750.0	16570.0	249.4	91.07	171.6	185.7	13.8	0.0490	1.10975
380.0	94.02	2.132	15030.0	16900.0	250.3	90.96	163.0	189.6	13.7	0.0466	1.10627
382.0	91.43	2.073	15290.0	17220.0	251.1	90.90	156.2	193.2	13.7	0.0449	1.10321
384.0	89.12	2.021	15550.0	17530.0	251.9	90.88	150.8	196.5	13.6	0.0437	1.10048
386.0	87.02	1.973	15800.0	17820.0	252.7	90.90	146.4	199.7	13.6	0.0427	1.09802
388.0	85.11	1.930	16040.0	18110.0	253.4	90.94	142.7	202.7	13.6	0.0420	1.09578
390.0	83.36	1.890	16280.0	18400.0	254.2	91.01	139.5	205.6	13.5	0.0414	1.09372
392.0	81.73	1.853	16510.0	18670.0	254.9	91.09	136.8	208.3	13.5	0.0410	1.09182
394.0	80.22	1.819	16740.0	18940.0	255.6	91.20	134.5	210.9	13.5	0.0406	1.09005
396.0	78.81	1.787	16970.0	19210.0	256.2	91.33	132.5	213.4	13.5	0.0403	1.08840
400.0	76.24	1.729	17420.0	19730.0	257.5	91.62	129.2	218.2	13.5	0.0400	1.08540
405.0	73.41	1.665	17970.0	20370.0	259.1	92.05	126.1	223.7	13.5	0.0398	1.08211
410.0	70.91	1.608	18510.0	21000.0	260.7	92.55	123.8	228.8	13.5	0.0398	1.07921
415.0	68.67	1.557	19040.0	21610.0	262.1	93.10	122.1	233.6	13.6	0.0400	1.07662
420.0	66.66	1.512	19570.0	22220.0	263.6	93.69	120.8	238.2	13.6	0.0402	1.07429
425.0	64.82	1.470	20100.0	22820.0	265.0	94.32	119.8	242.4	13.7	0.0406	1.07217
430.0	63.14	1.432	20620.0	23420.0	266.4	94.97	119.1	246.5	13.7	0.0410	1.07023
435.0	61.58	1.396	21150.0	24010.0	267.8	95.65	118.6	250.4	13.8	0.0414	1.06844
440.0	60.14	1.364	21670.0	24600.0	269.1	96.35	118.3	254.2	13.9	0.0419	1.06678
450.0	57.53	1.305	22720.0	25780.0	271.8	97.79	118.0	261.2	14.0	0.0430	1.06378
460.0	55.22	1.252	23770.0	26960.0	274.4	99.29	118.2	267.8	14.2	0.0441	1.06114
470.0	53.17	1.206	24830.0	28150.0	276.9	100.8	118.6	274.0	14.3	0.0453	1.05879
480.0	51.31	1.164	25900.0	29340.0	279.4	102.4	119.3	279.8	14.5	0.0466	1.05667
490.0	49.62	1.125	26980.0	30530.0	281.9	103.9	120.1	285.4	14.7	0.0480	1.05475
500.0	48.07	1.090	28070.0	31740.0	284.4	105.5	121.0	290.7	14.9	0.0494	1.05299
510.0	46.65	1.058	29170.0	32950.0	286.8	107.1	122.0	295.8	15.1	0.0508	1.05137
520.0	45.32	1.028	30290.0	34180.0	289.1	108.7	123.1	300.7	15.2	0.0522	1.04987
530.0	44.09	0.9999	31420.0	35420.0	291.5	110.2	124.3	305.5	15.4	0.0537	1.04848
540.0	42.95	0.9739	32560.0	36670.0	293.8	111.8	125.5	310.1	15.6	0.0552	1.04718
550.0	41.87	0.9495	33710.0	37930.0	296.1	113.4	126.7	314.5	15.8	0.0567	1.04596
560.0	40.86	0.9265	34880.0	39200.0	298.4	114.9	127.9	318.8	16.0	0.0583	1.04482
580.0	39.00	0.8845	37260.0	41780.0	303.0	118.0	130.5	327.1	16.4	0.0614	1.04273
600.0	37.34	0.8467	39690.0	44420.0	307.4	120.9	133.0	335.0	16.8	0.0646	1.04086
					4.10 MPa isobar						
85.85[a]	734.0	16.65	-21860.0	-21610.0	82.98	59.05	83.97	2171.0	11100.0	0.212	2.09125
200.0	619.1	14.04	-11880.0	-11590.0	156.8	61.20	93.01	1386.0	298.0	0.152	1.86826
250.0	564.1	12.79	-7047.0	-6727.0	178.4	66.51	102.3	1077.0	168.0	0.121	1.77352
260.0	552.2	12.52	-6019.0	-5692.0	182.5	67.86	104.7	1015.0	152.0	0.116	1.75360
280.0	526.9	11.95	-3884.0	-3541.0	190.5	70.82	110.5	890.5	124.0	0.105	1.71191
300.0	498.8	11.31	-1623.0	-1260.0	198.3	74.06	117.9	764.0	102.0	0.0955	1.66653
320.0	466.2	10.57	804.3	1192.0	206.2	77.58	128.0	633.2	82.3	0.0862	1.61511
330.0	447.3	10.14	2101.0	2506.0	210.3	79.48	135.0	564.7	73.2	0.0816	1.58576
340.0	425.5	9.649	3477.0	3902.0	214.4	81.51	144.8	492.3	64.4	0.0770	1.55251
345.0	413.0	9.366	4205.0	4642.0	216.6	82.61	151.7	453.7	60.0	0.0748	1.53372
350.0	399.0	9.048	4970.0	5423.0	218.9	83.78	161.1	412.6	55.5	0.0731	1.51278

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
355.0	382.7	8.677	5789.0	6261.0	221.2	85.08	175.4	367.4	50.7	0.0722	1.48860
356.0	379.0	8.594	5962.0	6439.0	221.7	85.36	179.3	357.7	49.7	0.0723	1.48320
358.0	371.1	8.415	6319.0	6806.0	222.8	85.95	188.9	337.3	47.6	0.0726	1.47165
360.0	362.2	8.214	6697.0	7197.0	223.8	86.61	202.0	315.3	45.4	0.0736	1.45877
362.0	352.0	7.982	7105.0	7619.0	225.0	87.35	221.7	291.1	43.0	0.0753	1.44397
364.0	339.5	7.698	7560.0	8092.0	226.3	88.23	255.6	263.5	40.3	0.0783	1.42606
365.0	331.8	7.524	7817.0	8362.0	227.1	88.76	284.8	247.7	38.7	0.0806	1.41515
366.0	322.4	7.312	8108.0	8669.0	227.9	89.41	334.3	229.8	36.9	0.0838	1.40192
366.5	316.7	7.182	8275.0	8845.0	228.4	89.80	375.9	219.6	35.8	0.0859	1.39389
367.0	309.8	7.026	8465.0	9049.0	228.9	90.26	443.6	208.1	34.6	0.0885	1.38425
367.5	300.8	6.821	8699.0	9300.0	229.6	90.87	579.9	194.6	33.0	0.0917	1.37172
367.530[b]	290.1	6.579	8923.0	9546.0	230.3	91.55	964.2	179.7	31.3	0.0910	1.35695
367.530[b]	149.4	3.389	12170.0	13380.0	240.7	94.70	959.4	147.3	16.5	0.0861	1.17323
370.0	128.5	2.915	13020.0	14420.0	243.5	93.35	357.8	158.7	15.3	0.240	1.14762
370.5	125.6	2.848	13150.0	14590.0	244.0	93.14	325.2	160.8	15.1	0.124	1.14403
371.0	123.0	2.790	13280.0	14750.0	244.4	92.95	300.6	162.7	15.0	0.0985	1.14091
371.5	120.7	2.738	13400.0	14890.0	244.8	92.78	281.3	164.5	14.9	0.0858	1.13814
372.0	118.7	2.691	13510.0	15030.0	245.2	92.63	265.7	166.1	14.8	0.0779	1.13565
373.0	115.1	2.609	13710.0	15280.0	245.9	92.37	241.9	169.3	14.6	0.0683	1.13132
374.0	112.0	2.539	13900.0	15520.0	246.5	92.16	224.4	172.2	14.5	0.0624	1.12761
375.0	109.3	2.478	14080.0	15730.0	247.1	91.98	211.0	174.8	14.4	0.0583	1.12438
376.0	106.9	2.423	14250.0	15940.0	247.6	91.83	200.3	177.3	14.3	0.0553	1.12151
377.0	104.7	2.374	14410.0	16140.0	248.1	91.70	191.6	179.7	14.2	0.0530	1.11892
378.0	102.7	2.330	14560.0	16320.0	248.6	91.60	184.3	181.9	14.1	0.0512	1.11657
380.0	99.24	2.250	14860.0	16680.0	249.6	91.44	172.8	186.1	14.0	0.0484	1.11243
382.0	96.22	2.182	15140.0	17020.0	250.5	91.34	164.1	190.0	13.9	0.0464	1.10885
384.0	93.56	2.122	15400.0	17340.0	251.3	91.28	157.3	193.5	13.8	0.0450	1.10571
386.0	91.18	2.068	15660.0	17650.0	252.1	91.27	151.9	196.9	13.8	0.0439	1.10290
388.0	89.04	2.019	15910.0	17950.0	252.9	91.28	147.4	200.0	13.7	0.0430	1.10037
390.0	87.08	1.975	16160.0	18240.0	253.6	91.32	143.6	203.0	13.7	0.0423	1.09807
392.0	85.27	1.934	16400.0	18520.0	254.3	91.39	140.5	205.9	13.7	0.0418	1.09595
394.0	83.61	1.896	16640.0	18800.0	255.0	91.48	137.8	208.6	13.7	0.0414	1.09400
396.0	82.06	1.861	16870.0	19070.0	255.7	91.59	135.4	211.2	13.6	0.0411	1.09218
398.0	80.61	1.828	17100.0	19340.0	256.4	91.71	133.4	213.7	13.6	0.0408	1.09049
400.0	79.25	1.797	17320.0	19610.0	257.1	91.85	131.6	216.2	13.6	0.0406	1.08890
405.0	76.18	1.728	17880.0	20250.0	258.7	92.26	128.0	221.9	13.6	0.0404	1.08532
410.0	73.49	1.667	18430.0	20890.0	260.2	92.73	125.4	227.1	13.6	0.0403	1.08220
415.0	71.10	1.612	18970.0	21510.0	261.8	93.26	123.4	232.1	13.7	0.0404	1.07942
420.0	68.95	1.564	19500.0	22120.0	263.2	93.84	121.9	236.7	13.7	0.0406	1.07693
425.0	67.00	1.519	20030.0	22730.0	264.7	94.45	120.8	241.1	13.8	0.0409	1.07467
430.0	65.22	1.479	20560.0	23330.0	266.1	95.09	120.0	245.3	13.8	0.0413	1.07261
435.0	63.57	1.442	21090.0	23930.0	267.4	95.76	119.4	249.2	13.9	0.0417	1.07071
440.0	62.05	1.407	21610.0	24530.0	268.8	96.44	119.0	253.0	13.9	0.0422	1.06896
450.0	59.31	1.345	22660.0	25710.0	271.5	97.88	118.6	260.2	14.1	0.0432	1.06581
460.0	56.89	1.290	23720.0	26900.0	274.1	99.36	118.7	266.9	14.2	0.0443	1.06304
470.0	54.74	1.241	24780.0	28090.0	276.6	100.9	119.0	273.2	14.4	0.0455	1.06058
480.0	52.80	1.197	25860.0	29280.0	279.2	102.4	119.6	279.1	14.6	0.0468	1.05836
490.0	51.04	1.158	26940.0	30480.0	281.6	104.0	120.4	284.8	14.7	0.0481	1.05636
500.0	49.43	1.121	28030.0	31690.0	284.1	105.6	121.3	290.1	14.9	0.0495	1.05452
510.0	47.95	1.087	29140.0	32910.0	286.5	107.1	122.3	295.3	15.1	0.0509	1.05284
520.0	46.58	1.056	30250.0	34130.0	288.9	108.7	123.4	300.2	15.3	0.0524	1.05128
530.0	45.31	1.027	31380.0	35370.0	291.2	110.3	124.5	305.0	15.5	0.0538	1.04983
540.0	44.12	1.000	32530.0	36620.0	293.6	111.8	125.6	309.6	15.7	0.0553	1.04849
550.0	43.00	0.9752	33680.0	37890.0	295.9	113.4	126.9	314.1	15.9	0.0568	1.04723
560.0	41.96	0.9514	34850.0	39160.0	298.2	114.9	128.1	318.5	16.1	0.0584	1.04605
580.0	40.04	0.9080	37230.0	41750.0	302.7	118.0	130.6	326.8	16.4	0.0615	1.04388
600.0	38.32	0.8690	39670.0	44390.0	307.2	120.9	133.1	334.7	16.8	0.0646	1.04195

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					4.20 MPa isobar						
85.86[a]	734.0	16.65	-21860.0	-21610.0	82.98	59.06	83.98	2171.0	11100.0	0.212	2.09128
200.0	619.1	14.04	-11880.0	-11580.0	156.8	61.21	93.00	1387.0	298.0	0.152	1.86839
250.0	564.3	12.80	-7051.0	-6723.0	178.4	66.51	102.2	1078.0	168.0	0.121	1.77373
260.0	552.4	12.53	-6024.0	-5688.0	182.5	67.87	104.7	1016.0	152.0	0.116	1.75384
280.0	527.1	11.95	-3890.0	-3538.0	190.4	70.82	110.5	891.8	125.0	0.105	1.71222
300.0	499.1	11.32	-1630.0	-1259.0	198.3	74.06	117.8	765.6	102.0	0.0956	1.66696
320.0	466.6	10.58	793.1	1190.0	206.2	77.58	127.8	635.4	82.5	0.0863	1.61574
330.0	447.8	10.15	2087.0	2501.0	210.2	79.47	134.7	567.3	73.5	0.0817	1.58657
340.0	426.2	9.665	3458.0	3893.0	214.4	81.50	144.3	495.5	64.7	0.0771	1.55360
345.0	413.9	9.386	4182.0	4630.0	216.5	82.58	150.9	457.4	60.3	0.0750	1.53504
350.0	400.1	9.074	4942.0	5405.0	218.8	83.74	159.8	416.8	55.8	0.0732	1.51442
355.0	384.1	8.711	5753.0	6235.0	221.1	85.02	173.1	372.7	51.1	0.0724	1.49078
360.0	364.5	8.265	6645.0	7153.0	223.7	86.51	196.8	322.3	46.0	0.0736	1.46205
362.0	354.8	8.046	7040.0	7562.0	224.8	87.21	213.3	299.3	43.7	0.0753	1.44808
364.0	343.3	7.786	7474.0	8013.0	226.1	88.02	239.7	273.6	41.2	0.0782	1.43161
365.0	336.6	7.632	7712.0	8263.0	226.8	88.50	260.4	259.3	39.7	0.0805	1.42191
366.0	328.6	7.453	7974.0	8537.0	227.5	89.05	291.4	243.5	38.1	0.0838	1.41069
367.0	319.0	7.233	8272.0	8852.0	228.4	89.71	344.2	225.6	36.3	0.0888	1.39703
367.5	313.0	7.098	8443.0	9035.0	228.9	90.11	388.7	215.5	35.2	0.0924	1.38869
368.0	305.8	6.935	8640.0	9246.0	229.4	90.60	461.4	204.2	33.9	0.0974	1.37865
368.5	296.3	6.720	8883.0	9508.0	230.1	91.23	606.7	190.9	32.3	0.105	1.36553
368.6	294.0	6.667	8941.0	9571.0	230.3	91.38	656.3	187.9	32.0	0.107	1.36227
368.8	288.5	6.541	9073.0	9715.0	230.7	91.75	804.1	181.3	31.1	0.112	1.35466
368.802[b]	288.4	6.540	9074.0	9716.0	230.7	91.75	805.6	181.3	31.1	0.112	1.35460
368.802[b]	166.9	3.784	11800.0	12910.0	239.4	95.46	2100.0	144.8	17.7	0.115	1.19490
370.0	150.0	3.401	12380.0	13620.0	241.3	94.75	702.9	150.4	16.6	0.261	1.17389
370.2	146.9	3.332	12490.0	13750.0	241.6	94.59	617.0	151.6	16.4	0.176	1.17013
370.4	144.3	3.273	12580.0	13870.0	242.0	94.44	555.1	152.7	16.2	0.144	1.16692
370.6	142.1	3.221	12670.0	13970.0	242.2	94.31	508.1	153.8	16.1	0.127	1.16410
370.8	140.0	3.175	12750.0	14070.0	242.5	94.19	470.9	154.8	16.0	0.115	1.16159
371.0	138.2	3.133	12820.0	14160.0	242.7	94.07	440.7	155.7	15.9	0.106	1.15932
371.5	134.2	3.042	12990.0	14370.0	243.3	93.81	385.0	158.0	15.6	0.0924	1.15444
372.0	130.8	2.967	13130.0	14550.0	243.8	93.59	346.3	160.1	15.5	0.0836	1.15037
372.5	127.9	2.901	13270.0	14720.0	244.2	93.39	317.8	162.0	15.3	0.0774	1.14687
373.0	125.4	2.844	13390.0	14870.0	244.6	93.22	295.7	163.8	15.2	0.0727	1.14379
373.5	123.1	2.792	13510.0	15010.0	245.0	93.06	278.0	165.5	15.1	0.0691	1.14104
374.0	121.1	2.746	13620.0	15150.0	245.4	92.92	263.5	167.1	15.0	0.0661	1.13856
375.0	117.5	2.664	13820.0	15400.0	246.1	92.68	241.0	170.1	14.8	0.0615	1.13420
376.0	114.4	2.593	14010.0	15630.0	246.7	92.48	224.3	172.9	14.7	0.0581	1.13046
377.0	111.6	2.531	14190.0	15850.0	247.3	92.31	211.3	175.5	14.5	0.0555	1.12718
378.0	109.2	2.476	14360.0	16050.0	247.8	92.16	200.8	178.0	14.4	0.0534	1.12426
379.0	107.0	2.426	14520.0	16250.0	248.3	92.04	192.3	180.3	14.4	0.0517	1.12163
380.0	105.0	2.381	14680.0	16440.0	248.8	91.94	185.1	182.5	14.3	0.0503	1.11923
382.0	101.4	2.300	14970.0	16800.0	249.8	91.79	173.7	186.7	14.2	0.0480	1.11500
384.0	98.34	2.230	15250.0	17140.0	250.6	91.70	165.1	190.5	14.1	0.0464	1.11134
386.0	95.62	2.168	15520.0	17460.0	251.5	91.65	158.3	194.0	14.0	0.0451	1.10812
388.0	93.19	2.113	15780.0	17770.0	252.3	91.63	152.8	197.3	13.9	0.0441	1.10525
390.0	90.99	2.063	16040.0	18070.0	253.1	91.65	148.3	200.5	13.9	0.0434	1.10266
392.0	88.99	2.018	16280.0	18360.0	253.8	91.70	144.5	203.5	13.9	0.0427	1.10030
394.0	87.15	1.976	16520.0	18650.0	254.5	91.77	141.3	206.3	13.8	0.0422	1.09813
396.0	85.44	1.938	16760.0	18930.0	255.2	91.86	138.6	209.0	13.8	0.0418	1.09613
398.0	83.85	1.902	17000.0	19200.0	255.9	91.97	136.2	211.6	13.8	0.0415	1.09427
400.0	82.37	1.868	17230.0	19470.0	256.6	92.09	134.2	214.1	13.8	0.0413	1.09253
405.0	79.05	1.793	17790.0	20130.0	258.3	92.47	130.1	220.0	13.8	0.0409	1.08865
410.0	76.15	1.727	18340.0	20780.0	259.8	92.92	127.1	225.5	13.8	0.0408	1.08527
415.0	73.59	1.669	18890.0	21410.0	261.4	93.43	124.8	230.5	13.8	0.0408	1.08229
420.0	71.30	1.617	19430.0	22030.0	262.8	93.98	123.1	235.3	13.8	0.0410	1.07963
425.0	69.22	1.570	19960.0	22640.0	264.3	94.58	121.9	239.8	13.9	0.0413	1.07723
430.0	67.33	1.527	20490.0	23250.0	265.7	95.21	120.9	244.0	13.9	0.0416	1.07504
435.0	65.59	1.488	21020.0	23850.0	267.1	95.86	120.2	248.1	14.0	0.0420	1.07303

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	63.99	1.451	21550.0	24450.0	268.5	96.54	119.7	251.9	14.0	0.0424	1.07118
445.0	62.50	1.417	22080.0	25050.0	269.8	97.24	119.4	255.7	14.1	0.0429	1.06946
450.0	61.11	1.386	22610.0	25640.0	271.2	97.96	119.2	259.2	14.2	0.0434	1.06786
460.0	58.58	1.328	23670.0	26830.0	273.8	99.43	119.2	266.0	14.3	0.0445	1.06496
470.0	56.33	1.277	24740.0	28030.0	276.3	100.9	119.5	272.4	14.5	0.0457	1.06238
480.0	54.31	1.232	25810.0	29220.0	278.9	102.5	120.0	278.4	14.6	0.0470	1.06007
490.0	52.48	1.190	26900.0	30430.0	281.3	104.0	120.7	284.1	14.8	0.0483	1.05797
500.0	50.80	1.152	27990.0	31640.0	283.8	105.6	121.6	289.5	15.0	0.0497	1.05607
510.0	49.26	1.117	29100.0	32860.0	286.2	107.2	122.5	294.8	15.2	0.0511	1.05432
520.0	47.84	1.085	30220.0	34090.0	288.6	108.7	123.6	299.8	15.3	0.0525	1.05270
530.0	46.52	1.055	31350.0	35330.0	291.0	110.3	124.7	304.6	15.5	0.0540	1.05120
540.0	45.29	1.027	32490.0	36580.0	293.3	111.9	125.8	309.2	15.7	0.0554	1.04980
550.0	44.14	1.001	33650.0	37850.0	295.6	113.4	127.0	313.8	15.9	0.0569	1.04850
560.0	43.06	0.9764	34820.0	39120.0	297.9	114.9	128.2	318.1	16.1	0.0585	1.04728
580.0	41.08	0.9315	37210.0	41710.0	302.5	118.0	130.7	326.5	16.5	0.0616	1.04504
600.0	39.30	0.8913	39640.0	44350.0	306.9	121.0	133.2	334.5	16.9	0.0647	1.04304
					4.30 MPa isobar						
85.87[a]	734.0	16.65	-21860.0	-21600.0	82.98	59.07	83.98	2171.0	11100.0	0.212	2.09131
200.0	619.2	14.04	-11890.0	-11580.0	156.8	61.21	92.99	1388.0	298.0	0.152	1.86851
250.0	564.4	12.80	-7055.0	-6719.0	178.4	66.51	102.2	1079.0	169.0	0.121	1.77395
260.0	552.5	12.53	-6028.0	-5685.0	182.5	67.87	104.7	1017.0	152.0	0.116	1.75408
280.0	527.3	11.96	-3896.0	-3536.0	190.4	70.82	110.4	893.1	125.0	0.105	1.71252
300.0	499.3	11.32	-1638.0	-1258.0	198.3	74.06	117.7	767.3	102.0	0.0957	1.66738
320.0	467.0	10.59	782.0	1188.0	206.2	77.58	127.6	637.5	82.7	0.0864	1.61636
330.0	448.3	10.17	2073.0	2496.0	210.2	79.46	134.4	569.8	73.7	0.0819	1.58736
340.0	426.9	9.681	3440.0	3884.0	214.3	81.48	143.7	498.7	65.0	0.0773	1.55467
345.0	414.8	9.406	4160.0	4618.0	216.5	82.56	150.1	460.9	60.6	0.0752	1.53632
350.0	401.2	9.098	4916.0	5388.0	218.7	83.71	158.6	421.0	56.2	0.0734	1.51602
355.0	385.6	8.744	5718.0	6210.0	221.0	84.96	171.1	377.7	51.6	0.0725	1.49289
360.0	366.6	8.314	6596.0	7113.0	223.6	86.41	192.4	329.0	46.6	0.0736	1.46512
362.0	357.4	8.106	6981.0	7511.0	224.7	87.08	206.5	307.0	44.4	0.0752	1.45184
364.0	346.8	7.864	7397.0	7944.0	225.8	87.85	227.8	282.8	41.9	0.0781	1.43650
366.0	333.7	7.566	7864.0	8433.0	227.2	88.77	265.1	255.2	39.2	0.0837	1.41779
367.0	325.5	7.382	8130.0	8713.0	227.9	89.33	297.5	239.6	37.6	0.0887	1.40629
368.0	315.5	7.156	8434.0	9035.0	228.8	90.01	353.0	221.9	35.7	0.0976	1.39223
368.5	309.4	7.016	8610.0	9222.0	229.3	90.42	399.5	211.9	34.6	0.106	1.38364
369.0	302.0	6.848	8811.0	9439.0	229.9	90.92	474.4	200.9	33.3	0.120	1.37329
369.5	292.2	6.627	9059.0	9708.0	230.6	91.56	619.1	188.2	31.7	0.162	1.35986
369.6	289.8	6.573	9118.0	9772.0	230.8	91.72	666.4	185.4	31.3	0.185	1.35655
369.8	284.3	6.447	9251.0	9918.0	231.2	92.07	799.9	179.3	30.5	0.375	1.34895
370.0	277.3	6.287	9415.0	10100.0	231.7	92.52	1036.0	172.5	29.4	0.228	1.33930
370.2	267.2	6.059	9641.0	10350.0	232.4	93.14	1573.0	164.5	28.0	0.161	1.32560
370.3	259.6	5.888	9806.0	10540.0	232.9	93.59	2208.0	159.7	27.0	0.147	1.31546
370.4	248.1	5.625	10060.0	10820.0	233.7	94.22	3741.0	154.2	25.6	0.136	1.29994
370.6	202.2	4.585	11090.0	12030.0	236.9	95.79	5297.0	145.4	20.7	0.126	1.23974
370.7	188.7	4.278	11430.0	12430.0	238.0	95.85	3078.0	145.4	19.5	0.123	1.22242
370.8	180.7	4.097	11640.0	12680.0	238.7	95.78	2128.0	145.9	18.9	0.119	1.21226
371.0	170.8	3.873	11910.0	13020.0	239.6	95.58	1352.0	147.2	18.1	0.112	1.19982
371.2	164.4	3.728	12100.0	13250.0	240.2	95.39	1020.0	148.5	17.6	0.105	1.19177
371.5	157.6	3.573	12310.0	13520.0	240.9	95.13	770.8	150.3	17.2	0.0980	1.18328
372.0	149.7	3.396	12580.0	13850.0	241.8	94.77	573.2	153.0	16.7	0.0889	1.17357
372.2	147.3	3.340	12670.0	13960.0	242.1	94.65	525.7	154.0	16.5	0.0860	1.17054
372.4	145.1	3.291	12750.0	14060.0	242.4	94.53	487.6	154.9	16.4	0.0835	1.16784
372.6	143.1	3.246	12830.0	14150.0	242.6	94.42	456.4	155.9	16.2	0.0812	1.16540
373.0	139.6	3.166	12970.0	14320.0	243.1	94.22	408.2	157.6	16.0	0.0773	1.16111
373.5	135.9	3.083	13120.0	14520.0	243.6	94.00	364.9	159.7	15.8	0.0733	1.15659
374.0	132.8	3.011	13260.0	14690.0	244.1	93.80	333.1	161.6	15.6	0.0700	1.15273
374.5	130.0	2.948	13390.0	14850.0	244.5	93.62	308.6	163.4	15.5	0.0672	1.14935
375.0	127.5	2.892	13510.0	15000.0	244.9	93.47	289.2	165.1	15.4	0.0649	1.14635
375.5	125.3	2.842	13630.0	15140.0	245.3	93.32	273.3	166.7	15.3	0.0629	1.14365
376.0	123.3	2.796	13740.0	15270.0	245.6	93.19	260.1	168.2	15.2	0.0611	1.14120

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
377.0	119.7	2.714	13940.0	15520.0	246.3	92.97	239.2	171.1	15.0	0.0582	1.13686
378.0	116.6	2.644	14130.0	15750.0	246.9	92.78	223.3	173.9	14.8	0.0558	1.13311
379.0	113.8	2.581	14310.0	15970.0	247.5	92.62	210.9	176.4	14.7	0.0539	1.12982
380.0	111.4	2.526	14470.0	16180.0	248.0	92.48	200.8	178.8	14.6	0.0523	1.12687
381.0	109.2	2.475	14640.0	16370.0	248.5	92.37	192.5	181.1	14.5	0.0509	1.12420
382.0	107.1	2.429	14790.0	16560.0	249.0	92.28	185.5	183.2	14.5	0.0498	1.12177
384.0	103.5	2.347	15090.0	16920.0	250.0	92.14	174.3	187.3	14.3	0.0479	1.11747
386.0	100.4	2.276	15370.0	17260.0	250.9	92.05	165.7	191.1	14.2	0.0464	1.11375
388.0	97.61	2.214	15640.0	17590.0	251.7	92.00	159.0	194.6	14.2	0.0453	1.11046
390.0	95.14	2.157	15900.0	17900.0	252.5	91.99	153.5	197.9	14.1	0.0444	1.10753
392.0	92.90	2.107	16160.0	18200.0	253.3	92.02	149.1	201.0	14.0	0.0437	1.10489
394.0	90.85	2.060	16410.0	18490.0	254.0	92.06	145.3	204.0	14.0	0.0431	1.10248
396.0	88.97	2.018	16650.0	18780.0	254.7	92.14	142.1	206.8	14.0	0.0427	1.10026
398.0	87.23	1.978	16890.0	19060.0	255.5	92.23	139.3	209.5	13.9	0.0423	1.09821
400.0	85.61	1.941	17120.0	19340.0	256.1	92.34	137.0	212.1	13.9	0.0420	1.09631
402.0	84.10	1.907	17360.0	19610.0	256.8	92.47	134.9	214.6	13.9	0.0418	1.09454
405.0	82.00	1.859	17700.0	20010.0	257.8	92.68	132.3	218.2	13.9	0.0415	1.09208
410.0	78.88	1.789	18260.0	20660.0	259.4	93.11	128.9	223.8	13.9	0.0413	1.08843
415.0	76.13	1.726	18810.0	21300.0	261.0	93.59	126.3	229.0	13.9	0.0413	1.08523
420.0	73.69	1.671	19360.0	21930.0	262.5	94.13	124.4	233.8	13.9	0.0414	1.08239
425.0	71.49	1.621	19890.0	22550.0	263.9	94.71	123.0	238.4	14.0	0.0416	1.07983
430.0	69.48	1.576	20430.0	23160.0	265.4	95.33	121.9	242.8	14.0	0.0419	1.07751
435.0	67.65	1.534	20960.0	23770.0	266.8	95.98	121.1	246.9	14.0	0.0423	1.07539
440.0	65.96	1.496	21500.0	24370.0	268.1	96.65	120.5	250.8	14.1	0.0427	1.07343
445.0	64.39	1.460	22030.0	24970.0	269.5	97.34	120.1	254.6	14.2	0.0432	1.07162
450.0	62.93	1.427	22560.0	25570.0	270.8	98.04	119.8	258.3	14.2	0.0437	1.06994
460.0	60.28	1.367	23620.0	26770.0	273.5	99.50	119.7	265.2	14.4	0.0447	1.06690
470.0	57.93	1.314	24690.0	27970.0	276.1	101.0	119.9	271.6	14.5	0.0459	1.06420
480.0	55.83	1.266	25770.0	29170.0	278.6	102.5	120.4	277.7	14.7	0.0472	1.06179
490.0	53.92	1.223	26860.0	30370.0	281.1	104.1	121.1	283.5	14.9	0.0485	1.05961
500.0	52.18	1.183	27950.0	31590.0	283.5	105.6	121.9	289.0	15.0	0.0498	1.05762
510.0	50.58	1.147	29060.0	32810.0	285.9	107.2	122.8	294.2	15.2	0.0512	1.05580
520.0	49.11	1.114	30180.0	34050.0	288.3	108.8	123.8	299.3	15.4	0.0526	1.05413
530.0	47.74	1.083	31320.0	35290.0	290.7	110.3	124.9	304.1	15.6	0.0541	1.05257
540.0	46.47	1.054	32460.0	36540.0	293.1	111.9	126.0	308.8	15.8	0.0555	1.05113
550.0	45.28	1.027	33620.0	37810.0	295.4	113.4	127.2	313.4	15.9	0.0570	1.04978
560.0	44.16	1.001	34790.0	39090.0	297.7	115.0	128.4	317.8	16.1	0.0586	1.04851
580.0	42.12	0.9551	37180.0	41680.0	302.2	118.0	130.9	326.3	16.5	0.0617	1.04620
600.0	40.29	0.9137	39620.0	44320.0	306.7	121.0	133.4	334.3	16.9	0.0648	1.04414
					4.40 MPa isobar						
85.88[a]	734.1	16.65	-21860.0	-21590.0	82.99	59.08	83.98	2171.0	11100.0	0.212	2.09133
200.0	619.3	14.04	-11890.0	-11580.0	156.7	61.21	92.98	1388.0	298.0	0.152	1.86864
250.0	564.5	12.80	-7059.0	-6715.0	178.4	66.52	102.2	1080.0	169.0	0.121	1.77416
260.0	552.7	12.53	-6032.0	-5681.0	182.4	67.87	104.6	1018.0	152.0	0.116	1.75431
280.0	527.5	11.96	-3901.0	-3533.0	190.4	70.82	110.4	894.5	125.0	0.105	1.71283
300.0	499.6	11.33	-1646.0	-1257.0	198.2	74.06	117.6	768.9	102.0	0.0958	1.66780
320.0	467.4	10.60	771.0	1186.0	206.1	77.57	127.4	639.7	82.9	0.0866	1.61698
330.0	448.8	10.18	2059.0	2492.0	210.1	79.46	134.1	572.4	74.0	0.0820	1.58815
340.0	427.6	9.697	3421.0	3875.0	214.3	81.46	143.2	501.7	65.3	0.0775	1.55573
350.0	402.3	9.122	4889.0	5372.0	218.6	83.67	157.5	425.1	56.5	0.0736	1.51758
355.0	387.0	8.775	5685.0	6186.0	220.9	84.91	169.2	382.6	52.0	0.0726	1.49492
360.0	368.6	8.359	6549.0	7076.0	223.4	86.32	188.5	335.3	47.1	0.0736	1.46801
362.0	359.9	8.161	6925.0	7464.0	224.5	86.97	200.7	314.2	44.9	0.0752	1.45533
364.0	349.9	7.934	7328.0	7882.0	225.6	87.69	218.4	291.2	42.6	0.0780	1.44091
366.0	337.9	7.663	7771.0	8345.0	226.9	88.54	247.0	265.7	40.1	0.0835	1.42382
367.0	330.8	7.501	8016.0	8603.0	227.6	89.03	269.5	251.5	38.6	0.0884	1.41371
368.0	322.5	7.313	8286.0	8888.0	228.4	89.60	303.1	235.9	37.0	0.0973	1.40195
369.0	312.2	7.080	8595.0	9216.0	229.3	90.30	360.2	218.5	35.1	0.120	1.38757
369.5	305.9	6.938	8773.0	9408.0	229.8	90.72	407.4	208.8	34.0	0.162	1.37879
370.0	298.3	6.766	8978.0	9628.0	230.4	91.22	481.5	198.2	32.7	0.228	1.36826

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
370.2	294.8	6.685	9070.0	9729.0	230.7	91.45	524.7	193.6	32.2	0.163	1.36334
370.4	290.8	6.594	9172.0	9839.0	231.0	91.71	580.8	188.8	31.5	0.139	1.35784
370.6	286.2	6.491	9284.0	9962.0	231.3	92.01	656.6	183.7	30.8	0.125	1.35159
371.0	274.5	6.224	9565.0	10270.0	232.1	92.75	927.2	172.5	29.1	0.109	1.33550
371.2	266.3	6.039	9753.0	10480.0	232.7	93.25	1192.0	166.3	27.9	0.104	1.32439
371.4	255.2	5.788	10000.0	10760.0	233.4	93.88	1642.0	159.8	26.5	0.0988	1.30952
371.6	239.9	5.440	10340.0	11150.0	234.5	94.66	2276.0	153.7	24.6	0.0948	1.28905
371.8	221.1	5.013	10770.0	11650.0	235.8	95.39	2596.0	149.5	22.6	0.0919	1.26424
372.0	203.5	4.615	11190.0	12150.0	237.2	95.79	2283.0	147.7	20.9	0.0899	1.24144
372.5	177.1	4.017	11890.0	12980.0	239.4	95.74	1200.0	148.6	18.7	0.0854	1.20777
373.0	164.1	3.721	12280.0	13460.0	240.7	95.40	780.0	150.9	17.7	0.0810	1.19136
373.5	155.7	3.532	12550.0	13800.0	241.6	95.09	593.8	153.3	17.1	0.0770	1.18098
374.0	149.6	3.393	12770.0	14070.0	242.3	94.81	490.5	155.6	16.7	0.0737	1.17343
374.2	147.6	3.347	12850.0	14160.0	242.6	94.71	461.0	156.4	16.6	0.0725	1.17089
374.5	144.8	3.284	12960.0	14300.0	242.9	94.57	424.7	157.7	16.4	0.0708	1.16748
375.0	140.8	3.194	13120.0	14500.0	243.5	94.35	379.0	159.6	16.2	0.0683	1.16257
375.5	137.4	3.116	13270.0	14680.0	244.0	94.16	345.3	161.5	16.0	0.0661	1.15840
376.0	134.4	3.049	13400.0	14840.0	244.4	93.99	319.3	163.2	15.8	0.0642	1.15476
376.5	131.8	2.989	13530.0	15000.0	244.8	93.83	298.6	164.9	15.7	0.0625	1.15153
377.0	129.4	2.935	13640.0	15140.0	245.2	93.69	281.7	166.5	15.5	0.0609	1.14863
378.0	125.3	2.841	13860.0	15410.0	245.9	93.44	255.7	169.5	15.3	0.0583	1.14359
379.0	121.7	2.760	14060.0	15660.0	246.6	93.23	236.5	172.3	15.2	0.0562	1.13931
380.0	118.6	2.690	14250.0	15890.0	247.2	93.06	221.7	174.9	15.0	0.0544	1.13558
381.0	115.9	2.628	14430.0	16100.0	247.7	92.91	209.9	177.4	14.9	0.0529	1.13228
382.0	113.4	2.572	14600.0	16310.0	248.3	92.79	200.3	179.7	14.8	0.0516	1.12932
383.0	111.2	2.522	14760.0	16500.0	248.8	92.68	192.3	182.0	14.7	0.0504	1.12664
384.0	109.1	2.475	14910.0	16690.0	249.3	92.60	185.5	184.1	14.6	0.0495	1.12419
386.0	105.5	2.393	15210.0	17050.0	250.2	92.47	174.6	188.1	14.5	0.0478	1.11983
388.0	102.3	2.321	15500.0	17390.0	251.1	92.39	166.2	191.8	14.4	0.0466	1.11606
390.0	99.53	2.257	15770.0	17720.0	251.9	92.35	159.6	195.3	14.3	0.0455	1.11272
392.0	97.02	2.200	16030.0	18030.0	252.7	92.34	154.2	198.5	14.2	0.0447	1.10974
394.0	94.74	2.148	16290.0	18330.0	253.5	92.37	149.7	201.6	14.2	0.0441	1.10705
396.0	92.66	2.101	16540.0	18630.0	254.2	92.42	145.9	204.6	14.1	0.0435	1.10459
398.0	90.74	2.058	16780.0	18920.0	255.0	92.50	142.8	207.4	14.1	0.0431	1.10233
400.0	88.97	2.018	17020.0	19200.0	255.7	92.59	140.0	210.1	14.1	0.0427	1.10025
402.0	87.32	1.980	17260.0	19480.0	256.4	92.70	137.7	212.6	14.1	0.0425	1.09831
404.0	85.78	1.945	17490.0	19750.0	257.0	92.83	135.6	215.1	14.0	0.0422	1.09649
410.0	81.68	1.852	18170.0	20550.0	259.0	93.30	130.8	222.1	14.0	0.0419	1.09169
415.0	78.74	1.786	18730.0	21200.0	260.6	93.76	127.9	227.4	14.0	0.0418	1.08826
420.0	76.13	1.726	19280.0	21830.0	262.1	94.29	125.7	232.4	14.0	0.0418	1.08522
425.0	73.79	1.673	19830.0	22450.0	263.6	94.85	124.1	237.1	14.1	0.0420	1.08249
430.0	71.67	1.625	20360.0	23070.0	265.0	95.45	122.9	241.5	14.1	0.0423	1.08003
435.0	69.73	1.581	20900.0	23680.0	266.4	96.09	121.9	245.7	14.1	0.0426	1.07779
440.0	67.95	1.541	21440.0	24290.0	267.8	96.75	121.3	249.8	14.2	0.0430	1.07572
445.0	66.30	1.504	21970.0	24900.0	269.2	97.43	120.8	253.6	14.2	0.0434	1.07382
450.0	64.77	1.469	22500.0	25500.0	270.5	98.13	120.5	257.3	14.3	0.0439	1.07205
460.0	62.00	1.406	23570.0	26700.0	273.2	99.57	120.2	264.3	14.4	0.0450	1.06886
470.0	59.55	1.350	24650.0	27900.0	275.8	101.1	120.3	270.8	14.6	0.0461	1.06604
480.0	57.35	1.301	25730.0	29110.0	278.3	102.6	120.8	277.0	14.7	0.0473	1.06352
490.0	55.37	1.256	26820.0	30320.0	280.8	104.1	121.4	282.8	14.9	0.0486	1.06125
500.0	53.57	1.215	27920.0	31540.0	283.3	105.7	122.2	288.4	15.1	0.0500	1.05919
510.0	51.91	1.177	29030.0	32760.0	285.7	107.2	123.1	293.7	15.3	0.0513	1.05730
520.0	50.38	1.143	30150.0	34000.0	288.1	108.8	124.0	298.8	15.4	0.0528	1.05556
530.0	48.97	1.110	31280.0	35250.0	290.5	110.4	125.1	303.7	15.6	0.0542	1.05395
540.0	47.65	1.081	32430.0	36500.0	292.8	111.9	126.2	308.5	15.8	0.0557	1.05246
550.0	46.42	1.053	33590.0	37770.0	295.1	113.5	127.4	313.0	16.0	0.0572	1.05106
560.0	45.27	1.027	34760.0	39050.0	297.4	115.0	128.6	317.5	16.2	0.0587	1.04976
580.0	43.16	0.9787	37150.0	41650.0	302.0	118.0	131.0	326.0	16.6	0.0618	1.04737
600.0	41.28	0.9361	39590.0	44290.0	306.5	121.0	133.5	334.1	16.9	0.0649	1.04525

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					4.60 MPa isobar						
85.90[a]	734.1	16.65	-21860.0	-21580.0	82.99	59.10	83.98	2171.0	11100.0	0.212	2.09139
200.0	619.5	14.05	-11890.0	-11570.0	156.7	61.22	92.95	1390.0	299.0	0.152	1.86890
250.0	564.8	12.81	-7067.0	-6708.0	178.4	66.52	102.1	1082.0	169.0	0.122	1.77458
260.0	553.0	12.54	-6041.0	-5674.0	182.4	67.88	104.6	1020.0	153.0	0.116	1.75479
280.0	527.9	11.97	-3913.0	-3528.0	190.4	70.83	110.2	897.1	125.0	0.106	1.71344
300.0	500.2	11.34	-1661.0	-1255.0	198.2	74.06	117.4	772.2	103.0	0.0960	1.66863
320.0	468.2	10.62	749.1	1182.0	206.1	77.56	127.0	643.9	83.4	0.0868	1.61820
330.0	449.9	10.20	2032.0	2483.0	210.1	79.44	133.5	577.3	74.4	0.0823	1.58969
340.0	429.0	9.729	3386.0	3859.0	214.2	81.43	142.1	507.8	65.8	0.0778	1.55779
350.0	404.3	9.168	4839.0	5341.0	218.5	83.61	155.4	433.0	57.2	0.0739	1.52059
355.0	389.6	8.835	5621.0	6142.0	220.7	84.82	165.8	392.0	52.8	0.0729	1.49878
360.0	372.3	8.442	6463.0	7008.0	223.2	86.17	181.9	347.1	48.1	0.0737	1.47336
362.0	364.2	8.260	6824.0	7381.0	224.2	86.77	191.5	327.5	46.1	0.0751	1.46166
364.0	355.3	8.056	7205.0	7776.0	225.3	87.43	204.5	306.5	43.9	0.0777	1.44865
366.0	344.9	7.822	7614.0	8202.0	226.4	88.18	223.3	283.8	41.6	0.0829	1.43382
368.0	332.6	7.541	8066.0	8676.0	227.7	89.04	253.5	258.6	39.0	0.0963	1.41617
369.0	325.2	7.374	8317.0	8941.0	228.5	89.55	277.1	244.7	37.6	0.118	1.40572
370.0	316.5	7.178	8593.0	9234.0	229.3	90.14	311.9	229.7	36.0	0.221	1.39356
370.5	311.5	7.065	8745.0	9396.0	229.7	90.48	336.5	221.7	35.1	0.131	1.38659
371.0	305.9	6.938	8909.0	9572.0	230.2	90.85	368.7	213.2	34.1	0.112	1.37879
371.5	299.5	6.793	9090.0	9767.0	230.7	91.27	413.0	204.3	33.0	0.102	1.36989
372.0	292.0	6.622	9294.0	9988.0	231.3	91.76	476.7	194.8	31.8	0.0950	1.35946
372.2	288.5	6.543	9384.0	10090.0	231.5	91.98	510.5	190.9	31.3	0.0927	1.35472
372.4	284.8	6.458	9481.0	10190.0	231.8	92.22	550.9	186.9	30.7	0.0907	1.34955
374.0	235.8	5.347	10660.0	11520.0	235.4	94.91	1147.0	157.1	24.3	0.0774	1.28357
375.0	197.2	4.471	11630.0	12660.0	238.4	95.89	1027.0	151.9	20.4	0.0727	1.23327
376.0	173.1	3.924	12330.0	13500.0	240.7	95.71	678.6	153.7	18.5	0.0693	1.20261
377.0	159.0	3.606	12800.0	14070.0	242.2	95.30	488.8	157.1	17.5	0.0661	1.18504
378.0	149.6	3.394	13150.0	14510.0	243.3	94.93	389.9	160.5	16.9	0.0633	1.17340
378.5	145.9	3.309	13300.0	14690.0	243.8	94.76	357.2	162.2	16.6	0.0620	1.16882
379.0	142.7	3.236	13440.0	14870.0	244.3	94.60	331.3	163.8	16.4	0.0608	1.16481
379.5	139.8	3.170	13580.0	15030.0	244.7	94.46	310.2	165.4	16.3	0.0597	1.16125
380.0	137.2	3.110	13700.0	15180.0	245.1	94.33	292.8	166.9	16.1	0.0587	1.15804
381.0	132.6	3.007	13930.0	15460.0	245.8	94.09	265.6	169.7	15.9	0.0569	1.15247
382.0	128.7	2.919	14130.0	15710.0	246.5	93.90	245.3	172.4	15.7	0.0554	1.14773
383.0	125.3	2.842	14330.0	15950.0	247.1	93.73	229.6	175.0	15.5	0.0540	1.14362
384.0	122.3	2.774	14510.0	16170.0	247.7	93.58	217.0	177.4	15.4	0.0528	1.13999
385.0	119.6	2.713	14690.0	16380.0	248.3	93.46	206.7	179.7	15.2	0.0517	1.13674
386.0	117.2	2.657	14850.0	16580.0	248.8	93.35	198.1	181.9	15.1	0.0508	1.13380
388.0	112.9	2.560	15170.0	16970.0	249.8	93.20	184.6	186.1	14.9	0.0492	1.12865
390.0	109.2	2.477	15470.0	17330.0	250.7	93.09	174.5	189.9	14.8	0.0479	1.12425
392.0	106.0	2.404	15750.0	17670.0	251.6	93.03	166.5	193.5	14.7	0.0469	1.12040
394.0	103.2	2.339	16030.0	17990.0	252.4	93.01	160.2	196.9	14.6	0.0461	1.11700
396.0	100.6	2.281	16290.0	18310.0	253.2	93.02	155.0	200.0	14.5	0.0454	1.11394
398.0	98.25	2.228	16550.0	18610.0	254.0	93.05	150.6	203.1	14.5	0.0448	1.11117
400.0	96.11	2.180	16800.0	18910.0	254.7	93.11	147.0	206.0	14.4	0.0443	1.10864
402.0	94.14	2.135	17050.0	19200.0	255.4	93.20	143.8	208.7	14.4	0.0439	1.10631
404.0	92.32	2.093	17290.0	19490.0	256.1	93.30	141.1	211.4	14.3	0.0436	1.10415
406.0	90.61	2.055	17530.0	19770.0	256.8	93.41	138.8	213.9	14.3	0.0434	1.10215
408.0	89.02	2.019	17760.0	20040.0	257.5	93.55	136.7	216.4	14.3	0.0432	1.10027
410.0	87.53	1.985	18000.0	20310.0	258.2	93.69	134.9	218.8	14.3	0.0430	1.09852
415.0	84.15	1.908	18570.0	20980.0	259.8	94.11	131.3	224.4	14.3	0.0428	1.09455
420.0	81.18	1.841	19130.0	21630.0	261.3	94.60	128.6	229.6	14.3	0.0427	1.09107
425.0	78.54	1.781	19680.0	22270.0	262.9	95.13	126.5	234.5	14.3	0.0428	1.08799
430.0	76.16	1.727	20230.0	22890.0	264.3	95.70	125.0	239.1	14.3	0.0430	1.08522
435.0	74.00	1.678	20770.0	23520.0	265.8	96.31	123.8	243.5	14.3	0.0433	1.08271
440.0	72.03	1.633	21320.0	24130.0	267.2	96.95	122.9	247.6	14.4	0.0436	1.08041
445.0	70.21	1.592	21860.0	24740.0	268.6	97.62	122.2	251.6	14.4	0.0440	1.07831
450.0	68.52	1.554	22390.0	25350.0	269.9	98.30	121.8	255.4	14.5	0.0445	1.07636
460.0	65.49	1.485	23470.0	26570.0	272.6	99.72	121.3	262.6	14.6	0.0454	1.07285

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	62.82	1.425	24550.0	27780.0	275.2	101.2	121.3	269.3	14.7	0.0465	1.06978
480.0	60.45	1.371	25640.0	29000.0	277.7	102.7	121.5	275.6	14.9	0.0477	1.06704
490.0	58.31	1.322	26730.0	30210.0	280.3	104.2	122.1	281.6	15.0	0.0490	1.06459
500.0	56.36	1.278	27840.0	31440.0	282.7	105.8	122.8	287.3	15.2	0.0503	1.06236
510.0	54.58	1.238	28950.0	32670.0	285.2	107.3	123.6	292.7	15.4	0.0516	1.06033
520.0	52.95	1.201	30080.0	33910.0	287.6	108.9	124.5	297.9	15.5	0.0530	1.05846
530.0	51.44	1.166	31220.0	35160.0	290.0	110.4	125.5	302.9	15.7	0.0544	1.05674
540.0	50.03	1.135	32370.0	36420.0	292.3	112.0	126.6	307.7	15.9	0.0559	1.05514
550.0	48.72	1.105	33530.0	37690.0	294.7	113.5	127.7	312.4	16.1	0.0574	1.05365
560.0	47.49	1.077	34700.0	38980.0	297.0	115.0	128.9	316.9	16.3	0.0589	1.05225
580.0	45.25	1.026	37090.0	41580.0	301.5	118.1	131.3	325.5	16.6	0.0619	1.04972
600.0	43.26	0.9810	39540.0	44230.0	306.0	121.0	133.7	333.7	17.0	0.0651	1.04746
				4.80 MPa isobar							
85.92[a]	734.2	16.65	-21860.0	-21570.0	82.99	59.11	83.99	2171.0	11100.0	0.212	2.09145
200.0	619.6	14.05	-11900.0	-11560.0	156.7	61.23	92.93	1391.0	300.0	0.152	1.86915
250.0	565.1	12.81	-7075.0	-6700.0	178.3	66.53	102.1	1084.0	170.0	0.122	1.77499
260.0	553.3	12.55	-6050.0	-5667.0	182.4	67.89	104.5	1022.0	153.0	0.116	1.75526
280.0	528.3	11.98	-3924.0	-3523.0	190.3	70.83	110.1	899.7	126.0	0.106	1.71405
300.0	500.7	11.35	-1676.0	-1253.0	198.1	74.06	117.2	775.4	103.0	0.0962	1.66945
320.0	469.0	10.64	727.6	1179.0	206.0	77.56	126.6	648.1	83.8	0.0871	1.61940
330.0	450.8	10.22	2005.0	2475.0	210.0	79.43	132.9	582.2	74.9	0.0826	1.59121
340.0	430.3	9.759	3351.0	3843.0	214.1	81.40	141.2	513.7	66.4	0.0782	1.55980
350.0	406.2	9.212	4791.0	5312.0	218.3	83.55	153.5	440.6	57.9	0.0742	1.52346
355.0	392.1	8.891	5561.0	6101.0	220.6	84.73	162.8	401.0	53.5	0.0731	1.50240
360.0	375.6	8.518	6384.0	6947.0	222.9	86.04	176.6	358.1	49.0	0.0738	1.47822
365.0	355.4	8.060	7288.0	7884.0	225.5	87.55	200.7	309.9	44.0	0.0794	1.44889
366.0	350.7	7.953	7485.0	8088.0	226.1	87.90	208.0	299.4	42.9	0.0823	1.44204
368.0	340.1	7.712	7900.0	8522.0	227.3	88.65	227.6	277.0	40.6	0.0950	1.42684
370.0	327.3	7.423	8359.0	9006.0	228.6	89.54	258.7	252.4	38.1	0.213	1.40876
371.0	319.7	7.251	8614.0	9276.0	229.3	90.06	282.5	239.0	36.6	0.111	1.39807
372.0	310.9	7.051	8894.0	9574.0	230.1	90.65	316.5	224.8	35.0	0.0962	1.38572
372.5	305.9	6.937	9046.0	9738.0	230.5	90.99	339.5	217.4	34.2	0.0920	1.37870
373.0	300.3	6.810	9210.0	9915.0	231.0	91.35	368.4	209.7	33.2	0.0885	1.37095
373.5	294.0	6.668	9388.0	10110.0	231.5	91.76	405.4	201.8	32.2	0.0855	1.36226
374.0	286.9	6.506	9584.0	10320.0	232.1	92.22	453.3	193.7	31.1	0.0828	1.35240
374.5	278.6	6.318	9804.0	10560.0	232.7	92.73	515.3	185.5	29.8	0.0802	1.34105
376.0	245.0	5.555	10650.0	11510.0	235.3	94.58	748.8	164.7	25.4	0.0729	1.29574
377.0	218.5	4.954	11330.0	12300.0	237.4	95.58	787.3	157.9	22.5	0.0693	1.26079
378.0	195.4	4.430	11960.0	13040.0	239.3	95.95	694.9	156.2	20.4	0.0667	1.23091
380.0	165.9	3.763	12900.0	14170.0	242.3	95.62	452.5	159.8	18.1	0.0626	1.19363
382.0	149.8	3.397	13530.0	14940.0	244.3	95.08	330.6	165.4	17.0	0.0591	1.17353
382.5	146.8	3.328	13660.0	15100.0	244.8	94.96	311.7	166.7	16.8	0.0583	1.16982
383.0	144.0	3.267	13780.0	15250.0	245.1	94.85	295.6	168.1	16.6	0.0575	1.16646
384.0	139.2	3.158	14020.0	15540.0	245.9	94.64	269.8	170.8	16.4	0.0562	1.16056
385.0	135.1	3.064	14230.0	15800.0	246.6	94.46	249.9	173.3	16.1	0.0550	1.15552
386.0	131.5	2.983	14430.0	16040.0	247.2	94.31	234.3	175.7	16.0	0.0539	1.15113
387.0	128.3	2.910	14620.0	16270.0	247.8	94.18	221.6	178.0	15.8	0.0529	1.14724
388.0	125.5	2.845	14790.0	16480.0	248.3	94.06	211.2	180.3	15.7	0.0520	1.14376
389.0	122.9	2.786	14970.0	16690.0	248.9	93.96	202.4	182.4	15.5	0.0512	1.14061
390.0	120.5	2.732	15130.0	16890.0	249.4	93.88	194.9	184.5	15.4	0.0505	1.13773
392.0	116.3	2.636	15440.0	17260.0	250.3	93.76	182.9	188.4	15.3	0.0492	1.13265
394.0	112.6	2.553	15740.0	17620.0	251.2	93.68	173.6	192.1	15.1	0.0482	1.12825
396.0	109.4	2.480	16020.0	17960.0	252.1	93.64	166.2	195.5	15.0	0.0473	1.12439
398.0	106.5	2.415	16300.0	18290.0	252.9	93.63	160.3	198.8	14.9	0.0466	1.12095
400.0	103.9	2.356	16560.0	18600.0	253.7	93.66	155.3	201.8	14.8	0.0460	1.11785
402.0	101.5	2.302	16820.0	18910.0	254.5	93.71	151.2	204.8	14.8	0.0455	1.11503
404.0	99.35	2.253	17080.0	19210.0	255.2	93.78	147.6	207.6	14.7	0.0451	1.11244
406.0	97.34	2.207	17320.0	19500.0	255.9	93.87	144.6	210.3	14.7	0.0448	1.11006
408.0	95.47	2.165	17570.0	19780.0	256.6	93.98	142.0	212.9	14.6	0.0445	1.10785
410.0	93.73	2.126	17810.0	20070.0	257.3	94.10	139.7	215.4	14.6	0.0443	1.10580
415.0	89.83	2.037	18400.0	20750.0	259.0	94.47	135.1	221.3	14.5	0.0439	1.10120

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
420.0	86.45	1.961	18970.0	21420.0	260.6	94.91	131.7	226.8	14.5	0.0437	1.09722
425.0	83.47	1.893	19540.0	22070.0	262.1	95.41	129.2	231.9	14.5	0.0437	1.09373
430.0	80.81	1.833	20090.0	22710.0	263.6	95.96	127.2	236.7	14.5	0.0438	1.09061
435.0	78.41	1.778	20640.0	23340.0	265.1	96.54	125.7	241.2	14.5	0.0440	1.08781
440.0	76.22	1.728	21190.0	23970.0	266.5	97.16	124.6	245.5	14.6	0.0443	1.08526
445.0	74.22	1.683	21740.0	24590.0	267.9	97.81	123.8	249.6	14.6	0.0446	1.08293
450.0	72.37	1.641	22280.0	25210.0	269.3	98.48	123.1	253.6	14.6	0.0450	1.08078
455.0	70.65	1.602	22830.0	25820.0	270.7	99.16	122.7	257.3	14.7	0.0455	1.07879
460.0	69.05	1.566	23370.0	26440.0	272.0	99.87	122.4	261.0	14.7	0.0459	1.07694
470.0	66.16	1.500	24460.0	27660.0	274.6	101.3	122.2	267.9	14.9	0.0470	1.07359
480.0	63.58	1.442	25550.0	28880.0	277.2	102.8	122.3	274.3	15.0	0.0481	1.07063
490.0	61.28	1.390	26650.0	30110.0	279.7	104.3	122.8	280.4	15.2	0.0493	1.06797
500.0	59.19	1.342	27760.0	31340.0	282.2	105.8	123.4	286.2	15.3	0.0506	1.06558
510.0	57.29	1.299	28880.0	32570.0	284.7	107.4	124.1	291.7	15.5	0.0519	1.06339
520.0	55.54	1.259	30010.0	33820.0	287.1	108.9	125.0	297.0	15.6	0.0533	1.06139
530.0	53.93	1.223	31150.0	35070.0	289.5	110.5	126.0	302.1	15.8	0.0547	1.05955
540.0	52.43	1.189	32300.0	36340.0	291.8	112.0	127.0	307.0	16.0	0.0561	1.05784
550.0	51.03	1.157	33470.0	37610.0	294.2	113.5	128.1	311.7	16.2	0.0576	1.05626
560.0	49.73	1.128	34640.0	38900.0	296.5	115.1	129.2	316.3	16.3	0.0591	1.05477
580.0	47.36	1.074	37040.0	41510.0	301.1	118.1	131.6	325.0	16.7	0.0621	1.05208
600.0	45.25	1.026	39490.0	44160.0	305.6	121.0	134.0	333.3	17.1	0.0652	1.04969
					5.00 MPa isobar						
85.93[a]	734.2	16.65	-21860.0	-21560.0	82.99	59.13	83.99	2172.0	11100.0	0.212	2.09150
200.0	619.8	14.05	-11900.0	-11550.0	156.7	61.24	92.91	1392.0	300.0	0.152	1.86941
250.0	565.3	12.82	-7082.0	-6692.0	178.3	66.54	102.0	1086.0	170.0	0.122	1.77541
260.0	553.6	12.55	-6059.0	-5661.0	182.3	67.89	104.4	1025.0	154.0	0.116	1.75572
280.0	528.7	11.99	-3935.0	-3518.0	190.3	70.84	110.0	902.3	126.0	0.106	1.71465
300.0	501.2	11.37	-1691.0	-1251.0	198.1	74.06	117.0	778.6	103.0	0.0964	1.67027
320.0	469.8	10.65	706.4	1176.0	205.9	77.55	126.2	652.2	84.2	0.0873	1.62058
330.0	451.8	10.25	1979.0	2467.0	209.9	79.41	132.3	587.0	75.4	0.0829	1.59269
340.0	431.6	9.788	3317.0	3828.0	214.0	81.38	140.3	519.5	66.9	0.0785	1.56174
350.0	408.1	9.254	4744.0	5285.0	218.2	83.50	151.8	447.9	58.5	0.0746	1.52621
355.0	394.4	8.944	5504.0	6064.0	220.4	84.66	160.2	409.5	54.3	0.0734	1.50581
360.0	378.7	8.588	6310.0	6893.0	222.7	85.92	172.2	368.3	49.8	0.0738	1.48270
365.0	359.9	8.162	7185.0	7798.0	225.2	87.35	191.7	323.0	45.1	0.0790	1.45533
366.0	355.6	8.064	7372.0	7992.0	225.7	87.67	197.3	313.3	44.1	0.0817	1.44909
368.0	346.2	7.850	7763.0	8400.0	226.8	88.35	211.2	292.8	42.0	0.0936	1.43553
370.0	335.3	7.604	8184.0	8841.0	228.0	89.12	231.2	270.9	39.7	0.205	1.42004
371.0	329.1	7.464	8409.0	9079.0	228.7	89.55	244.9	259.3	38.5	0.109	1.41129
372.0	322.3	7.309	8648.0	9332.0	229.4	90.02	262.3	247.2	37.2	0.0960	1.40166
373.0	314.6	7.135	8905.0	9606.0	230.1	90.54	285.3	234.6	35.8	0.0894	1.39087
374.0	305.8	6.935	9185.0	9906.0	230.9	91.13	316.6	221.4	34.2	0.0848	1.37855
375.0	295.4	6.700	9497.0	10240.0	231.8	91.80	360.5	207.7	32.5	0.0809	1.36415
375.5	289.5	6.564	9668.0	10430.0	232.3	92.18	388.8	200.9	31.6	0.0791	1.35593
376.0	282.9	6.415	9853.0	10630.0	232.8	92.60	422.2	194.0	30.6	0.0774	1.34687
378.0	249.2	5.651	10750.0	11630.0	235.5	94.48	576.2	170.9	26.0	0.0705	1.30133
380.0	210.7	4.779	11790.0	12840.0	238.7	95.84	592.5	161.2	21.9	0.0654	1.25072
382.0	181.3	4.111	12690.0	13910.0	241.5	96.00	470.5	161.4	19.3	0.0620	1.21295
384.0	162.5	3.685	13370.0	14730.0	243.6	95.66	358.8	165.3	18.0	0.0592	1.18928
390.0	133.9	3.036	14740.0	16390.0	247.9	94.70	223.7	179.2	16.2	0.0531	1.15395
391.0	130.9	2.968	14920.0	16600.0	248.5	94.60	213.5	181.3	16.1	0.0523	1.15030
392.0	128.2	2.906	15090.0	16810.0	249.0	94.51	204.9	183.4	15.9	0.0516	1.14700
393.0	125.7	2.850	15260.0	17010.0	249.5	94.44	197.5	185.4	15.8	0.0510	1.14397
394.0	123.4	2.797	15420.0	17210.0	250.0	94.38	191.1	187.3	15.7	0.0504	1.14119
396.0	119.2	2.704	15730.0	17580.0	250.9	94.29	180.5	191.0	15.5	0.0494	1.13621
398.0	115.6	2.622	16030.0	17930.0	251.8	94.24	172.2	194.5	15.4	0.0485	1.13187
400.0	112.4	2.550	16310.0	18270.0	252.7	94.22	165.4	197.8	15.3	0.0478	1.12803
402.0	109.6	2.485	16580.0	18590.0	253.5	94.24	159.9	200.9	15.2	0.0472	1.12458
404.0	107.0	2.425	16850.0	18910.0	254.3	94.27	155.3	203.9	15.1	0.0467	1.12147
406.0	104.6	2.371	17110.0	19220.0	255.0	94.34	151.3	206.8	15.0	0.0463	1.11862
408.0	102.4	2.321	17360.0	19520.0	255.8	94.42	148.0	209.5	15.0	0.0459	1.11600

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
410.0	100.3	2.275	17610.0	19810.0	256.5	94.52	145.1	212.1	14.9	0.0456	1.11359
412.0	98.44	2.232	17860.0	20100.0	257.2	94.64	142.6	214.7	14.9	0.0453	1.11134
414.0	96.68	2.192	18100.0	20380.0	257.9	94.77	140.4	217.1	14.8	0.0451	1.10925
420.0	91.98	2.086	18810.0	21200.0	259.8	95.24	135.2	224.1	14.8	0.0447	1.10369
425.0	88.61	2.009	19380.0	21870.0	261.4	95.70	132.0	229.4	14.7	0.0446	1.09973
430.0	85.63	1.942	19950.0	22530.0	263.0	96.22	129.7	234.4	14.7	0.0446	1.09622
435.0	82.96	1.881	20510.0	23170.0	264.4	96.78	127.8	239.1	14.7	0.0448	1.09309
440.0	80.54	1.826	21070.0	23810.0	265.9	97.37	126.4	243.5	14.8	0.0450	1.09026
445.0	78.33	1.776	21620.0	24430.0	267.3	98.00	125.4	247.7	14.8	0.0453	1.08769
450.0	76.30	1.730	22170.0	25060.0	268.7	98.65	124.6	251.8	14.8	0.0456	1.08533
455.0	74.43	1.688	22720.0	25680.0	270.1	99.32	124.0	255.7	14.9	0.0460	1.08315
460.0	72.69	1.648	23270.0	26300.0	271.4	100.0	123.6	259.4	14.9	0.0465	1.08112
470.0	69.55	1.577	24360.0	27530.0	274.1	101.4	123.2	266.4	15.0	0.0474	1.07748
480.0	66.77	1.514	25460.0	28760.0	276.7	102.9	123.2	273.0	15.1	0.0485	1.07427
490.0	64.29	1.458	26570.0	30000.0	279.2	104.4	123.5	279.3	15.3	0.0497	1.07141
500.0	62.05	1.407	27680.0	31230.0	281.7	105.9	124.0	285.2	15.4	0.0510	1.06884
510.0	60.02	1.361	28800.0	32480.0	284.2	107.5	124.7	290.8	15.6	0.0523	1.06650
520.0	58.15	1.319	29940.0	33730.0	286.6	109.0	125.5	296.2	15.7	0.0536	1.06436
530.0	56.43	1.280	31080.0	34990.0	289.0	110.5	126.4	301.3	15.9	0.0550	1.06239
540.0	54.84	1.244	32240.0	36260.0	291.4	112.1	127.4	306.3	16.1	0.0564	1.06058
550.0	53.36	1.210	33400.0	37540.0	293.7	113.6	128.5	311.1	16.3	0.0578	1.05889
560.0	51.98	1.179	34580.0	38830.0	296.1	115.1	129.6	315.7	16.4	0.0593	1.05731
570.0	50.69	1.149	35780.0	40130.0	298.4	116.6	130.7	320.2	16.6	0.0608	1.05584
580.0	49.47	1.122	36980.0	41440.0	300.6	118.1	131.8	324.6	16.8	0.0623	1.05446
600.0	47.24	1.071	39430.0	44100.0	305.2	121.1	134.2	332.9	17.2	0.0654	1.05193
					5.50 MPa isobar						
85.98[a]	734.3	16.65	-21860.0	-21530.0	82.99	59.17	84.00	2172.0	11100.0	0.213	2.09164
200.0	620.2	14.06	-11910.0	-11520.0	156.6	61.26	92.85	1396.0	301.0	0.153	1.87004
250.0	566.0	12.83	-7102.0	-6673.0	178.2	66.55	101.9	1091.0	171.0	0.122	1.77644
260.0	554.3	12.57	-6081.0	-5643.0	182.3	67.91	104.2	1030.0	155.0	0.117	1.75688
280.0	529.6	12.01	-3963.0	-3505.0	190.2	70.85	109.7	908.7	127.0	0.106	1.71615
300.0	502.5	11.40	-1728.0	-1245.0	198.0	74.06	116.5	786.5	104.0	0.0969	1.67227
320.0	471.7	10.70	654.7	1169.0	205.8	77.54	125.3	662.3	85.3	0.0879	1.62346
330.0	454.2	10.30	1916.0	2450.0	209.7	79.38	131.0	598.7	76.5	0.0836	1.59628
340.0	434.7	9.858	3237.0	3795.0	213.7	81.32	138.3	533.4	68.2	0.0793	1.56639
350.0	412.4	9.352	4635.0	5224.0	217.9	83.39	148.2	465.1	60.0	0.0754	1.53261
355.0	399.7	9.064	5374.0	5981.0	220.0	84.49	154.9	429.2	55.9	0.0741	1.51361
360.0	385.5	8.742	6147.0	6777.0	222.2	85.68	163.9	391.5	51.8	0.0741	1.49260
365.0	369.2	8.372	6969.0	7626.0	224.6	86.97	176.7	351.3	47.5	0.0782	1.46871
370.0	349.6	7.927	7862.0	8556.0	227.1	88.44	197.2	307.7	42.9	0.184	1.44036
372.0	340.3	7.718	8250.0	8962.0	228.2	89.11	209.5	288.9	40.9	0.0938	1.42712
374.0	329.9	7.481	8662.0	9397.0	229.4	89.85	225.9	269.4	38.8	0.0854	1.41228
376.0	317.8	7.208	9107.0	9870.0	230.6	90.68	248.6	249.0	36.5	0.0809	1.39529
377.0	311.0	7.053	9346.0	10130.0	231.3	91.13	263.2	238.7	35.3	0.0789	1.38575
378.0	303.6	6.884	9599.0	10400.0	232.0	91.63	280.6	228.2	34.0	0.0771	1.37533
379.0	295.3	6.697	9867.0	10690.0	232.8	92.16	301.2	217.9	32.7	0.0752	1.36391
380.0	286.2	6.490	10150.0	11000.0	233.6	92.73	324.7	207.9	31.3	0.0732	1.35136
390.0	181.6	4.117	13460.0	14790.0	243.5	96.33	332.0	171.9	19.6	0.0587	1.21321
391.0	174.7	3.963	13720.0	15110.0	244.3	96.28	310.9	173.1	19.1	0.0579	1.20459
392.0	168.7	3.826	13980.0	15410.0	245.0	96.21	291.5	174.5	18.7	0.0571	1.19702
393.0	163.4	3.705	14210.0	15700.0	245.8	96.12	274.2	176.1	18.3	0.0564	1.19034
394.0	158.6	3.598	14430.0	15960.0	246.4	96.04	259.1	177.8	18.0	0.0557	1.18442
395.0	154.4	3.501	14640.0	16210.0	247.1	95.96	246.0	179.6	17.7	0.0551	1.17913
396.0	150.5	3.414	14840.0	16460.0	247.7	95.88	234.5	181.4	17.5	0.0545	1.17437
397.0	147.1	3.335	15040.0	16680.0	248.3	95.81	224.5	183.2	17.3	0.0539	1.17006
398.0	143.9	3.262	15220.0	16900.0	248.8	95.75	215.8	185.0	17.1	0.0534	1.16613
399.0	140.9	3.196	15400.0	17120.0	249.4	95.70	208.2	186.8	17.0	0.0529	1.16253
400.0	138.2	3.135	15570.0	17320.0	249.9	95.65	201.4	188.5	16.8	0.0524	1.15921
402.0	133.4	3.025	15890.0	17710.0	250.8	95.58	190.1	191.9	16.6	0.0516	1.15328
404.0	129.1	2.928	16200.0	18080.0	251.8	95.55	181.0	195.2	16.4	0.0508	1.14811

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
406.0	125.4	2.843	16500.0	18440.0	252.6	95.54	173.5	198.4	16.2	0.0502	1.14354
408.0	122.0	2.766	16790.0	18780.0	253.5	95.55	167.4	201.4	16.1	0.0496	1.13946
410.0	118.9	2.697	17070.0	19110.0	254.3	95.59	162.2	204.4	15.9	0.0491	1.13577
412.0	116.2	2.634	17340.0	19430.0	255.1	95.65	157.8	207.2	15.8	0.0487	1.13242
414.0	113.6	2.576	17600.0	19740.0	255.8	95.73	154.0	209.9	15.8	0.0483	1.12935
416.0	111.2	2.523	17860.0	20040.0	256.5	95.83	150.7	212.5	15.7	0.0480	1.12652
418.0	109.1	2.473	18120.0	20340.0	257.3	95.94	147.9	215.1	15.6	0.0478	1.12390
420.0	107.0	2.427	18370.0	20640.0	258.0	96.07	145.4	217.5	15.6	0.0475	1.12146
422.0	105.1	2.383	18620.0	20920.0	258.6	96.21	143.2	219.9	15.5	0.0473	1.11918
425.0	102.4	2.323	18980.0	21350.0	259.7	96.44	140.4	223.3	15.4	0.0471	1.11601
430.0	98.48	2.233	19580.0	22040.0	261.3	96.88	136.6	228.8	15.4	0.0469	1.11131
435.0	95.00	2.154	20160.0	22720.0	262.8	97.38	133.7	233.9	15.3	0.0468	1.10719
440.0	91.90	2.084	20740.0	23380.0	264.3	97.92	131.5	238.7	15.3	0.0469	1.10353
445.0	89.11	2.021	21310.0	24030.0	265.8	98.49	129.8	243.2	15.3	0.0470	1.10024
450.0	86.57	1.963	21880.0	24680.0	267.3	99.10	128.5	247.5	15.3	0.0473	1.09726
455.0	84.25	1.911	22440.0	25320.0	268.7	99.73	127.5	251.7	15.3	0.0475	1.09453
460.0	82.11	1.862	23000.0	25950.0	270.1	100.4	126.7	255.6	15.3	0.0479	1.09203
465.0	80.13	1.817	23560.0	26590.0	271.4	101.1	126.2	259.4	15.4	0.0483	1.08971
470.0	78.29	1.775	24120.0	27220.0	272.8	101.8	125.8	263.1	15.4	0.0487	1.08756
480.0	74.95	1.700	25230.0	28470.0	275.4	103.2	125.3	270.1	15.5	0.0497	1.08368
490.0	72.00	1.633	26360.0	29720.0	278.0	104.6	125.3	276.6	15.6	0.0507	1.08025
500.0	69.35	1.573	27480.0	30980.0	280.5	106.1	125.6	282.8	15.7	0.0519	1.07719
510.0	66.96	1.519	28620.0	32240.0	283.0	107.6	126.1	288.6	15.9	0.0531	1.07443
520.0	64.79	1.469	29760.0	33500.0	285.5	109.1	126.8	294.2	16.0	0.0544	1.07192
530.0	62.80	1.424	30910.0	34770.0	287.9	110.7	127.5	299.6	16.2	0.0557	1.06963
540.0	60.96	1.382	32070.0	36050.0	290.3	112.2	128.4	304.7	16.3	0.0571	1.06751
550.0	59.25	1.344	33250.0	37340.0	292.7	113.7	129.4	309.6	16.5	0.0585	1.06556
560.0	57.67	1.308	34430.0	38640.0	295.0	115.2	130.4	314.4	16.7	0.0599	1.06375
570.0	56.19	1.274	35630.0	39950.0	297.3	116.7	131.5	319.0	16.8	0.0614	1.06205
580.0	54.80	1.243	36840.0	41270.0	299.6	118.2	132.6	323.5	17.0	0.0628	1.06047
600.0	52.27	1.185	39300.0	43940.0	304.2	121.1	134.8	332.1	17.3	0.0659	1.05758
					6.00 MPa isobar						
86.03[a]	734.4	16.65	-21860.0	-21500.0	82.99	59.21	84.01	2172.0	11100.0	0.213	2.09178
200.0	620.6	14.07	-11930.0	-11500.0	156.5	61.28	92.80	1399.0	303.0	0.153	1.87067
250.0	566.6	12.85	-7121.0	-6654.0	178.1	66.57	101.7	1095.0	172.0	0.123	1.77747
260.0	555.0	12.59	-6102.0	-5625.0	182.2	67.92	104.1	1035.0	155.0	0.117	1.75803
280.0	530.5	12.03	-3990.0	-3492.0	190.1	70.86	109.5	915.0	128.0	0.107	1.71761
300.0	503.7	11.42	-1764.0	-1239.0	197.8	74.07	116.1	794.3	105.0	0.0974	1.67423
320.0	473.5	10.74	604.6	1163.0	205.6	77.52	124.5	672.1	86.3	0.0885	1.62624
330.0	456.4	10.35	1855.0	2435.0	209.5	79.35	129.9	610.0	77.6	0.0842	1.59971
340.0	437.6	9.924	3161.0	3765.0	213.5	81.27	136.5	546.6	69.4	0.0800	1.57076
350.0	416.3	9.441	4536.0	5171.0	217.5	83.29	145.2	481.1	61.4	0.0762	1.53846
360.0	391.3	8.874	6005.0	6682.0	221.8	85.49	157.9	412.0	53.5	0.0745	1.50113
365.0	376.7	8.542	6791.0	7493.0	224.0	86.69	167.3	375.4	49.5	0.0776	1.47959
370.0	359.9	8.160	7625.0	8360.0	226.4	88.01	180.5	336.7	45.3	0.166	1.45511
372.0	352.3	7.989	7977.0	8728.0	227.4	88.58	187.5	320.6	43.6	0.0911	1.44420
374.0	344.1	7.804	8342.0	9111.0	228.4	89.18	195.9	304.0	41.8	0.0845	1.43246
376.0	335.2	7.601	8724.0	9513.0	229.5	89.83	206.2	287.1	40.0	0.0812	1.41971
378.0	325.3	7.377	9124.0	9938.0	230.6	90.52	219.0	269.9	38.0	0.0787	1.40572
380.0	314.3	7.127	9549.0	10390.0	231.8	91.28	235.0	252.5	36.0	0.0764	1.39021
382.0	301.8	6.844	10000.0	10880.0	233.1	92.10	254.6	235.5	33.9	0.0740	1.37285
384.0	287.7	6.525	10490.0	11410.0	234.5	92.99	277.1	219.5	31.7	0.0714	1.35341
386.0	272.0	6.169	11020.0	11990.0	236.0	93.93	299.4	205.5	29.4	0.0687	1.33195
390.0	237.9	5.396	12140.0	13250.0	239.2	95.60	323.4	187.3	25.2	0.0637	1.28620
392.0	221.4	5.021	12700.0	13890.0	240.9	96.18	320.1	182.9	23.4	0.0617	1.26446
393.0	213.7	4.845	12970.0	14210.0	241.7	96.38	314.9	181.7	22.7	0.0608	1.25436
394.0	206.3	4.679	13240.0	14520.0	242.5	96.54	307.7	181.0	22.0	0.0601	1.24486
395.0	199.5	4.524	13500.0	14820.0	243.2	96.65	299.0	180.8	21.4	0.0594	1.23602
396.0	193.1	4.379	13750.0	15120.0	244.0	96.72	289.3	180.9	20.8	0.0587	1.22785
397.0	187.2	4.246	13990.0	15400.0	244.7	96.76	279.0	181.4	20.4	0.0581	1.22033
398.0	181.8	4.122	14220.0	15680.0	245.4	96.77	268.6	182.1	19.9	0.0575	1.21343

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
399.0	176.8	4.009	14440.0	15940.0	246.1	96.77	258.5	183.0	19.6	0.0570	1.20711
400.0	172.2	3.905	14660.0	16190.0	246.7	96.76	248.8	184.1	19.2	0.0565	1.20132
401.0	168.0	3.809	14860.0	16440.0	247.3	96.74	239.7	185.3	18.9	0.0560	1.19601
402.0	164.1	3.721	15060.0	16670.0	247.9	96.72	231.3	186.6	18.7	0.0556	1.19113
403.0	160.5	3.639	15250.0	16900.0	248.5	96.70	223.5	188.0	18.4	0.0551	1.18663
404.0	157.1	3.563	15440.0	17120.0	249.0	96.68	216.4	189.4	18.2	0.0547	1.18247
406.0	151.1	3.427	15790.0	17540.0	250.0	96.65	204.1	192.3	17.9	0.0540	1.17502
408.0	145.9	3.308	16130.0	17940.0	251.0	96.63	193.8	195.2	17.6	0.0533	1.16855
410.0	141.3	3.203	16440.0	18320.0	251.9	96.63	185.2	198.1	17.3	0.0527	1.16284
412.0	137.1	3.109	16750.0	18680.0	252.8	96.65	178.0	201.0	17.1	0.0521	1.15777
414.0	133.4	3.025	17050.0	19030.0	253.7	96.69	171.9	203.8	16.9	0.0516	1.15322
416.0	130.0	2.948	17330.0	19370.0	254.5	96.74	166.7	206.5	16.8	0.0512	1.14910
418.0	126.9	2.878	17610.0	19700.0	255.3	96.82	162.2	209.2	16.6	0.0508	1.14535
420.0	124.1	2.814	17890.0	20020.0	256.0	96.91	158.3	211.8	16.5	0.0505	1.14191
422.0	121.5	2.754	18150.0	20330.0	256.8	97.01	154.9	214.3	16.4	0.0502	1.13874
424.0	119.0	2.699	18410.0	20640.0	257.5	97.13	151.9	216.8	16.3	0.0499	1.13580
426.0	116.7	2.648	18670.0	20940.0	258.2	97.26	149.3	219.2	16.3	0.0497	1.13306
428.0	114.6	2.599	18930.0	21240.0	258.9	97.40	147.0	221.5	16.2	0.0495	1.13050
430.0	112.6	2.554	19180.0	21530.0	259.6	97.56	144.9	223.8	16.1	0.0494	1.12810
435.0	108.1	2.452	19790.0	22240.0	261.2	97.98	140.7	229.2	16.0	0.0491	1.12269
440.0	104.1	2.362	20390.0	22940.0	262.8	98.46	137.4	234.3	15.9	0.0490	1.11797
445.0	100.6	2.282	20990.0	23620.0	264.4	98.99	134.9	239.1	15.9	0.0490	1.11379
450.0	97.48	2.211	21570.0	24290.0	265.9	99.55	132.9	243.7	15.9	0.0491	1.11005
455.0	94.62	2.146	22150.0	24950.0	267.3	100.1	131.4	248.1	15.8	0.0492	1.10667
460.0	92.01	2.087	22720.0	25600.0	268.8	100.8	130.2	252.2	15.8	0.0495	1.10359
465.0	89.62	2.032	23300.0	26250.0	270.2	101.4	129.3	256.2	15.8	0.0497	1.10077
470.0	87.40	1.982	23870.0	26890.0	271.5	102.1	128.6	260.1	15.9	0.0501	1.09816
475.0	85.35	1.935	24430.0	27530.0	272.9	102.8	128.0	263.8	15.9	0.0505	1.09575
480.0	83.43	1.892	25000.0	28170.0	274.2	103.5	127.7	267.4	15.9	0.0509	1.09350
490.0	79.95	1.813	26140.0	29450.0	276.9	104.9	127.3	274.2	16.0	0.0518	1.08943
500.0	76.85	1.743	27280.0	30720.0	279.4	106.3	127.3	280.6	16.1	0.0529	1.08583
510.0	74.08	1.680	28420.0	31990.0	282.0	107.8	127.6	286.7	16.2	0.0540	1.08260
520.0	71.57	1.623	29580.0	33270.0	284.4	109.3	128.1	292.5	16.3	0.0552	1.07969
530.0	69.28	1.571	30740.0	34560.0	286.9	110.8	128.7	298.0	16.5	0.0565	1.07704
540.0	67.17	1.523	31910.0	35850.0	289.3	112.3	129.5	303.3	16.6	0.0578	1.07461
550.0	65.23	1.479	33090.0	37150.0	291.7	113.8	130.3	308.4	16.7	0.0591	1.07237
560.0	63.43	1.438	34280.0	38450.0	294.0	115.3	131.3	313.3	16.9	0.0605	1.07030
570.0	61.75	1.400	35490.0	39770.0	296.4	116.8	132.3	318.1	17.1	0.0619	1.06837
580.0	60.19	1.365	36700.0	41100.0	298.7	118.3	133.3	322.7	17.2	0.0634	1.06657
600.0	57.33	1.300	39170.0	43790.0	303.2	121.2	135.5	331.5	17.6	0.0663	1.06331
					6.50 MPa isobar						
86.07[a]	734.5	16.66	-21860.0	-21470.0	83.00	59.26	84.01	2173.0	11200.0	0.213	2.09192
200.0	620.9	14.08	-11940.0	-11480.0	156.5	61.29	92.74	1402.0	304.0	0.153	1.87129
250.0	567.2	12.86	-7140.0	-6635.0	178.1	66.59	101.6	1100.0	173.0	0.123	1.77848
260.0	555.7	12.60	-6123.0	-5607.0	182.1	67.94	103.9	1040.0	156.0	0.117	1.75916
280.0	531.5	12.05	-4017.0	-3478.0	190.0	70.87	109.2	921.3	129.0	0.107	1.71906
300.0	505.0	11.45	-1799.0	-1231.0	197.7	74.07	115.7	801.9	106.0	0.0979	1.67615
320.0	475.2	10.78	556.2	1159.0	205.4	77.51	123.8	681.6	87.3	0.0891	1.62893
330.0	458.6	10.40	1797.0	2422.0	209.3	79.33	128.8	620.8	78.7	0.0849	1.60299
340.0	440.3	9.986	3088.0	3739.0	213.3	81.22	134.9	559.1	70.6	0.0808	1.57488
350.0	419.9	9.523	4443.0	5125.0	217.3	83.21	142.6	496.0	62.8	0.0769	1.54386
360.0	396.4	8.990	5879.0	6602.0	221.4	85.33	153.3	430.6	55.1	0.0749	1.50867
365.0	383.0	8.686	6638.0	7386.0	223.6	86.48	160.6	396.5	51.3	0.0772	1.48884
370.0	368.0	8.346	7433.0	8212.0	225.8	87.70	170.1	361.2	47.4	0.150	1.46692
372.0	361.5	8.197	7763.0	8556.0	226.8	88.21	174.8	346.8	45.8	0.0886	1.45740
374.0	354.5	8.040	8103.0	8911.0	227.7	88.75	180.1	332.1	44.2	0.0832	1.44736
376.0	347.1	7.872	8452.0	9278.0	228.7	89.31	186.3	317.2	42.6	0.0807	1.43672
378.0	339.2	7.692	8812.0	9657.0	229.7	89.89	193.5	302.1	40.9	0.0789	1.42539
380.0	330.7	7.499	9186.0	10050.0	230.7	90.51	201.9	286.9	39.2	0.0774	1.41325
382.0	321.4	7.289	9574.0	10470.0	231.8	91.16	211.6	271.8	37.5	0.0758	1.40019
384.0	311.4	7.061	9979.0	10900.0	233.0	91.85	222.8	257.0	35.7	0.0742	1.38608

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
386.0	300.4	6.813	10400.0	11360.0	234.2	92.57	235.2	242.8	33.8	0.0724	1.37083
388.0	288.5	6.543	10850.0	11840.0	235.4	93.33	248.1	229.7	32.0	0.0704	1.35443
390.0	275.8	6.255	11310.0	12350.0	236.7	94.09	260.1	218.1	30.1	0.0684	1.33703
395.0	242.3	5.494	12520.0	13700.0	240.1	95.81	276.3	198.4	25.9	0.0636	1.29186
396.0	235.6	5.344	12760.0	13980.0	240.8	96.08	276.3	196.1	25.2	0.0628	1.28310
398.0	222.9	5.055	13240.0	14530.0	242.2	96.53	273.0	192.7	23.8	0.0613	1.26634
400.0	211.0	4.786	13710.0	15070.0	243.6	96.87	266.0	190.9	22.7	0.0601	1.25089
402.0	200.3	4.541	14160.0	15590.0	244.9	97.09	256.1	190.4	21.7	0.0590	1.23694
404.0	190.6	4.322	14590.0	16090.0	246.1	97.24	244.6	190.8	20.9	0.0581	1.22454
406.0	182.0	4.127	14990.0	16570.0	247.3	97.33	232.6	191.9	20.2	0.0573	1.21362
408.0	174.4	3.955	15380.0	17020.0	248.4	97.38	221.1	193.6	19.7	0.0565	1.20404
410.0	167.7	3.803	15740.0	17450.0	249.5	97.42	210.5	195.6	19.2	0.0558	1.19561
412.0	161.8	3.668	16090.0	17860.0	250.5	97.46	201.1	197.8	18.8	0.0552	1.18817
414.0	156.5	3.548	16430.0	18260.0	251.4	97.50	192.7	200.2	18.5	0.0547	1.18156
416.0	151.7	3.440	16750.0	18640.0	252.3	97.54	185.5	202.7	18.2	0.0542	1.17565
418.0	147.4	3.343	17060.0	19000.0	253.2	97.60	179.1	205.2	18.0	0.0537	1.17034
420.0	143.5	3.254	17360.0	19350.0	254.1	97.67	173.6	207.7	17.8	0.0533	1.16552
422.0	139.9	3.173	17650.0	19700.0	254.9	97.75	168.8	210.1	17.6	0.0530	1.16114
424.0	136.6	3.099	17930.0	20030.0	255.7	97.85	164.5	212.6	17.4	0.0526	1.15712
426.0	133.6	3.030	18210.0	20350.0	256.4	97.95	160.8	215.0	17.3	0.0523	1.15342
428.0	130.8	2.966	18480.0	20670.0	257.2	98.07	157.5	217.4	17.2	0.0521	1.15000
430.0	128.2	2.907	18750.0	20980.0	257.9	98.20	154.6	219.7	17.1	0.0519	1.14682
432.0	125.7	2.852	19010.0	21290.0	258.6	98.34	152.0	221.9	17.0	0.0517	1.14386
434.0	123.5	2.800	19270.0	21590.0	259.3	98.49	149.7	224.2	16.9	0.0515	1.14108
440.0	117.3	2.661	20030.0	22470.0	261.3	99.00	144.1	230.6	16.7	0.0511	1.13371
445.0	113.0	2.561	20650.0	23180.0	262.9	99.48	140.6	235.6	16.6	0.0510	1.12843
450.0	109.1	2.473	21250.0	23880.0	264.5	100.0	137.8	240.4	16.5	0.0509	1.12377
455.0	105.6	2.394	21850.0	24560.0	266.0	100.6	135.7	244.9	16.4	0.0510	1.11960
460.0	102.4	2.323	22440.0	25240.0	267.5	101.1	134.0	249.3	16.4	0.0511	1.11584
465.0	99.54	2.257	23020.0	25900.0	268.9	101.8	132.6	253.5	16.4	0.0513	1.11243
470.0	96.90	2.198	23610.0	26560.0	270.3	102.4	131.6	257.5	16.3	0.0516	1.10930
475.0	94.47	2.142	24190.0	27220.0	271.7	103.1	130.8	261.3	16.3	0.0519	1.10642
480.0	92.21	2.091	24760.0	27870.0	273.1	103.7	130.2	265.0	16.3	0.0522	1.10376
490.0	88.14	1.999	25920.0	29170.0	275.8	105.1	129.4	272.1	16.4	0.0530	1.09896
500.0	84.55	1.917	27070.0	30460.0	278.4	106.5	129.1	278.8	16.5	0.0540	1.09476
510.0	81.36	1.845	28230.0	31750.0	280.9	108.0	129.1	285.0	16.5	0.0550	1.09102
520.0	78.48	1.780	29390.0	33040.0	283.4	109.5	129.4	291.0	16.6	0.0561	1.08766
530.0	75.87	1.721	30560.0	34340.0	285.9	110.9	129.9	296.7	16.8	0.0573	1.08463
540.0	73.49	1.666	31740.0	35640.0	288.3	112.4	130.5	302.1	16.9	0.0586	1.08185
550.0	71.29	1.617	32930.0	36950.0	290.7	113.9	131.3	307.4	17.0	0.0598	1.07931
560.0	69.26	1.571	34130.0	38270.0	293.1	115.4	132.1	312.4	17.2	0.0612	1.07697
570.0	67.38	1.528	35340.0	39600.0	295.5	116.9	133.1	317.3	17.3	0.0625	1.07479
580.0	65.62	1.488	36560.0	40930.0	297.8	118.4	134.0	322.0	17.5	0.0639	1.07277
590.0	63.98	1.451	37800.0	42280.0	300.1	119.8	135.1	326.5	17.6	0.0654	1.07088
600.0	62.44	1.416	39040.0	43630.0	302.4	121.3	136.1	331.0	17.8	0.0668	1.06911
					7.00 MPa isobar						
86.12[a]	734.6	16.66	-21860.0	-21440.0	83.00	59.30	84.02	2173.0	11200.0	0.213	2.09206
200.0	621.3	14.09	-11950.0	-11450.0	156.4	61.31	92.69	1406.0	305.0	0.153	1.87191
250.0	567.9	12.88	-7159.0	-6615.0	178.0	66.60	101.5	1105.0	174.0	0.123	1.77948
260.0	556.4	12.62	-6144.0	-5589.0	182.0	67.95	103.7	1046.0	157.0	0.118	1.76028
280.0	532.4	12.07	-4044.0	-3464.0	189.9	70.88	109.0	927.4	130.0	0.108	1.72048
300.0	506.2	11.48	-1833.0	-1224.0	197.6	74.08	115.3	809.3	107.0	0.0984	1.67802
320.0	476.9	10.81	509.3	1157.0	205.3	77.51	123.1	690.8	88.3	0.0897	1.63153
340.0	442.9	10.04	3020.0	3717.0	213.0	81.18	133.5	571.1	71.7	0.0815	1.57879
350.0	423.3	9.599	4356.0	5085.0	217.0	83.14	140.5	510.1	64.1	0.0777	1.54888
360.0	401.0	9.094	5764.0	6534.0	221.1	85.21	149.7	447.6	56.6	0.0754	1.51546
370.0	374.9	8.502	7269.0	8092.0	225.4	87.46	162.9	382.8	49.3	0.137	1.47687
375.0	359.7	8.157	8071.0	8929.0	227.6	88.68	172.3	349.3	45.5	0.0809	1.45474
380.0	342.4	7.766	8918.0	9820.0	230.0	90.01	184.5	315.2	41.7	0.0776	1.42994
382.0	334.8	7.593	9273.0	10190.0	230.9	90.57	190.4	301.6	40.2	0.0765	1.41909
384.0	326.7	7.410	9637.0	10580.0	232.0	91.16	197.1	288.1	38.6	0.0754	1.40763

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
386.0	318.1	7.214	10010.0	10980.0	233.0	91.76	204.4	274.9	37.0	0.0742	1.39550
388.0	309.0	7.006	10400.0	11400.0	234.1	92.39	212.2	262.1	35.4	0.0729	1.38266
390.0	299.2	6.786	10800.0	11830.0	235.2	93.04	220.4	250.1	33.8	0.0715	1.36911
392.0	288.9	6.552	11210.0	12280.0	236.3	93.70	228.4	239.0	32.2	0.0699	1.35491
394.0	278.2	6.309	11640.0	12750.0	237.5	94.35	235.6	229.1	30.6	0.0683	1.34018
400.0	244.8	5.552	12940.0	14200.0	241.2	96.11	246.6	208.6	26.4	0.0637	1.29521
402.0	234.0	5.307	13380.0	14690.0	242.4	96.58	245.9	204.7	25.2	0.0625	1.28089
404.0	223.7	5.073	13800.0	15180.0	243.6	96.96	243.1	202.0	24.1	0.0613	1.26731
406.0	214.0	4.852	14220.0	15670.0	244.8	97.27	238.4	200.4	23.2	0.0604	1.25462
408.0	204.9	4.648	14630.0	16140.0	246.0	97.51	232.2	199.7	22.4	0.0595	1.24292
410.0	196.6	4.459	15020.0	16590.0	247.1	97.70	225.1	199.7	21.6	0.0587	1.23224
412.0	189.1	4.288	15400.0	17040.0	248.2	97.85	217.4	200.3	21.0	0.0580	1.22255
414.0	182.2	4.132	15770.0	17460.0	249.2	97.97	209.7	201.4	20.5	0.0574	1.21380
416.0	176.0	3.990	16120.0	17880.0	250.2	98.07	202.3	202.9	20.1	0.0569	1.20591
418.0	170.3	3.862	16460.0	18270.0	251.1	98.17	195.3	204.6	19.7	0.0564	1.19878
420.0	165.2	3.745	16790.0	18660.0	252.1	98.26	188.9	206.4	19.3	0.0559	1.19233
422.0	160.5	3.639	17110.0	19030.0	252.9	98.35	183.1	208.5	19.0	0.0555	1.18647
424.0	156.2	3.542	17410.0	19390.0	253.8	98.44	177.9	210.6	18.8	0.0552	1.18113
426.0	152.2	3.452	17710.0	19740.0	254.6	98.55	173.2	212.7	18.6	0.0548	1.17624
428.0	148.6	3.370	18010.0	20080.0	255.4	98.66	168.9	214.9	18.4	0.0545	1.17175
430.0	145.2	3.293	18290.0	20420.0	256.2	98.78	165.2	217.1	18.2	0.0542	1.16760
432.0	142.1	3.223	18570.0	20740.0	257.0	98.91	161.8	219.3	18.0	0.0540	1.16376
434.0	139.2	3.157	18850.0	21060.0	257.7	99.04	158.8	221.4	17.9	0.0538	1.16019
436.0	136.5	3.095	19120.0	21380.0	258.4	99.19	156.1	223.6	17.8	0.0536	1.15685
438.0	133.9	3.037	19380.0	21690.0	259.1	99.34	153.6	225.7	17.7	0.0534	1.15374
440.0	131.5	2.983	19650.0	21990.0	259.8	99.51	151.4	227.8	17.6	0.0533	1.15081
445.0	126.1	2.859	20290.0	22740.0	261.5	99.95	146.8	232.8	17.4	0.0530	1.14421
450.0	121.3	2.751	20920.0	23460.0	263.1	100.4	143.2	237.7	17.2	0.0529	1.13845
455.0	117.1	2.656	21540.0	24170.0	264.7	101.0	140.3	242.4	17.1	0.0528	1.13336
460.0	113.3	2.570	22140.0	24870.0	266.2	101.5	138.1	246.9	17.0	0.0528	1.12881
465.0	109.9	2.492	22740.0	25550.0	267.7	102.1	136.2	251.2	16.9	0.0529	1.12471
470.0	106.8	2.422	23340.0	26230.0	269.2	102.7	134.8	255.3	16.9	0.0531	1.12098
475.0	103.9	2.357	23930.0	26900.0	270.6	103.3	133.7	259.3	16.8	0.0533	1.11757
480.0	101.3	2.297	24520.0	27570.0	272.0	104.0	132.8	263.1	16.8	0.0536	1.11444
485.0	98.84	2.242	25110.0	28230.0	273.3	104.7	132.1	266.8	16.8	0.0539	1.11153
490.0	96.57	2.190	25690.0	28890.0	274.7	105.3	131.6	270.4	16.8	0.0543	1.10884
500.0	92.44	2.096	26860.0	30200.0	277.3	106.7	130.9	277.2	16.9	0.0551	1.10397
510.0	88.79	2.014	28030.0	31510.0	279.9	108.2	130.7	283.7	16.9	0.0561	1.09967
520.0	85.53	1.939	29210.0	32820.0	282.5	109.6	130.8	289.8	17.0	0.0571	1.09584
530.0	82.58	1.873	30390.0	34130.0	285.0	111.1	131.1	295.6	17.1	0.0582	1.09238
540.0	79.89	1.812	31580.0	35440.0	287.4	112.6	131.6	301.2	17.2	0.0594	1.08924
550.0	77.43	1.756	32770.0	36760.0	289.8	114.0	132.3	306.6	17.3	0.0606	1.08638
560.0	75.16	1.704	33980.0	38090.0	292.2	115.5	133.0	311.7	17.4	0.0619	1.08374
570.0	73.06	1.657	35200.0	39420.0	294.6	117.0	133.9	316.7	17.6	0.0632	1.08131
580.0	71.11	1.613	36420.0	40760.0	296.9	118.5	134.8	321.5	17.7	0.0645	1.07904
590.0	69.28	1.571	37660.0	42120.0	299.2	119.9	135.7	326.1	17.8	0.0659	1.07694
600.0	67.58	1.532	38910.0	43480.0	301.5	121.4	136.7	330.6	18.0	0.0673	1.07497
					7.50 MPa isobar						
86.17[a]	734.7	16.66	-21860.0	-21410.0	83.00	59.34	84.03	2174.0	11200.0	0.213	2.09220
200.0	621.7	14.10	-11960.0	-11430.0	156.4	61.33	92.64	1409.0	307.0	0.154	1.87253
250.0	568.5	12.89	-7177.0	-6596.0	177.9	66.62	101.3	1110.0	175.0	0.124	1.78047
260.0	557.1	12.63	-6165.0	-5571.0	181.9	67.97	103.6	1051.0	158.0	0.118	1.76138
280.0	533.2	12.09	-4070.0	-3449.0	189.8	70.90	108.7	933.5	131.0	0.108	1.72188
300.0	507.4	11.51	-1867.0	-1215.0	197.5	74.08	114.9	816.6	108.0	0.0989	1.67985
320.0	478.5	10.85	463.7	1155.0	205.1	77.50	122.4	699.8	89.2	0.0903	1.63405
340.0	445.4	10.10	2954.0	3697.0	212.8	81.15	132.3	582.6	72.8	0.0822	1.58251
350.0	426.4	9.671	4275.0	5050.0	216.8	83.08	138.6	523.5	65.3	0.0784	1.55359
360.0	405.2	9.190	5659.0	6475.0	220.8	85.10	146.7	463.5	58.0	0.0759	1.52166
370.0	380.8	8.636	7125.0	7993.0	224.9	87.27	157.6	402.2	50.9	0.127	1.48553
375.0	367.0	8.323	7897.0	8799.0	227.1	88.43	164.8	371.0	47.4	0.0801	1.46531

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
380.0	351.7	7.976	8703.0	9644.0	229.3	89.65	173.6	339.6	43.8	0.0775	1.44319
385.0	334.6	7.588	9550.0	10540.0	231.7	90.95	184.6	308.4	40.3	0.0756	1.41872
386.0	330.9	7.505	9725.0	10720.0	232.1	91.22	187.0	302.3	39.5	0.0752	1.41351
388.0	323.3	7.332	10080.0	11100.0	233.1	91.78	192.2	290.3	38.1	0.0743	1.40273
390.0	315.3	7.151	10440.0	11490.0	234.1	92.35	197.6	278.7	36.6	0.0733	1.39148
392.0	306.9	6.961	10820.0	11890.0	235.2	92.92	203.2	267.6	35.2	0.0722	1.37977
394.0	298.2	6.762	11200.0	12310.0	236.2	93.51	208.8	257.2	33.8	0.0709	1.36761
400.0	270.2	6.128	12380.0	13600.0	239.5	95.24	222.3	231.7	29.7	0.0670	1.32930
405.0	246.5	5.589	13390.0	14730.0	242.3	96.49	226.3	218.1	26.8	0.0640	1.29733
406.0	241.8	5.484	13590.0	14950.0	242.8	96.71	226.1	216.2	26.2	0.0635	1.29116
408.0	232.8	5.279	13980.0	15400.0	243.9	97.11	224.9	213.1	25.3	0.0625	1.27920
410.0	224.1	5.083	14380.0	15850.0	245.0	97.45	222.5	210.9	24.4	0.0616	1.26782
412.0	215.9	4.897	14760.0	16290.0	246.1	97.74	219.0	209.5	23.6	0.0608	1.25709
414.0	208.2	4.722	15140.0	16730.0	247.2	97.99	214.8	208.7	22.9	0.0600	1.24706
416.0	201.0	4.558	15510.0	17150.0	248.2	98.20	209.9	208.6	22.3	0.0594	1.23775
418.0	194.3	4.406	15870.0	17570.0	249.2	98.39	204.7	208.9	21.7	0.0588	1.22916
420.0	188.1	4.266	16210.0	17970.0	250.1	98.55	199.3	209.6	21.2	0.0583	1.22124
422.0	182.4	4.136	16550.0	18360.0	251.1	98.69	194.0	210.6	20.8	0.0579	1.21396
424.0	177.1	4.016	16880.0	18750.0	252.0	98.83	188.9	211.9	20.4	0.0575	1.20728
426.0	172.2	3.906	17200.0	19120.0	252.8	98.96	184.0	213.4	20.1	0.0571	1.20114
428.0	167.7	3.803	17510.0	19480.0	253.7	99.09	179.5	215.0	19.8	0.0568	1.19548
430.0	163.6	3.709	17820.0	19840.0	254.5	99.23	175.3	216.8	19.5	0.0565	1.19026
432.0	159.7	3.621	18110.0	20180.0	255.3	99.36	171.4	218.6	19.3	0.0562	1.18543
434.0	156.1	3.539	18410.0	20520.0	256.1	99.50	167.9	220.5	19.1	0.0559	1.18095
436.0	152.7	3.463	18690.0	20860.0	256.9	99.64	164.6	222.4	18.9	0.0557	1.17678
438.0	149.6	3.392	18970.0	21180.0	257.6	99.79	161.7	224.4	18.7	0.0555	1.17289
440.0	146.6	3.325	19250.0	21500.0	258.4	99.95	159.0	226.3	18.6	0.0553	1.16926
442.0	143.9	3.263	19520.0	21820.0	259.1	100.1	156.6	228.3	18.4	0.0552	1.16586
445.0	140.0	3.175	19920.0	22280.0	260.1	100.4	153.3	231.2	18.3	0.0550	1.16112
450.0	134.3	3.045	20580.0	23040.0	261.8	100.8	148.8	235.9	18.0	0.0547	1.15409
455.0	129.2	2.930	21210.0	23770.0	263.4	101.3	145.2	240.6	17.8	0.0546	1.14794
460.0	124.7	2.828	21840.0	24490.0	265.0	101.9	142.4	245.1	17.7	0.0545	1.14248
465.0	120.7	2.737	22460.0	25200.0	266.5	102.4	140.1	249.4	17.6	0.0546	1.13760
470.0	117.0	2.654	23070.0	25890.0	268.0	103.0	138.2	253.6	17.5	0.0547	1.13320
475.0	113.7	2.579	23670.0	26580.0	269.5	103.6	136.7	257.7	17.4	0.0548	1.12920
480.0	110.7	2.509	24270.0	27260.0	270.9	104.3	135.5	261.6	17.4	0.0550	1.12554
485.0	107.8	2.445	24870.0	27940.0	272.3	104.9	134.6	265.3	17.3	0.0553	1.12217
490.0	105.2	2.386	25460.0	28610.0	273.7	105.6	133.8	269.0	17.3	0.0556	1.11905
500.0	100.5	2.279	26650.0	29940.0	276.4	106.9	132.9	276.0	17.3	0.0563	1.11345
510.0	96.37	2.186	27830.0	31270.0	279.0	108.3	132.4	282.6	17.3	0.0571	1.10855
520.0	92.69	2.102	29020.0	32590.0	281.6	109.8	132.2	288.8	17.3	0.0581	1.10420
530.0	89.38	2.027	30210.0	33910.0	284.1	111.2	132.4	294.8	17.4	0.0591	1.10030
540.0	86.37	1.959	31410.0	35240.0	286.6	112.7	132.8	300.5	17.5	0.0602	1.09677
550.0	83.63	1.897	32610.0	36570.0	289.0	114.1	133.3	305.9	17.6	0.0614	1.09356
560.0	81.11	1.839	33830.0	37900.0	291.4	115.6	133.9	311.2	17.7	0.0626	1.09062
570.0	78.79	1.787	35050.0	39250.0	293.8	117.1	134.7	316.2	17.8	0.0639	1.08791
580.0	76.63	1.738	36280.0	40600.0	296.1	118.5	135.5	321.1	17.9	0.0652	1.08540
590.0	74.62	1.692	37530.0	41960.0	298.5	120.0	136.4	325.8	18.1	0.0665	1.08307
600.0	72.74	1.650	38780.0	43330.0	300.8	121.4	137.4	330.4	18.2	0.0679	1.08089
				8.00 MPa isobar							
86.21[a]	734.8	16.66	-21860.0	-21380.0	83.01	59.38	84.04	2174.0	11200.0	0.213	2.09234
200.0	622.1	14.11	-11970.0	-11400.0	156.3	61.35	92.58	1412.0	308.0	0.154	1.87315
250.0	569.1	12.91	-7196.0	-6576.0	177.8	66.64	101.2	1114.0	176.0	0.124	1.78146
260.0	557.8	12.65	-6185.0	-5553.0	181.8	67.99	103.4	1056.0	159.0	0.119	1.76247
280.0	534.1	12.11	-4095.0	-3435.0	189.7	70.91	108.5	939.4	131.0	0.109	1.72325
300.0	508.5	11.53	-1900.0	-1207.0	197.4	74.09	114.5	823.8	109.0	0.0993	1.68165
320.0	480.1	10.89	419.4	1154.0	205.0	77.49	121.8	708.6	90.2	0.0908	1.63650
340.0	447.7	10.15	2891.0	3679.0	212.6	81.12	131.1	593.7	73.9	0.0828	1.58607
350.0	429.4	9.738	4198.0	5019.0	216.5	83.02	137.0	536.2	66.4	0.0791	1.55802
360.0	409.1	9.277	5561.0	6424.0	220.5	85.01	144.2	478.3	59.3	0.0765	1.52737

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
370.0	386.1	8.756	6996.0	7909.0	224.5	87.12	153.4	419.9	52.4	0.118	1.49323
375.0	373.3	8.466	7746.0	8691.0	226.6	88.22	159.2	390.4	49.1	0.0795	1.47447
380.0	359.4	8.151	8522.0	9503.0	228.8	89.38	166.0	361.1	45.7	0.0774	1.45427
385.0	344.2	7.806	9328.0	10350.0	231.0	90.59	174.1	332.0	42.3	0.0760	1.43239
390.0	327.5	7.427	10170.0	11250.0	233.3	91.86	183.5	304.0	39.0	0.0743	1.40856
395.0	309.1	7.009	11050.0	12190.0	235.7	93.18	193.6	278.0	35.7	0.0722	1.38269
400.0	289.1	6.557	11960.0	13180.0	238.2	94.52	203.1	255.8	32.6	0.0696	1.35505
410.0	247.6	5.614	13840.0	15270.0	243.4	96.93	211.5	227.0	27.1	0.0643	1.29871
412.0	239.6	5.433	14220.0	15690.0	244.4	97.32	210.9	223.8	26.2	0.0634	1.28807
414.0	231.8	5.257	14590.0	16110.0	245.4	97.67	209.5	221.3	25.4	0.0626	1.27784
416.0	224.4	5.088	14960.0	16530.0	246.4	97.98	207.5	219.5	24.6	0.0619	1.26806
418.0	217.3	4.928	15320.0	16940.0	247.4	98.27	204.8	218.2	23.9	0.0613	1.25879
420.0	210.6	4.775	15670.0	17350.0	248.4	98.52	201.6	217.5	23.3	0.0607	1.25005
422.0	204.2	4.631	16020.0	17750.0	249.3	98.75	198.1	217.2	22.8	0.0601	1.24184
424.0	198.3	4.496	16360.0	18140.0	250.3	98.95	194.4	217.3	22.3	0.0597	1.23416
426.0	192.7	4.369	16690.0	18530.0	251.2	99.14	190.5	217.8	21.8	0.0592	1.22700
428.0	187.4	4.251	17020.0	18900.0	252.1	99.32	186.6	218.6	21.4	0.0589	1.22032
430.0	182.6	4.140	17340.0	19270.0	252.9	99.49	182.7	219.5	21.0	0.0585	1.21411
432.0	178.0	4.036	17650.0	19630.0	253.8	99.65	179.0	220.7	20.7	0.0582	1.20833
434.0	173.7	3.940	17960.0	19990.0	254.6	99.81	175.4	222.1	20.4	0.0579	1.20295
436.0	169.7	3.849	18260.0	20340.0	255.4	99.97	172.1	223.5	20.2	0.0577	1.19793
438.0	166.0	3.764	18550.0	20680.0	256.2	100.1	169.0	225.1	19.9	0.0574	1.19325
440.0	162.5	3.685	18840.0	21010.0	256.9	100.3	166.0	226.7	19.7	0.0572	1.18886
442.0	159.2	3.610	19130.0	21340.0	257.7	100.5	163.3	228.4	19.5	0.0570	1.18476
444.0	156.1	3.540	19410.0	21670.0	258.4	100.6	160.8	230.1	19.4	0.0569	1.18090
446.0	153.2	3.474	19680.0	21980.0	259.1	100.8	158.5	231.8	19.2	0.0567	1.17728
450.0	147.8	3.352	20220.0	22610.0	260.5	101.2	154.4	235.3	18.9	0.0565	1.17063
455.0	141.8	3.217	20880.0	23370.0	262.2	101.7	150.2	239.7	18.7	0.0563	1.16330
460.0	136.6	3.097	21530.0	24110.0	263.8	102.2	146.8	244.1	18.4	0.0562	1.15684
465.0	131.9	2.990	22160.0	24840.0	265.4	102.7	144.0	248.4	18.3	0.0562	1.15110
470.0	127.6	2.894	22790.0	25550.0	266.9	103.3	141.7	252.5	18.1	0.0562	1.14595
475.0	123.8	2.807	23410.0	26260.0	268.4	103.9	139.8	256.6	18.0	0.0563	1.14129
480.0	120.3	2.728	24020.0	26950.0	269.9	104.5	138.4	260.5	17.9	0.0564	1.13705
485.0	117.1	2.655	24630.0	27640.0	271.3	105.1	137.1	264.3	17.9	0.0566	1.13317
490.0	114.1	2.587	25230.0	28320.0	272.7	105.8	136.2	268.0	17.8	0.0569	1.12959
495.0	111.3	2.524	25830.0	29000.0	274.1	106.5	135.4	271.6	17.8	0.0572	1.12628
500.0	108.8	2.466	26440.0	29680.0	275.4	107.1	134.8	275.1	17.7	0.0575	1.12320
510.0	104.1	2.360	27630.0	31020.0	278.1	108.5	134.1	281.8	17.7	0.0583	1.11764
520.0	99.96	2.267	28830.0	32360.0	280.7	109.9	133.7	288.2	17.7	0.0591	1.11274
530.0	96.27	2.183	30030.0	33700.0	283.2	111.4	133.7	294.2	17.8	0.0601	1.10837
540.0	92.93	2.107	31240.0	35040.0	285.7	112.8	133.9	300.0	17.8	0.0611	1.10443
550.0	89.90	2.039	32450.0	36380.0	288.2	114.3	134.3	305.5	17.9	0.0622	1.10086
560.0	87.12	1.976	33670.0	37720.0	290.6	115.7	134.9	310.9	18.0	0.0634	1.09759
570.0	84.56	1.918	34900.0	39070.0	293.0	117.2	135.5	316.0	18.1	0.0646	1.09459
580.0	82.19	1.864	36140.0	40430.0	295.4	118.6	136.3	321.0	18.2	0.0658	1.09183
590.0	79.99	1.814	37390.0	41800.0	297.7	120.1	137.1	325.7	18.3	0.0671	1.08926
600.0	77.94	1.767	38650.0	43180.0	300.0	121.5	138.0	330.4	18.5	0.0684	1.08687
					9.00 MPa isobar						
86.30[a]	735.0	16.67	-21850.0	-21310.0	83.01	59.45	84.06	2175.0	11200.0	0.213	2.09262
200.0	622.8	14.12	-11990.0	-11360.0	156.2	61.39	92.48	1419.0	311.0	0.155	1.87437
250.0	570.3	12.93	-7232.0	-6536.0	177.7	66.67	101.0	1124.0	178.0	0.125	1.78339
260.0	559.2	12.68	-6225.0	-5516.0	181.7	68.02	103.2	1066.0	161.0	0.119	1.76462
280.0	535.8	12.15	-4146.0	-3405.0	189.5	70.93	108.1	951.1	133.0	0.109	1.72595
300.0	510.7	11.58	-1965.0	-1188.0	197.1	74.10	113.8	837.7	111.0	0.100	1.68514
320.0	483.2	10.96	334.3	1156.0	204.7	77.49	120.7	725.5	92.0	0.0919	1.64119
340.0	452.1	10.25	2773.0	3651.0	212.3	81.07	129.2	614.7	76.0	0.0841	1.59273
350.0	434.8	9.861	4055.0	4967.0	216.1	82.94	134.2	559.9	68.7	0.0805	1.56619
360.0	416.0	9.434	5385.0	6339.0	219.9	84.87	140.2	505.5	61.8	0.0777	1.53764
370.0	395.2	8.962	6770.0	7775.0	223.9	86.88	147.3	451.5	55.2	0.105	1.50657
375.0	383.9	8.706	7487.0	8521.0	225.9	87.92	151.4	424.7	52.0	0.0786	1.48989
380.0	371.9	8.435	8222.0	9289.0	227.9	88.99	156.0	398.2	48.9	0.0771	1.47232

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
385.0	359.2	8.145	8977.0	10080.0	230.0	90.08	161.1	372.2	45.8	0.0762	1.45375
390.0	345.5	7.835	9753.0	10900.0	232.1	91.21	166.8	346.9	42.8	0.0754	1.43409
395.0	330.9	7.504	10550.0	11750.0	234.3	92.37	172.9	322.8	39.9	0.0743	1.41328
400.0	315.4	7.152	11370.0	12630.0	236.5	93.55	179.0	300.6	37.1	0.0728	1.39136
405.0	299.0	6.781	12210.0	13540.0	238.7	94.73	184.7	281.1	34.4	0.0710	1.36858
410.0	282.2	6.399	13070.0	14480.0	241.0	95.87	189.0	265.0	31.9	0.0690	1.34536
420.0	248.8	5.642	14790.0	16390.0	245.6	97.91	191.5	243.6	27.6	0.0652	1.30026
425.0	233.3	5.290	15640.0	17340.0	247.9	98.74	189.5	237.8	25.9	0.0637	1.27964
430.0	219.0	4.966	16460.0	18280.0	250.1	99.45	185.6	234.7	24.5	0.0624	1.26090
432.0	213.7	4.846	16790.0	18650.0	250.9	99.71	183.6	234.1	24.0	0.0620	1.25398
434.0	208.6	4.731	17110.0	19010.0	251.8	99.96	181.5	233.8	23.6	0.0617	1.24739
436.0	203.8	4.621	17420.0	19370.0	252.6	100.2	179.3	233.8	23.2	0.0613	1.24112
438.0	199.1	4.516	17740.0	19730.0	253.4	100.4	177.0	234.0	22.8	0.0610	1.23518
440.0	194.8	4.417	18040.0	20080.0	254.2	100.6	174.7	234.4	22.4	0.0608	1.22954
442.0	190.6	4.322	18340.0	20430.0	255.0	100.8	172.4	235.0	22.1	0.0605	1.22421
444.0	186.6	4.232	18640.0	20770.0	255.8	101.0	170.2	235.8	21.8	0.0603	1.21916
450.0	175.9	3.989	19510.0	21770.0	258.0	101.7	163.7	238.8	21.1	0.0598	1.20557
455.0	168.1	3.813	20220.0	22580.0	259.8	102.2	159.0	241.9	20.6	0.0595	1.19579
460.0	161.3	3.657	20900.0	23360.0	261.5	102.7	154.9	245.4	20.2	0.0593	1.18719
465.0	155.1	3.518	21570.0	24130.0	263.2	103.2	151.5	249.0	19.9	0.0591	1.17957
470.0	149.6	3.393	22230.0	24880.0	264.8	103.8	148.5	252.8	19.6	0.0591	1.17278
475.0	144.7	3.281	22870.0	25610.0	266.4	104.4	146.1	256.5	19.4	0.0591	1.16668
480.0	140.2	3.179	23510.0	26340.0	267.9	105.0	144.0	260.2	19.2	0.0592	1.16116
485.0	136.1	3.086	24140.0	27060.0	269.4	105.6	142.3	263.9	19.1	0.0593	1.15614
490.0	132.3	3.001	24760.0	27760.0	270.8	106.2	140.9	267.5	18.9	0.0594	1.15154
495.0	128.9	2.922	25380.0	28460.0	272.2	106.8	139.8	271.1	18.8	0.0596	1.14732
500.0	125.6	2.849	26000.0	29160.0	273.6	107.5	138.8	274.6	18.8	0.0599	1.14342
505.0	122.7	2.781	26620.0	29850.0	275.0	108.2	138.1	278.0	18.7	0.0602	1.13980
510.0	119.9	2.718	27230.0	30540.0	276.4	108.8	137.5	281.3	18.6	0.0605	1.13642
520.0	114.8	2.603	28450.0	31910.0	279.0	110.2	136.7	287.7	18.6	0.0612	1.13032
530.0	110.3	2.501	29680.0	33280.0	281.6	111.6	136.3	293.9	18.6	0.0620	1.12492
540.0	106.2	2.409	30900.0	34640.0	284.2	113.0	136.2	299.8	18.6	0.0629	1.12009
550.0	102.6	2.326	32130.0	36000.0	286.7	114.5	136.3	305.4	18.6	0.0639	1.11574
560.0	99.26	2.251	33370.0	37370.0	289.1	115.9	136.7	310.8	18.6	0.0649	1.11180
570.0	96.21	2.182	34610.0	38730.0	291.6	117.3	137.2	316.1	18.7	0.0660	1.10819
580.0	93.40	2.118	35860.0	40110.0	293.9	118.8	137.8	321.1	18.8	0.0672	1.10487
590.0	90.80	2.059	37120.0	41490.0	296.3	120.2	138.5	326.0	18.9	0.0684	1.10181
600.0	88.38	2.004	38390.0	42880.0	298.6	121.6	139.3	330.8	19.0	0.0696	1.09896
					10.00 MPa isobar						
86.40[a]	735.2	16.67	-21850.0	-21250.0	83.02	59.53	84.07	2176.0	11300.0	0.213	2.09289
200.0	623.6	14.14	-12020.0	-11310.0	156.1	61.43	92.38	1425.0	313.0	0.155	1.87557
250.0	571.5	12.96	-7268.0	-6496.0	177.5	66.70	100.7	1133.0	179.0	0.125	1.78529
260.0	560.5	12.71	-6265.0	-5478.0	181.5	68.05	102.9	1076.0	163.0	0.120	1.76673
280.0	537.5	12.19	-4194.0	-3374.0	189.3	70.96	107.7	962.5	135.0	0.110	1.72857
300.0	512.9	11.63	-2027.0	-1167.0	196.9	74.12	113.2	851.2	112.0	0.101	1.68849
320.0	486.1	11.02	253.5	1161.0	204.4	77.49	119.7	741.7	93.8	0.0929	1.64564
340.0	456.2	10.35	2664.0	3630.0	211.9	81.03	127.5	634.5	77.9	0.0853	1.59890
360.0	422.1	9.572	5227.0	6272.0	219.5	84.76	137.1	530.2	64.0	0.0789	1.54672
370.0	402.9	9.137	6576.0	7671.0	223.3	86.71	142.9	479.4	57.7	0.0971	1.51793
380.0	382.0	8.662	7977.0	9132.0	227.2	88.72	149.5	430.0	51.7	0.0771	1.48688
385.0	370.7	8.406	8699.0	9889.0	229.2	89.75	153.3	406.0	48.8	0.0764	1.47039
390.0	358.9	8.138	9436.0	10660.0	231.2	90.80	157.2	382.7	46.0	0.0759	1.45321
395.0	346.4	7.856	10190.0	11460.0	233.2	91.87	161.4	360.3	43.2	0.0753	1.43530
400.0	333.4	7.561	10960.0	12280.0	235.3	92.95	165.7	339.2	40.6	0.0745	1.41671
410.0	305.8	6.934	12530.0	13980.0	239.5	95.12	173.5	302.5	35.7	0.0721	1.37784
420.0	277.1	6.284	14150.0	15740.0	243.7	97.19	178.4	275.4	31.5	0.0690	1.33834
425.0	263.0	5.965	14960.0	16630.0	245.8	98.13	179.2	265.9	29.6	0.0675	1.31920
430.0	249.4	5.656	15760.0	17530.0	247.9	99.00	178.7	258.8	28.0	0.0662	1.30093
435.0	236.5	5.364	16550.0	18420.0	250.0	99.79	177.2	253.9	26.6	0.0651	1.28380
440.0	224.5	5.092	17330.0	19300.0	252.0	100.5	174.6	251.0	25.4	0.0641	1.26800

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
445.0	213.5	4.842	18100.0	20160.0	253.9	101.2	171.4	249.6	24.4	0.0634	1.25360
450.0	203.5	4.614	18850.0	21010.0	255.8	101.8	167.8	249.5	23.5	0.0628	1.24060
455.0	194.4	4.408	19570.0	21840.0	257.7	102.4	164.1	250.4	22.8	0.0624	1.22893
460.0	186.2	4.222	20290.0	22650.0	259.4	103.0	160.5	252.0	22.2	0.0621	1.21848
465.0	178.8	4.055	20980.0	23450.0	261.2	103.5	157.2	254.3	21.7	0.0619	1.20912
470.0	172.1	3.904	21660.0	24230.0	262.8	104.1	154.1	256.9	21.3	0.0617	1.20071
475.0	166.1	3.767	22340.0	24990.0	264.4	104.7	151.5	259.8	21.0	0.0617	1.19314
480.0	160.6	3.643	23000.0	25740.0	266.0	105.3	149.1	262.9	20.7	0.0617	1.18630
485.0	155.6	3.529	23650.0	26480.0	267.5	105.9	147.1	266.1	20.4	0.0617	1.18007
490.0	151.0	3.425	24290.0	27210.0	269.0	106.5	145.4	269.3	20.2	0.0618	1.17440
495.0	146.8	3.330	24930.0	27940.0	270.5	107.2	143.9	272.6	20.0	0.0620	1.16919
500.0	142.9	3.241	25570.0	28650.0	272.0	107.8	142.7	275.9	19.9	0.0622	1.16439
505.0	139.3	3.159	26200.0	29360.0	273.4	108.5	141.7	279.1	19.8	0.0624	1.15996
510.0	136.0	3.083	26830.0	30070.0	274.8	109.1	140.8	282.3	19.7	0.0626	1.15585
520.0	129.9	2.945	28080.0	31470.0	277.5	110.5	139.6	288.6	19.5	0.0632	1.14843
530.0	124.5	2.823	29320.0	32860.0	280.1	111.8	138.8	294.7	19.4	0.0639	1.14192
540.0	119.7	2.715	30570.0	34250.0	282.7	113.2	138.5	300.5	19.4	0.0647	1.13614
550.0	115.4	2.617	31810.0	35630.0	285.3	114.7	138.4	306.2	19.3	0.0656	1.13096
560.0	111.5	2.529	33060.0	37020.0	287.8	116.1	138.5	311.7	19.3	0.0665	1.12628
570.0	107.9	2.448	34320.0	38400.0	290.2	117.5	138.8	316.9	19.3	0.0675	1.12202
580.0	104.7	2.374	35580.0	39790.0	292.6	118.9	139.3	322.0	19.4	0.0685	1.11812
590.0	101.7	2.305	36850.0	41190.0	295.0	120.3	139.9	327.0	19.4	0.0696	1.11454
600.0	98.86	2.242	38130.0	42590.0	297.4	121.7	140.5	331.8	19.5	0.0708	1.11122
					11.00 MPa isobar						
86.49[a]	735.4	16.68	-21850.0	-21190.0	83.03	59.60	84.09	2177.0	11300.0	0.213	2.09317
200.0	624.3	14.16	-12040.0	-11260.0	156.0	61.46	92.29	1432.0	316.0	0.156	1.87677
250.0	572.7	12.99	-7302.0	-6455.0	177.4	66.74	100.5	1142.0	181.0	0.126	1.78716
260.0	561.8	12.74	-6303.0	-5440.0	181.4	68.08	102.6	1085.0	164.0	0.121	1.76879
280.0	539.1	12.23	-4242.0	-3342.0	189.1	70.99	107.3	973.7	137.0	0.111	1.73112
300.0	515.0	11.68	-2086.0	-1144.0	196.7	74.14	112.6	864.3	114.0	0.102	1.69173
320.0	488.8	11.08	176.3	1169.0	204.2	77.49	118.8	757.2	95.6	0.0939	1.64988
340.0	460.0	10.43	2561.0	3615.0	211.6	81.01	126.0	653.1	79.8	0.0865	1.60465
360.0	427.6	9.696	5084.0	6219.0	219.0	84.68	134.6	552.9	66.1	0.0801	1.55489
370.0	409.7	9.290	6405.0	7589.0	222.8	86.58	139.5	504.6	59.9	0.0918	1.52788
380.0	390.4	8.853	7768.0	9011.0	226.6	88.53	144.9	458.1	54.1	0.0774	1.49919
390.0	369.6	8.381	9177.0	10490.0	230.4	90.52	150.9	413.7	48.7	0.0762	1.46865
400.0	347.1	7.872	10630.0	12030.0	234.3	92.56	157.3	372.7	43.6	0.0754	1.43619
410.0	323.2	7.329	12130.0	13630.0	238.3	94.61	163.3	336.6	38.9	0.0740	1.40209
420.0	298.2	6.763	13670.0	15290.0	242.3	96.61	168.1	307.5	34.8	0.0719	1.36721
430.0	273.3	6.198	15210.0	16990.0	246.3	98.50	170.5	286.4	31.2	0.0694	1.33301
435.0	261.3	5.925	15980.0	17840.0	248.2	99.37	170.6	278.8	29.7	0.0683	1.31671
440.0	249.7	5.662	16750.0	18690.0	250.2	100.2	170.0	273.0	28.4	0.0673	1.30117
445.0	238.7	5.413	17510.0	19540.0	252.1	101.0	168.8	268.9	27.2	0.0665	1.28655
450.0	228.4	5.179	18260.0	20380.0	254.0	101.7	167.0	266.1	26.1	0.0657	1.27291
455.0	218.7	4.961	18990.0	21210.0	255.8	102.4	164.9	264.6	25.2	0.0652	1.26032
460.0	209.9	4.759	19720.0	22030.0	257.6	103.0	162.4	264.2	24.5	0.0647	1.24875
465.0	201.7	4.573	20430.0	22830.0	259.3	103.6	159.9	264.5	23.8	0.0644	1.23817
470.0	194.1	4.403	21130.0	23630.0	261.0	104.3	157.5	265.6	23.2	0.0642	1.22852
475.0	187.3	4.246	21820.0	24410.0	262.7	104.9	155.1	267.2	22.7	0.0641	1.21972
480.0	180.9	4.103	22500.0	25180.0	264.3	105.5	152.9	269.2	22.3	0.0640	1.21170
485.0	175.1	3.972	23170.0	25940.0	265.9	106.1	150.9	271.5	22.0	0.0640	1.20436
490.0	169.8	3.850	23830.0	26690.0	267.4	106.8	149.1	274.0	21.7	0.0640	1.19765
495.0	164.9	3.739	24490.0	27430.0	268.9	107.4	147.5	276.7	21.4	0.0641	1.19148
500.0	160.3	3.636	25140.0	28160.0	270.4	108.0	146.1	279.4	21.2	0.0643	1.18579
505.0	156.1	3.540	25780.0	28890.0	271.8	108.7	144.9	282.3	21.0	0.0644	1.18054
510.0	152.2	3.451	26420.0	29610.0	273.3	109.4	143.9	285.2	20.8	0.0646	1.17567
515.0	148.5	3.368	27060.0	30330.0	274.7	110.0	143.0	288.1	20.7	0.0649	1.17114
520.0	145.1	3.290	27700.0	31040.0	276.0	110.7	142.3	291.0	20.5	0.0651	1.16691
530.0	138.8	3.148	28970.0	32460.0	278.7	112.1	141.3	296.8	20.4	0.0657	1.15924
540.0	133.3	3.022	30230.0	33870.0	281.4	113.4	140.6	302.4	20.2	0.0664	1.15246
550.0	128.3	2.909	31490.0	35270.0	284.0	114.8	140.3	308.0	20.1	0.0672	1.14641

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
560.0	123.8	2.808	32760.0	36680.0	286.5	116.2	140.3	313.4	20.1	0.0681	1.14097
570.0	119.7	2.715	34030.0	38080.0	289.0	117.6	140.4	318.6	20.0	0.0690	1.13603
580.0	116.0	2.630	35300.0	39490.0	291.4	119.1	140.8	323.7	20.0	0.0699	1.13153
590.0	112.5	2.552	36590.0	40900.0	293.8	120.5	141.2	328.6	20.1	0.0709	1.12739
600.0	109.3	2.479	37870.0	42310.0	296.2	121.9	141.8	333.4	20.1	0.0720	1.12358
					12.00 MPa isobar						
86.58[a]	735.6	16.68	-21850.0	-21130.0	83.04	59.68	84.11	2179.0	11300.0	0.213	2.09345
200.0	625.0	14.17	12060.0	-11210.0	155.9	61.50	92.20	1438.0	319.0	0.156	1.87795
250.0	573.8	13.01	-7337.0	-6414.0	177.2	66.77	100.3	1150.0	183.0	0.127	1.78899
260.0	563.0	12.77	-6341.0	-5401.0	181.2	68.11	102.4	1094.0	166.0	0.122	1.77081
280.0	540.7	12.26	-4288.0	-3310.0	189.0	71.01	106.9	984.6	138.0	0.112	1.73361
300.0	517.0	11.72	-2144.0	-1121.0	196.5	74.16	112.1	877.0	116.0	0.103	1.69486
320.0	491.4	11.14	102.6	1179.0	203.9	77.49	118.0	772.1	97.3	0.0948	1.65392
340.0	463.5	10.51	2464.0	3606.0	211.3	80.99	124.8	670.7	81.6	0.0876	1.61004
360.0	432.5	9.808	4954.0	6177.0	218.6	84.62	132.5	574.0	68.1	0.0812	1.56234
380.0	397.7	9.018	7584.0	8915.0	226.0	88.39	141.5	483.4	56.4	0.0779	1.50991
390.0	378.6	8.585	8956.0	10350.0	229.8	90.32	146.4	441.4	51.1	0.0767	1.48168
400.0	358.3	8.124	10370.0	11840.0	233.5	92.28	151.5	402.3	46.2	0.0760	1.45209
410.0	336.8	7.638	11810.0	13380.0	237.3	94.24	156.4	367.3	41.7	0.0752	1.42134
420.0	314.6	7.134	13290.0	14970.0	241.2	96.19	160.6	337.7	37.6	0.0739	1.38994
430.0	292.2	6.626	14780.0	16590.0	245.0	98.07	163.4	314.3	34.1	0.0720	1.35874
440.0	270.3	6.130	16270.0	18230.0	248.7	99.82	164.5	297.4	31.1	0.0701	1.32883
450.0	249.8	5.664	17760.0	19870.0	252.4	101.4	163.8	286.4	28.7	0.0685	1.30118
455.0	240.2	5.447	18490.0	20690.0	254.2	102.2	162.8	282.8	27.7	0.0679	1.28844
460.0	231.2	5.242	19210.0	21500.0	256.0	102.9	161.5	280.4	26.8	0.0673	1.27647
465.0	222.7	5.049	19930.0	22310.0	257.8	103.6	160.0	278.9	26.0	0.0669	1.26531
470.0	214.7	4.869	20640.0	23100.0	259.5	104.3	158.4	278.3	25.2	0.0666	1.25493
475.0	207.3	4.701	21340.0	23890.0	261.1	105.0	156.6	278.3	24.6	0.0664	1.24532
480.0	200.4	4.545	22030.0	24670.0	262.8	105.6	154.9	279.0	24.1	0.0662	1.23644
485.0	194.0	4.400	22710.0	25440.0	264.4	106.3	153.2	280.1	23.6	0.0661	1.22823
490.0	188.1	4.265	23390.0	26200.0	265.9	106.9	151.6	281.6	23.2	0.0661	1.22065
495.0	182.6	4.140	24060.0	26950.0	267.4	107.6	150.1	283.4	22.9	0.0661	1.21365
500.0	177.4	4.024	24720.0	27700.0	268.9	108.2	148.8	285.5	22.6	0.0662	1.20716
505.0	172.7	3.916	25380.0	28440.0	270.4	108.9	147.5	287.7	22.3	0.0664	1.20115
510.0	168.2	3.815	26030.0	29180.0	271.9	109.5	146.5	290.1	22.0	0.0665	1.19557
515.0	164.1	3.721	26680.0	29910.0	273.3	110.2	145.6	292.6	21.8	0.0667	1.19036
520.0	160.2	3.632	27330.0	30630.0	274.7	110.9	144.8	295.1	21.7	0.0669	1.18551
530.0	153.1	3.472	28620.0	32070.0	277.4	112.2	143.5	300.3	21.4	0.0675	1.17670
540.0	146.8	3.329	29900.0	33510.0	280.1	113.6	142.7	305.6	21.1	0.0681	1.16892
550.0	141.1	3.201	31180.0	34930.0	282.7	115.0	142.2	310.8	21.0	0.0688	1.16199
560.0	136.1	3.086	32460.0	36350.0	285.3	116.4	142.0	316.0	20.9	0.0696	1.15576
570.0	131.4	2.981	33740.0	37770.0	287.8	117.8	142.0	321.1	20.8	0.0704	1.15014
580.0	127.2	2.885	35030.0	39190.0	290.3	119.2	142.2	326.1	20.7	0.0713	1.14501
590.0	123.4	2.797	36320.0	40610.0	292.7	120.6	142.5	330.9	20.7	0.0722	1.14032
600.0	119.8	2.716	37620.0	42040.0	295.1	122.0	143.0	335.6	20.7	0.0732	1.13601
					14.00 MPa isobar						
86.77[a]	736.0	16.69	-21850.0	-21010.0	83.05	59.81	84.14	2181.0	11400.0	0.214	2.09400
200.0	626.5	14.21	-12100.0	-11120.0	155.6	61.57	92.02	1450.0	324.0	0.157	1.88027
250.0	576.1	13.06	-7403.0	-6331.0	177.0	66.84	99.92	1167.0	187.0	0.128	1.79256
300.0	520.8	11.81	-2254.0	-1069.0	196.1	74.20	111.1	901.2	119.0	0.105	1.70082
320.0	496.3	11.25	-36.1	1208.0	203.5	77.51	116.6	800.3	101.0	0.0967	1.66150
340.0	470.0	10.66	2286.0	3600.0	210.7	80.97	122.7	703.6	85.0	0.0897	1.61992
360.0	441.3	10.01	4720.0	6119.0	217.9	84.54	129.3	612.4	71.7	0.0835	1.57557
380.0	410.0	9.297	7270.0	8776.0	225.1	88.20	136.5	528.2	60.4	0.0793	1.52805
390.0	393.2	8.917	8590.0	10160.0	228.7	90.06	140.2	489.5	55.3	0.0778	1.50307
400.0	375.8	8.521	9937.0	11580.0	232.3	91.92	143.9	453.4	50.6	0.0771	1.47734
420.0	339.1	7.689	12710.0	14530.0	239.5	95.65	150.8	391.3	42.5	0.0763	1.42428
440.0	301.5	6.837	15550.0	17600.0	246.6	99.24	155.4	346.1	36.0	0.0744	1.37141

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
450.0	283.3	6.424	16980.0	19160.0	250.1	100.9	156.4	330.4	33.3	0.0731	1.34628
460.0	265.9	6.030	18400.0	20720.0	253.5	102.6	156.6	319.0	31.1	0.0720	1.32265
470.0	249.7	5.663	19810.0	22280.0	256.9	104.1	155.9	311.2	29.3	0.0711	1.30090
480.0	234.9	5.327	21210.0	23840.0	260.2	105.6	154.6	306.7	27.7	0.0704	1.28120
485.0	228.0	5.171	21900.0	24610.0	261.8	106.3	153.9	305.4	27.1	0.0702	1.27214
490.0	221.5	5.023	22590.0	25380.0	263.4	107.0	153.0	304.7	26.5	0.0701	1.26359
495.0	215.3	4.883	23270.0	26140.0	264.9	107.7	152.1	304.4	26.0	0.0700	1.25554
500.0	209.5	4.751	23950.0	26900.0	266.4	108.4	151.3	304.7	25.5	0.0699	1.24797
510.0	198.8	4.508	25300.0	28400.0	269.4	109.7	149.6	306.2	24.7	0.0700	1.23416
520.0	189.3	4.292	26630.0	29890.0	272.3	111.1	148.1	308.7	24.1	0.0703	1.22197
530.0	180.8	4.100	27950.0	31360.0	275.1	112.5	146.9	312.1	23.6	0.0707	1.21117
540.0	173.2	3.927	29260.0	32830.0	277.8	113.9	146.0	315.9	23.2	0.0712	1.20157
550.0	166.3	3.772	30570.0	34290.0	280.5	115.3	145.3	320.0	22.8	0.0717	1.19299
560.0	160.1	3.632	31880.0	35740.0	283.1	116.6	144.9	324.3	22.6	0.0724	1.18527
570.0	154.5	3.504	33190.0	37180.0	285.7	118.0	144.7	328.8	22.4	0.0731	1.17829
580.0	149.4	3.388	34500.0	38630.0	288.2	119.4	144.7	333.2	22.2	0.0738	1.17194
590.0	144.7	3.281	35810.0	40080.0	290.7	120.8	144.9	337.7	22.1	0.0747	1.16615
600.0	140.4	3.183	37130.0	41530.0	293.1	122.2	145.2	342.1	22.1	0.0755	1.16083
					16.00 MPa isobar						
86.95[a]	736.4	16.70	-21850.0	-20890.0	83.07	59.94	84.17	2184.0	11500.0	0.214	2.09454
200.0	627.9	14.24	-12140.0	-11020.0	155.4	61.64	91.85	1463.0	329.0	0.158	1.88255
250.0	578.2	13.11	-7467.0	-6247.0	176.7	66.91	99.56	1184.0	190.0	0.129	1.79601
300.0	524.3	11.89	-2358.0	-1013.0	195.7	74.25	110.3	924.3	122.0	0.106	1.70643
320.0	500.8	11.36	-164.6	1244.0	203.0	77.54	115.4	826.7	104.0	0.0984	1.66852
340.0	475.8	10.79	2125.0	3608.0	210.2	80.97	121.0	733.8	88.2	0.0916	1.62885
360.0	449.0	10.18	4514.0	6086.0	217.3	84.50	126.9	646.9	75.1	0.0856	1.58711
380.0	420.2	9.528	7006.0	8685.0	224.3	88.09	133.0	567.4	64.0	0.0811	1.54318
400.0	389.4	8.831	9595.0	11410.0	231.3	91.72	139.1	496.9	54.5	0.0783	1.49721
420.0	357.1	8.097	12270.0	14250.0	238.2	95.33	144.7	437.4	46.5	0.0776	1.44995
440.0	324.1	7.351	15010.0	17190.0	245.0	98.87	149.1	391.2	40.1	0.0771	1.40291
460.0	292.2	6.626	17780.0	20200.0	251.7	102.2	151.5	359.0	35.0	0.0756	1.35832
470.0	277.1	6.284	19170.0	21720.0	255.0	103.8	152.0	347.9	33.0	0.0749	1.33764
480.0	262.9	5.961	20550.0	23240.0	258.2	105.4	152.0	339.7	31.2	0.0742	1.31833
490.0	249.6	5.660	21930.0	24750.0	261.3	106.9	151.6	334.1	29.8	0.0737	1.30048
500.0	237.3	5.381	23290.0	26270.0	264.4	108.4	150.9	330.6	28.5	0.0734	1.28415
510.0	226.0	5.126	24650.0	27770.0	267.4	109.8	150.2	328.9	27.5	0.0733	1.26930
520.0	215.7	4.892	26000.0	29270.0	270.3	111.2	149.3	328.6	26.6	0.0734	1.25587
530.0	206.4	4.680	27340.0	30760.0	273.1	112.6	148.6	329.6	25.9	0.0737	1.24374
540.0	197.9	4.487	28670.0	32240.0	275.9	114.0	147.9	331.4	25.4	0.0740	1.23278
550.0	190.1	4.312	30010.0	33720.0	278.6	115.4	147.4	333.8	24.9	0.0744	1.22288
560.0	183.1	4.152	31330.0	35190.0	281.2	116.8	147.0	336.8	24.5	0.0750	1.21391
570.0	176.6	4.006	32660.0	36660.0	283.8	118.2	146.8	340.1	24.1	0.0756	1.20576
580.0	170.7	3.872	33990.0	38120.0	286.4	119.6	146.7	343.7	23.9	0.0762	1.19832
590.0	165.3	3.748	35320.0	39590.0	288.9	121.0	146.8	347.4	23.7	0.0770	1.19151
600.0	160.3	3.635	36660.0	41060.0	291.4	122.4	147.0	351.2	23.5	0.0777	1.18525
					18.00 MPa isobar						
87.14[a]	736.8	16.71	-21850.0	-20770.0	83.08	60.07	84.20	2187.0	11500.0	0.214	2.09509
200.0	629.3	14.27	-12180.0	-10920.0	155.2	61.71	91.69	1475.0	334.0	0.160	1.88478
250.0	580.3	13.16	-7530.0	-6162.0	176.4	66.97	99.22	1200.0	194.0	0.131	1.79935
300.0	527.7	11.97	-2457.0	-952.5	195.4	74.30	109.6	946.2	125.0	0.108	1.71175
320.0	505.0	11.45	-284.6	1287.0	202.6	77.58	114.4	851.6	107.0	0.100	1.67505
340.0	481.1	10.91	1977.0	3627.0	209.7	80.99	119.6	762.0	91.2	0.0934	1.63700
400.0	400.7	9.086	9308.0	11290.0	230.4	91.60	135.8	535.2	57.9	0.0798	1.51372
420.0	371.4	8.422	11920.0	14050.0	237.2	95.15	140.6	477.9	50.1	0.0788	1.47052
440.0	341.7	7.749	14590.0	16910.0	243.8	98.63	144.7	431.8	43.6	0.0787	1.42768
460.0	312.7	7.091	17290.0	19830.0	250.3	102.0	147.5	397.3	38.5	0.0783	1.38661
470.0	298.8	6.775	18660.0	21310.0	253.5	103.6	148.4	384.2	36.3	0.0778	1.36720
480.0	285.4	6.472	20020.0	22800.0	256.6	105.2	149.0	373.7	34.5	0.0774	1.34876
490.0	272.7	6.183	21380.0	24290.0	259.7	106.8	149.3	365.6	32.9	0.0769	1.33138

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
500.0	260.6	5.911	22740.0	25790.0	262.7	108.3	149.4	359.5	31.5	0.0766	1.31514
510.0	249.4	5.656	24100.0	27280.0	265.7	109.8	149.3	355.3	30.2	0.0764	1.30006
520.0	238.9	5.419	25450.0	28770.0	268.6	111.3	149.1	352.6	29.2	0.0764	1.28614
530.0	229.2	5.199	26800.0	30260.0	271.4	112.7	148.8	351.2	28.3	0.0765	1.27333
540.0	220.3	4.995	28140.0	31750.0	274.2	114.1	148.6	351.0	27.6	0.0767	1.26159
550.0	212.0	4.808	29490.0	33230.0	276.9	115.5	148.3	351.6	27.0	0.0770	1.25082
560.0	204.4	4.635	30830.0	34720.0	279.6	117.0	148.2	353.0	26.4	0.0774	1.24095
570.0	197.3	4.475	32170.0	36200.0	282.2	118.4	148.1	354.9	26.0	0.0779	1.23190
580.0	190.8	4.327	33520.0	37680.0	284.8	119.8	148.1	357.3	25.6	0.0785	1.22358
590.0	184.8	4.191	34860.0	39160.0	287.3	121.1	148.2	360.0	25.3	0.0791	1.21592
600.0	179.2	4.064	36210.0	40640.0	289.8	122.5	148.4	362.9	25.0	0.0798	1.20885
					20.00 MPa isobar						
87.32[a]	737.2	16.72	-21850.0	-20650.0	83.10	60.19	84.23	2190.0	11600.0	0.214	2.09563
100.0	724.8	16.44	-20790.0	-19580.0	94.58	60.57	85.00	2099.0	4540.0	0.211	2.06877
200.0	630.6	14.30	-12220.0	-10820.0	155.0	61.78	91.54	1487.0	339.0	0.161	1.88697
250.0	582.3	13.21	-7590.0	-6075.0	176.2	67.04	98.92	1216.0	197.0	0.132	1.80259
300.0	530.9	12.04	-2550.0	-888.8	195.0	74.35	108.9	967.2	128.0	0.109	1.71679
350.0	474.1	10.75	2991.0	4851.0	212.7	82.74	120.9	747.1	87.4	0.0922	1.62576
360.0	461.9	10.47	4163.0	6073.0	216.2	84.48	123.4	707.7	81.2	0.0895	1.60669
380.0	436.6	9.901	6572.0	8592.0	223.0	88.00	128.4	634.5	70.2	0.0848	1.56774
400.0	410.3	9.304	9059.0	11210.0	229.7	91.53	133.3	569.7	61.0	0.0814	1.52792
450.0	342.6	7.769	15560.0	18130.0	246.0	100.2	143.0	449.5	44.1	0.0801	1.42871
460.0	329.3	7.468	16890.0	19570.0	249.1	101.9	144.4	432.9	41.6	0.0801	1.40984
480.0	303.8	6.890	19580.0	22480.0	255.3	105.1	146.4	406.9	37.5	0.0799	1.37407
490.0	291.8	6.617	20930.0	23950.0	258.3	106.7	147.1	397.1	35.7	0.0796	1.35737
500.0	280.3	6.355	22270.0	25420.0	261.3	108.2	147.6	389.2	34.2	0.0794	1.34155
510.0	269.3	6.107	23620.0	26900.0	264.3	109.8	148.0	383.1	32.9	0.0792	1.32666
520.0	259.0	5.873	24980.0	28380.0	267.1	111.3	148.2	378.5	31.7	0.0791	1.31271
530.0	249.3	5.653	26330.0	29860.0	270.0	112.7	148.3	375.2	30.7	0.0791	1.29969
540.0	240.2	5.446	27670.0	31350.0	272.7	114.2	148.4	373.1	29.8	0.0793	1.28758
550.0	231.7	5.253	29020.0	32830.0	275.5	115.6	148.5	372.1	29.1	0.0795	1.27633
560.0	223.7	5.073	30380.0	34320.0	278.1	117.1	148.6	371.9	28.4	0.0798	1.26591
570.0	216.3	4.906	31730.0	35800.0	280.8	118.5	148.7	372.4	27.9	0.0802	1.25626
580.0	209.4	4.749	33080.0	37290.0	283.3	119.9	148.9	373.4	27.4	0.0807	1.24731
590.0	203.0	4.604	34440.0	38780.0	285.9	121.3	149.1	375.0	27.0	0.0812	1.23901
600.0	197.0	4.468	35800.0	40270.0	288.4	122.7	149.4	377.0	26.6	0.0818	1.23131
					25.00 MPa isobar						
87.78[a]	738.2	16.74	-21840.0	-20350.0	83.14	60.46	84.31	2199.	11700.0	0.215	2.09697
200.0	633.9	14.37	-12320.0	-10580.0	154.5	61.94	91.19	1516.0	352.0	0.163	1.89227
300.0	538.3	12.21	-2765.0	-716.9	194.2	74.49	107.6	1016.0	135.0	0.113	1.72842
350.0	486.0	11.02	2659.0	4927.0	211.6	82.82	118.3	809.5	94.1	0.0964	1.64404
400.0	429.7	9.745	8549.0	11110.0	228.1	91.49	129.0	644.4	67.9	0.0857	1.55679
450.0	371.9	8.434	14830.0	17790.0	243.9	100.0	137.8	528.5	50.9	0.0827	1.47066
460.0	360.6	8.178	16120.0	19180.0	246.9	101.7	139.2	511.3	48.4	0.0830	1.45421
480.0	338.6	7.679	18730.0	21990.0	252.9	105.0	141.7	482.4	43.9	0.0838	1.42261
500.0	317.8	7.206	21370.0	24840.0	258.7	108.2	143.7	460.1	40.3	0.0843	1.39307
520.0	298.3	6.764	24040.0	27740.0	264.4	111.3	145.4	443.7	37.4	0.0846	1.36587
540.0	280.3	6.356	26720.0	30660.0	269.9	114.3	146.8	432.2	35.1	0.0848	1.34116
560.0	263.9	5.985	29430.0	33600.0	275.2	117.2	148.0	424.7	33.2	0.0852	1.31892
580.0	249.1	5.649	32150.0	36580.0	280.5	120.1	149.1	420.6	31.7	0.0857	1.29904
600.0	235.8	5.347	34890.0	39570.0	285.5	122.9	150.2	419.0	30.6	0.0865	1.28135
					30.00 MPa isobar						
88.24[a]	739.2	16.76	-21830.0	-20040.0	83.19	60.70	84.39	2210.0	11900.0	0.216	2.09828
200.0	637.0	14.45	-12410.0	-10330.0	154.0	62.11	90.88	1544.0	365.0	0.166	1.89734
300.0	545.0	12.36	-2958.0	-530.7	193.5	74.64	106.5	1060.0	142.0	0.116	1.73890
350.0	496.1	11.25	2376.0	5042.0	210.7	82.94	116.5	864.4	100.0	0.100	1.65961

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
400.0	445.0	10.09	8142.0	11120.0	226.9	91.55	126.3	707.8	73.9	0.0897	1.57964
450.0	393.5	8.923	14280.0	17650.0	242.2	100.1	134.6	595.3	56.7	0.0854	1.50194
460.0	383.4	8.695	15550.0	19000.0	245.2	101.7	136.0	578.0	54.1	0.0854	1.48709
480.0	363.8	8.250	18110.0	21750.0	251.1	105.0	138.7	547.9	49.5	0.0861	1.45841
500.0	345.0	7.824	20710.0	24540.0	256.8	108.2	141.0	523.6	45.6	0.0872	1.43129
520.0	327.2	7.419	23340.0	27380.0	262.3	111.3	143.1	504.4	42.5	0.0882	1.40590
540.0	310.4	7.039	26000.0	30260.0	267.8	114.4	145.0	489.5	39.8	0.0889	1.38236
560.0	294.8	6.685	28690.0	33180.0	273.1	117.4	146.7	478.4	37.7	0.0895	1.36070
580.0	280.4	6.358	31410.0	36130.0	278.3	120.3	148.3	470.4	35.9	0.0900	1.34088
600.0	267.1	6.057	34160.0	39110.0	283.3	123.1	149.8	465.1	34.4	0.0906	1.32282
					35.00 MPa isobar						
88.70[a]	740.2	16.79	-21830.0	-19740.0	83.23	60.91	84.47	2221.0	12000.0	0.216	2.09958
200.0	640.0	14.51	-12490.0	-10080.0	153.5	62.27	90.61	1570.0	378.0	0.169	1.90220
300.0	551.1	12.50	-3134.0	-333.2	192.8	74.80	105.7	1101.0	148.0	0.119	1.74847
400.0	457.6	10.38	7802.0	11170.0	225.8	91.66	124.4	763.6	79.4	0.0935	1.59869
450.0	410.6	9.311	13840.0	17600.0	240.9	100.1	132.5	653.7	61.9	0.0884	1.52702
460.0	401.4	9.103	15090.0	18930.0	243.9	101.8	133.9	636.3	59.2	0.0881	1.51332
480.0	383.5	8.697	17610.0	21640.0	249.6	105.1	136.6	605.8	54.4	0.0884	1.48679
500.0	366.2	8.305	20180.0	24400.0	255.2	108.3	139.1	580.4	50.4	0.0893	1.46153
520.0	349.7	7.931	22790.0	27200.0	260.7	111.4	141.4	559.6	47.0	0.0906	1.43769
540.0	334.1	7.576	25430.0	30050.0	266.1	114.5	143.5	542.7	44.1	0.0918	1.41534
560.0	319.3	7.242	28110.0	32940.0	271.4	117.5	145.5	529.3	41.7	0.0927	1.39450
580.0	305.5	6.928	30820.0	35870.0	276.5	120.5	147.4	518.9	39.7	0.0935	1.37516
600.0	292.6	6.635	33560.0	38840.0	281.5	123.3	149.2	511.0	38.0	0.0942	1.35729
					40.00 MPa isobar						
89.16[a]	741.1	16.81	-21820.0	-19440.0	83.28	61.10	84.55	2233.0	12200.0	0.217	2.10086
150.0	686.4	15.56	-16810.0	-14240.0	127.7	60.24	86.48	1869.0	891.0	0.198	1.98801
200.0	642.9	14.58	-12580.0	-9833.0	153.0	62.42	90.37	1596.0	391.0	0.171	1.90686
300.0	556.7	12.62	-3295.0	-126.8	192.2	74.97	105.0	1139.0	155.0	0.122	1.75730
400.0	468.4	10.62	7508.0	11270.0	224.9	91.80	122.9	813.7	84.4	0.0969	1.61511
450.0	424.8	9.633	13470.0	17630.0	239.8	100.3	130.9	706.0	66.5	0.0916	1.54802
460.0	416.3	9.441	14700.0	18940.0	242.7	101.9	132.4	688.6	63.8	0.0911	1.53521
480.0	399.7	9.064	17200.0	21620.0	248.4	105.2	135.1	657.9	58.8	0.0908	1.51033
500.0	383.6	8.700	19750.0	24340.0	254.0	108.4	137.7	631.8	54.6	0.0914	1.48657
520.0	368.2	8.350	22330.0	27120.0	259.4	111.6	140.1	609.9	51.1	0.0925	1.46400
540.0	353.5	8.016	24960.0	29950.0	264.7	114.7	142.4	591.8	48.0	0.0939	1.44270
560.0	339.5	7.699	27620.0	32820.0	270.0	117.7	144.5	576.8	45.5	0.0952	1.42268
580.0	326.3	7.400	30320.0	35730.0	275.1	120.6	146.6	564.7	43.3	0.0962	1.40394
600.0	313.9	7.117	33060.0	38680.0	280.1	123.5	148.6	555.1	41.4	0.0972	1.38644
					50.00 MPa isobar						
90.07[a]	743.0	16.85	-21800.0	-18840.0	83.39	61.41	84.70	2259.0	12400.0	0.219	2.10333
150.0	690.4	15.66	-16920.0	-13720.0	126.9	60.50	86.24	1912.0	952.0	0.202	1.99446
200.0	648.4	14.70	-12730.0	-9328.0	152.1	62.73	89.95	1646.0	416.0	0.176	1.91568
300.0	566.7	12.85	-3584.0	306.6	191.0	75.30	103.9	1209.0	167.0	0.128	1.77321
400.0	486.5	11.03	7019.0	11550.0	223.2	92.13	121.0	901.8	93.5	0.103	1.64256
450.0	447.7	10.15	12870.0	17800.0	237.9	100.6	128.8	797.5	74.9	0.0977	1.58213
500.0	411.1	9.323	19050.0	24420.0	251.9	108.8	135.8	722.4	62.3	0.0962	1.52661
520.0	397.3	9.010	21610.0	27160.0	257.3	112.0	138.3	699.2	58.4	0.0966	1.50603
540.0	384.0	8.709	24210.0	29950.0	262.5	115.1	140.8	679.4	55.1	0.0976	1.48643
560.0	371.3	8.421	26850.0	32790.0	267.7	118.1	143.1	662.6	52.2	0.0989	1.46783
580.0	359.2	8.146	29530.0	35670.0	272.7	121.1	145.4	648.3	49.7	0.100	1.45023
600.0	347.7	7.884	32260.0	38600.0	277.7	123.9	147.6	636.4	47.5	0.102	1.43361

Thermophysical properties of propane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					60.00 MPa isobar						
90.99[a]	744.8	16.89	-21780.0	-18230.0	83.51	61.67	84.86	2287.	12600.0	0.220	2.10572
150.0	694.2	15.74	-17010.0	-13200.0	126.1	60.75	86.04	1953.0	1020.0	0.206	2.00058
200.0	653.5	14.82	-12870.0	-8820.0	151.3	63.03	89.62	1693.0	442.0	0.181	1.92391
300.0	575.7	13.05	-3836.0	760.4	189.9	75.65	103.1	1271.0	178.0	0.134	1.78728
400.0	501.2	11.37	6619.0	11900.0	221.9	92.49	119.7	978.0	102.0	0.109	1.66515
450.0	465.8	10.56	12400.0	18080.0	236.4	101.0	127.4	876.5	82.4	0.103	1.60942
500.0	432.5	9.808	18510.0	24630.0	250.2	109.2	134.5	801.2	69.0	0.101	1.55814
520.0	419.8	9.521	21050.0	27350.0	255.6	112.4	137.2	777.3	64.9	0.101	1.53902
540.0	407.7	9.245	23630.0	30120.0	260.8	115.5	139.7	756.5	61.3	0.102	1.52073
560.0	395.9	8.978	26250.0	32930.0	265.9	118.5	142.2	738.4	58.2	0.103	1.50328
580.0	384.7	8.723	28920.0	35800.0	270.9	121.5	144.5	722.8	55.4	0.104	1.48666
600.0	373.9	8.478	31640.0	38720.0	275.9	124.4	146.8	709.4	53.0	0.105	1.47086
					80.00 MPa isobar						
92.81[a]	748.3	16.97	-21740.0	-17030.0	83.76	62.08	85.16	2346.0	13000.0	0.223	2.11021
150.0	701.3	15.90	-17190.0	-12160.0	124.6	61.24	85.75	2032.0	1140.0	0.213	2.01193
200.0	662.9	15.03	-13120.0	-7796.0	149.7	63.62	89.11	1780.0	493.0	0.191	1.93889
300.0	591.0	13.40	-4260.0	1709.0	188.1	76.33	102.0	1380.0	200.0	0.145	1.81152
400.0	524.8	11.90	5989.0	12710.0	219.6	93.21	118.1	1107.0	117.0	0.120	1.70140
450.0	493.9	11.20	11670.0	18810.0	234.0	101.7	125.8	1010.0	95.6	0.114	1.65200
500.0	464.9	10.54	17700.0	25280.0	247.6	109.9	133.1	935.0	80.9	0.111	1.60654
550.0	438.0	9.932	24050.0	32110.0	260.6	117.8	139.7	878.5	70.4	0.111	1.56513
600.0	413.2	9.371	30710.0	39250.0	273.0	125.1	145.9	836.5	62.8	0.113	1.52776
					100.00 MPa isobar						
94.61[a]	751.6	17.04	-21690.0	-15830.0	84.04	62.42	85.47	2407.0	13300.0	0.226	2.11433
150.0	707.8	16.05	-17340.0	-11110.0	123.3	61.72	85.55	2105.0	1280.0	0.220	2.02227
200.0	671.3	15.22	-13330.0	-6762.0	148.3	64.20	88.77	1859.0	544.0	0.200	1.95228
250.0	636.8	14.44	-9119.0	-2194.0	168.6	69.65	94.30	1648.0	321.0	0.176	1.88946
300.0	604.0	13.70	-4607.0	2694.0	186.4	77.01	101.4	1474.0	221.0	0.155	1.83207
350.0	572.9	12.99	260.2	7957.0	202.6	85.32	109.2	1331.0	165.0	0.140	1.77917
400.0	543.4	12.32	5503.0	13620.0	217.8	93.93	117.2	1214.0	130.0	0.129	1.73024
450.0	515.6	11.69	11120.0	19670.0	232.0	102.4	124.9	1121.0	107.0	0.123	1.68504
500.0	489.4	11.10	17090.0	26100.0	245.5	110.7	132.2	1047.0	91.4	0.120	1.64345
550.0	465.0	10.55	23410.0	32890.0	258.5	118.5	139.1	989.9	79.9	0.119	1.60539
600.0	442.5	10.03	30040.0	40000.0	270.9	125.9	145.5	945.6	71.3	0.121	1.57076

[a]At melting line
[b]At liquid-vapor boundary

Appendix H: Thermophysical Properties of Isobutane

Thermophysical properties of coexisting gaseous and liquid iso-butane

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
113.550[a]	0.00000	741.4	12.76	-23800.0	-23800.0	108.4	74.04	98.99	1727.0	9110.0	0.110	2.10788
113.550[a]	0.00000	0.0000	0.00000	3423.0	52180.0	356.3	42.62	50.94	139.4	3.15	0.00304	1.00000
115.0	0.00000	740.0	12.73	-23660.0	-23660.0	109.7	74.08	99.26	1721.0	8300.0	0.111	2.10467
115.0	0.00000	0.0000	0.00000	3483.0	38170.0	354.0	42.99	51.30	140.1	3.18	0.00311	1.00000
120.0	0.00000	735.1	12.65	-23160.0	-23160.0	113.9	74.26	100.1	1699.0	6160.0	0.116	2.09373
120.0	0.00000	0.0000	0.00000	3701.0	15140.0	346.1	44.32	52.63	142.8	3.30	0.00333	1.00000
125.0	0.00000	730.3	12.56	-22660.0	-22660.0	118.0	74.47	100.9	1675.0	4720.0	0.120	2.08297
125.0	0.00000	0.0000	0.00000	3926.0	8548.0	339.0	45.65	53.96	145.4	3.42	0.00356	1.00000
130.0	0.00000	725.5	12.48	-22150.0	-22150.0	122.0	74.75	101.6	1651.0	3710.0	0.124	2.07239
130.0	0.00000	0.0000	0.00000	4157.0	6587.0	332.7	46.97	55.28	147.9	3.53	0.00380	1.00000
135.0	0.00000	720.7	12.40	-21640.0	-21640.0	125.9	75.09	102.4	1627.0	2990.0	0.127	2.06196
135.0	0.00000	0.0001	0.00000	4395.0	6068.0	327.0	48.26	56.58	150.5	3.64	0.00403	1.00000
140.0	0.00001	715.8	12.32	-21130.0	-21130.0	129.6	75.48	103.2	1603.0	2460.0	0.130	2.05167
140.0	0.00001	0.0002	0.00001	4640.0	6045.0	322.0	49.53	57.85	152.9	3.75	0.00428	1.00000
145.0	0.00001	711.0	12.23	-20610.0	-20610.0	133.2	75.92	104.1	1579.0	2050.0	0.132	2.04151
145.0	0.00001	0.0005	0.00001	4891.0	6209.0	317.4	50.77	59.09	155.4	3.86	0.00453	1.00000
150.0	0.00002	706.2	12.15	-20080.0	-20080.0	136.8	76.39	104.9	1555.0	1740.0	0.134	2.03147
150.0	0.00002	0.0010	0.00002	5147.0	6451.0	313.3	51.99	60.31	157.8	3.97	0.00478	1.00000
155.0	0.00005	701.4	12.07	-19560.0	-19560.0	140.2	76.88	105.8	1531.0	1490.0	0.136	2.02153
155.0	0.00005	0.0020	0.00004	5410.0	6728.0	309.6	53.18	61.50	160.1	4.08	0.00504	1.00000
160.0	0.00008	696.6	11.98	-19030.0	-19030.0	143.6	77.40	106.8	1508.0	1300.0	0.137	2.01169
160.0	0.00009	0.0036	0.00006	5678.0	7025.0	306.3	54.36	62.69	162.4	4.19	0.00530	1.00000
165.0	0.00015	691.7	11.90	-18490.0	-18490.0	146.9	77.95	107.7	1484.0	1140.0	0.138	2.00194
165.0	0.00015	0.0064	0.00011	5953.0	7334.0	303.4	55.53	63.86	164.7	4.31	0.00557	1.00001
170.0	0.00026	686.9	11.82	-17950.0	-17950.0	150.1	78.50	108.7	1461.0	1000.0	0.138	1.99226
170.0	0.00026	0.0107	0.00019	6232.0	7652.0	300.7	56.69	65.03	166.9	4.42	0.00585	1.00001
175.0	0.00044	682.0	11.73	-17400.0	-17400.0	153.3	79.08	109.7	1437.0	893.0	0.138	1.98266
175.0	0.00044	0.0174	0.00030	6517.0	7975.0	298.3	57.84	66.20	169.1	4.53	0.00613	1.00002
180.0	0.00071	677.2	11.65	-16850.0	-16850.0	156.4	79.67	110.7	1413.0	801.0	0.138	1.97311
180.0	0.00071	0.0275	0.00047	6807.0	8305.0	296.2	59.00	67.37	171.3	4.64	0.00642	1.00003
185.0	0.00111	672.3	11.57	-16300.0	-16300.0	159.5	80.27	111.7	1390.0	722.0	0.138	1.96362
185.0	0.00112	0.0421	0.00073	7103.0	8641.0	294.2	60.16	68.56	173.4	4.76	0.00672	1.00005
190.0	0.00170	667.4	11.48	-15730.0	-15730.0	162.5	80.90	112.8	1366.0	654.0	0.137	1.95418
190.0	0.00171	0.0628	0.00108	7403.0	8980.0	292.5	61.33	69.76	175.4	4.87	0.00703	1.00007
195.0	0.00254	662.5	11.40	-15170.0	-15170.0	165.4	81.54	113.8	1342.0	596.0	0.136	1.94477
195.0	0.00254	0.0914	0.00157	7708.0	9325.0	291.0	62.52	70.98	177.4	4.99	0.00734	1.00010
200.0	0.00371	657.6	11.31	-14600.0	-14590.0	168.3	82.19	114.9	1319.0	545.0	0.135	1.93539
200.0	0.00371	0.1302	0.00224	8018.0	9674.0	289.6	63.72	72.23	179.4	5.10	0.00767	1.00014
205.0	0.00530	652.6	11.23	-14020.0	-14020.0	171.1	82.87	116.0	1294.0	500.0	0.134	1.92603
205.0	0.00530	0.1816	0.00313	8332.0	10030.0	288.4	64.94	73.50	181.2	5.22	0.00800	1.00020
210.0	0.00741	647.6	11.14	-13430.0	-13430.0	174.0	83.57	117.2	1270.0	461.0	0.133	1.91669
210.0	0.00741	0.2487	0.00428	8651.0	10380.0	287.4	66.18	74.81	183.0	5.34	0.00834	1.00027
215.0	0.01019	642.6	11.06	-12850.0	-12850.0	176.7	84.29	118.3	1246.0	426.0	0.131	1.90736
215.0	0.01019	0.3347	0.00576	8974.0	10740.0	286.4	67.44	76.15	184.8	5.46	0.00870	1.00036

Thermophysical properties of coexisting gaseous and liquid iso-butane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
220.0	0.01377	637.5	10.97	-12250.0	-12250.0	179.5	85.03	119.5	1221.0	395.0	0.129	1.89802
220.0	0.01377	0.4433	0.00763	9301.0	11110.0	285.6	68.73	77.53	186.5	5.58	0.00906	1.00048
225.0	0.01833	632.4	10.88	-11650.0	-11650.0	182.2	85.80	120.7	1196.0	367.0	0.128	1.88868
225.0	0.01833	0.5785	0.00995	9633.0	11470.0	284.9	70.04	78.96	188.0	5.70	0.00944	1.00063
230.0	0.02405	627.3	10.79	-11050.0	-11040.0	184.8	86.59	121.9	1171.0	342.0	0.126	1.87933
230.0	0.02405	0.7448	0.01282	9968.0	11840.0	284.3	71.38	80.42	189.5	5.82	0.00983	1.00080
235.0	0.03113	622.1	10.70	-10430.0	-10430.0	187.5	87.40	123.2	1146.0	319.0	0.124	1.86996
235.0	0.03113	0.9469	0.01629	10310.0	12220.0	283.8	72.74	81.93	190.9	5.95	0.0102	1.00102
240.0	0.03980	616.9	10.61	-9814.0	-9810.0	190.1	88.24	124.5	1120.0	299.0	0.122	1.86056
240.0	0.03980	1.190	0.02047	10650.0	12590.0	283.4	74.14	83.49	192.2	6.07	0.0106	1.00128
245.0	0.05029	611.6	10.52	-9189.0	-9184.0	192.6	89.11	125.8	1095.0	280.0	0.119	1.85112
245.0	0.05029	1.479	0.02545	11000.0	12970.0	283.1	75.56	85.09	193.4	6.20	0.0111	1.00159
250.0	0.06286	606.3	10.43	-8557.0	-8551.0	195.2	90.00	127.2	1069.0	263.0	0.117	1.84163
250.0	0.06286	1.821	0.03133	11350.0	13350.0	282.8	77.00	86.74	194.5	6.33	0.0115	1.00196
255.0	0.07779	600.9	10.34	-7918.0	-7911.0	197.7	90.91	128.6	1043.0	247.0	0.115	1.83209
255.0	0.07779	2.220	0.03820	11700.0	13740.0	282.6	78.47	88.45	195.5	6.47	0.0120	1.00239
260.0	0.09537	595.4	10.24	-7273.0	-7263.0	200.2	91.85	130.0	1017.0	233.0	0.113	1.82249
260.0	0.09537	2.685	0.04619	12060.0	14120.0	282.5	79.97	90.21	196.3	6.60	0.0124	1.00289
265.0	0.1159	589.8	10.15	-6620.0	-6609.0	202.7	92.82	131.5	990.1	219.0	0.110	1.81282
265.0	0.1159	3.220	0.05540	12410.0	14510.0	282.4	81.49	92.02	197.1	6.74	0.0129	1.00346
270.0	0.1397	584.2	10.05	-5960.0	-5946.0	205.2	93.81	133.0	963.5	207.0	0.108	1.80307
270.0	0.1397	3.834	0.06597	12780.0	14890.0	282.4	83.04	93.90	197.6	6.88	0.0134	1.00412
275.0	0.1670	578.5	9.953	-5292.0	-5276.0	207.6	94.83	134.6	936.7	195.0	0.106	1.79322
275.0	0.1670	4.535	0.07802	13140.0	15280.0	282.4	84.61	95.83	198.1	7.02	0.0139	1.00487
280.0	0.1983	572.7	9.853	-4617.0	-4597.0	210.1	95.87	136.3	909.7	184.0	0.104	1.78327
280.0	0.1983	5.329	0.09168	13510.0	15670.0	282.5	86.20	97.83	198.4	7.17	0.0144	1.00573
285.0	0.2339	566.8	9.751	-3934.0	-3910.0	212.5	96.93	137.9	882.6	174.0	0.101	1.77321
285.0	0.2339	6.226	0.1071	13880.0	16060.0	282.6	87.81	99.89	198.5	7.32	0.0150	1.00669
290.0	0.2741	560.8	9.648	-3243.0	-3214.0	214.9	98.02	139.7	855.3	165.0	0.0993	1.76302
290.0	0.2741	7.235	0.1245	14250.0	16460.0	282.7	89.45	102.0	198.5	7.48	0.0155	1.00777
295.0	0.3192	554.6	9.542	-2543.0	-2510.0	217.3	99.14	141.5	827.9	156.0	0.0970	1.75269
295.0	0.3192	8.366	0.1439	14630.0	16850.0	282.9	91.10	104.3	198.3	7.64	0.0161	1.00899
300.0	0.3697	548.4	9.434	-1835.0	-1796.0	219.7	100.3	143.4	800.3	148.0	0.0948	1.74220
300.0	0.3697	9.630	0.1657	15010.0	17240.0	283.1	92.78	106.6	197.9	7.80	0.0167	1.01035
305.0	0.4260	542.0	9.324	-1118.0	-1072.0	222.0	101.4	145.4	772.6	140.0	0.0926	1.73154
305.0	0.4260	11.04	0.1899	15380.0	17630.0	283.3	94.47	109.0	197.3	7.97	0.0173	1.01187
310.0	0.4884	535.4	9.212	-391.2	-338.2	224.4	102.6	147.5	744.8	133.0	0.0905	1.72070
310.0	0.4884	12.61	0.2169	15760.0	18020.0	283.6	96.18	111.5	196.5	8.15	0.0179	1.01355
315.0	0.5573	528.7	9.096	344.8	406.1	226.8	103.8	149.6	716.8	126.0	0.0884	1.70964
315.0	0.5573	14.34	0.2468	16140.0	18400.0	283.9	97.91	114.1	195.5	8.33	0.0186	1.01543
320.0	0.6331	521.8	8.977	1091.0	1161.0	229.1	105.1	151.9	688.7	120.0	0.0864	1.69835
320.0	0.6331	16.27	0.2800	16520.0	18780.0	284.2	99.66	116.9	194.3	8.52	0.0193	1.01752
325.0	0.7162	514.7	8.855	1847.0	1928.0	231.5	106.3	154.4	660.5	113.0	0.0844	1.68680
325.0	0.7162	18.41	0.3168	16900.0	19160.0	284.5	101.4	119.9	192.8	8.71	0.0199	1.01983
330.0	0.8071	507.4	8.729	2614.0	2707.0	233.8	107.6	157.0	632.2	107.0	0.0825	1.67496
330.0	0.8071	20.78	0.3575	17280.0	19540.0	284.8	103.2	123.1	191.1	8.92	0.0207	1.02240

Thermophysical properties of coexisting gaseous and liquid iso-butane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
335.0	0.9062	499.8	8.599	3392.0	3498.0	236.2	108.9	159.8	603.8	102.0	0.0805	1.66281
335.0	0.9062	23.40	0.4027	17660.0	19910.0	285.1	105.0	126.5	189.1	9.14	0.0214	1.02525
340.0	1.014	492.0	8.464	4183.0	4303.0	238.5	110.2	162.8	575.2	96.2	0.0787	1.65029
340.0	1.014	26.32	0.4528	18030.0	20270.0	285.5	106.9	130.3	186.8	9.37	0.0221	1.02842
345.0	1.131	483.9	8.324	4986.0	5122.0	240.9	111.6	166.1	546.4	91.0	0.0768	1.63737
345.0	1.131	29.55	0.5084	18400.0	20620.0	285.8	108.7	134.4	184.2	9.61	0.0229	1.03195
350.0	1.257	475.4	8.178	5803.0	5956.0	243.2	112.9	169.8	517.4	86.0	0.0750	1.62398
350.0	1.257	33.16	0.5704	18760.0	20970.0	286.1	110.6	139.1	181.3	9.87	0.0238	1.03590
355.0	1.394	466.5	8.026	6634.0	6808.0	245.6	114.3	173.9	488.1	81.2	0.0732	1.61006
355.0	1.394	37.18	0.6397	19120.0	21300.0	286.4	112.6	144.3	178.0	10.1	0.0246	1.04033
360.0	1.541	457.1	7.865	7482.0	7677.0	248.0	115.8	178.7	458.6	76.6	0.0715	1.59551
360.0	1.541	41.70	0.7175	19470.0	21610.0	286.7	114.5	150.5	174.4	10.4	0.0255	1.04531
365.0	1.699	447.2	7.695	8347.0	8568.0	250.4	117.3	184.1	428.6	72.0	0.0697	1.58024
365.0	1.699	46.81	0.8053	19800.0	21910.0	286.9	116.5	157.8	170.3	10.8	0.0265	1.05097
370.0	1.870	436.7	7.513	9232.0	9481.0	252.8	118.8	190.7	398.1	67.6	0.0680	1.56408
370.0	1.870	52.61	0.9051	20110.0	22180.0	287.1	118.6	166.7	165.9	11.1	0.0276	1.05743
375.0	2.052	425.3	7.318	10140.0	10420.0	255.2	120.3	198.9	367.0	63.2	0.0663	1.54684
375.0	2.052	59.28	1.020	20410.0	22420.0	287.2	120.8	178.1	161.0	11.5	0.0288	1.06489
380.0	2.249	413.0	7.105	11080.0	11390.0	257.7	122.0	209.4	334.9	58.9	0.0646	1.52822
380.0	2.249	67.03	1.153	20670.0	22620.0	287.3	123.0	193.2	155.6	12.0	0.0303	1.07364
385.0	2.459	399.3	6.869	12050.0	12410.0	260.3	123.7	224.0	301.7	54.6	0.0629	1.50778
385.0	2.459	76.22	1.311	20900.0	22770.0	287.2	125.3	214.5	149.7	12.6	0.0322	1.08408
390.0	2.685	383.7	6.601	13070.0	13470.0	263.0	125.6	246.1	266.8	50.2	0.0615	1.48480
390.0	2.685	87.39	1.503	21060.0	22850.0	287.0	127.8	247.3	143.1	13.2	0.0350	1.09688
395.0	2.928	365.3	6.285	14150.0	14620.0	265.8	127.7	284.5	229.8	45.5	0.0611	1.45798
395.0	2.928	101.5	1.746	21150.0	22820.0	286.6	130.5	304.9	135.9	14.1	0.0396	1.11325
400.0	3.190	341.9	5.883	15340.0	15890.0	268.9	130.1	371.1	189.9	40.4	0.0630	1.42448
400.0	3.190	120.6	2.075	21090.0	22630.0	285.7	133.4	432.9	127.8	15.2	0.0480	1.13573
407.85[b]	3.640	224.4	3.860	19040.0	19990.0	278.8						1.26472

[a]Triple point
[b]Critical point

Thermophysical properties of iso-butane on the melting line

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
113.60[a]	0.00000	741.4	12.76	-23800.0	-23800.0	108.4	74.04	98.99	1727.0	9110.0	0.110	2.10788
113.6	0.1152	741.4	12.75	-23800.0	-23790.0	108.5	74.02	98.99	1728.0	9090.0	0.110	2.10782
113.8	0.5788	741.4	12.75	-23780.0	-23740.0	108.6	73.90	99.01	1735.0	9040.0	0.110	2.10773
114.0	1.046	741.4	12.76	-23770.0	-23690.0	108.7	73.79	99.04	1741.0	8980.0	0.110	2.10764
114.2	1.518	741.4	12.76	-23750.0	-23630.0	108.9	73.69	99.06	1748.0	8930.0	0.110	2.10755
114.4	1.995	741.4	12.76	-23740.0	-23580.0	109.0	73.58	99.08	1755.0	8880.0	0.110	2.10746
114.6	2.475	741.4	12.76	-23720.0	-23530.0	109.1	73.48	99.10	1761.0	8830.0	0.110	2.10738
114.8	2.960	741.5	12.76	-23710.0	-23480.0	109.2	73.39	99.12	1768.0	8770.0	0.111	2.10730
115.0	3.449	741.5	12.76	-23700.0	-23430.0	109.3	73.29	99.14	1774.0	8720.0	0.111	2.10721
115.2	3.942	741.5	12.76	-23680.0	-23370.0	109.5	73.20	99.16	1780.0	8670.0	0.111	2.10713
115.4	4.440	741.5	12.76	-23670.0	-23320.0	109.6	73.11	99.18	1787.0	8630.0	0.111	2.10705
115.6	4.942	741.5	12.76	-23650.0	-23270.0	109.7	73.03	99.20	1793.0	8580.0	0.111	2.10698
115.8	5.448	741.6	12.76	-23640.0	-23210.0	109.8	72.94	99.22	1799.0	8530.0	0.111	2.10690
116.0	5.959	741.6	12.76	-23630.0	-23160.0	110.0	72.87	99.24	1805.0	8480.0	0.111	2.10683
116.2	6.475	741.6	12.76	-23610.0	-23100.0	110.1	72.79	99.25	1811.0	8440.0	0.111	2.10676
116.4	6.995	741.6	12.76	-23600.0	-23050.0	110.2	72.72	99.27	1817.0	8390.0	0.112	2.10669
116.6	7.519	741.7	12.76	-23580.0	-23000.0	110.3	72.64	99.29	1823.0	8350.0	0.112	2.10662
116.8	8.048	741.7	12.76	-23570.0	-22940.0	110.4	72.58	99.31	1829.0	8300.0	0.112	2.10656
117.0	8.582	741.7	12.76	-23560.0	-22880.0	110.5	72.51	99.33	1834.0	8260.0	0.112	2.10649
117.2	9.121	741.8	12.76	-23540.0	-22830.0	110.7	72.45	99.35	1840.0	8220.0	0.112	2.10643
117.4	9.664	741.8	12.76	-23530.0	-22770.0	110.8	72.39	99.37	1846.0	8180.0	0.112	2.10637
117.6	10.21	741.8	12.76	-23520.0	-22720.0	110.9	72.33	99.38	1851.0	8140.0	0.112	2.10631
117.8	10.76	741.9	12.76	-23500.0	-22660.0	111.0	72.28	99.40	1857.0	8100.0	0.112	2.10626
118.0	11.32	741.9	12.76	-23490.0	-22600.0	111.1	72.23	99.42	1862.0	8060.0	0.113	2.10620
118.2	11.88	741.9	12.76	-23480.0	-22540.0	111.2	72.18	99.44	1868.0	8020.0	0.113	2.10615
118.4	12.45	742.0	12.77	-23460.0	-22490.0	111.3	72.13	99.46	1873.0	7980.0	0.113	2.10610
118.6	13.02	742.0	12.77	-23450.0	-22430.0	111.5	72.09	99.47	1879.0	7940.0	0.113	2.10606
118.8	13.60	742.0	12.77	-23440.0	-22370.0	111.6	72.05	99.49	1884.0	7900.0	0.113	2.10601
119.0	14.18	742.1	12.77	-23420.0	-22310.0	111.7	72.01	99.51	1889.0	7870.0	0.113	2.10597
119.2	14.77	742.1	12.77	-23410.0	-22250.0	111.8	71.98	99.53	1894.0	7830.0	0.113	2.10593
119.4	15.36	742.2	12.77	-23400.0	-22190.0	111.9	71.94	99.54	1899.0	7800.0	0.113	2.10589
119.6	15.96	742.2	12.77	-23380.0	-22130.0	112.0	71.91	99.56	1905.0	7760.0	0.114	2.10585
119.8	16.56	742.3	12.77	-23370.0	-22070.0	112.1	71.88	99.58	1910.0	7730.0	0.114	2.10582
120.0	17.17	742.3	12.77	-23360.0	-22010.0	112.2	71.86	99.59	1915.0	7690.0	0.114	2.10579
120.2	17.78	742.4	12.77	-23340.0	-21950.0	112.3	71.83	99.61	1920.0	7660.0	0.114	2.10576
120.4	18.40	742.4	12.77	-23330.0	-21890.0	112.4	71.81	99.63	1925.0	7630.0	0.114	2.10573
120.6	19.02	742.5	12.77	-23320.0	-21830.0	112.5	71.80	99.64	1929.0	7600.0	0.114	2.10571
120.8	19.65	742.5	12.77	-23310.0	-21770.0	112.7	71.78	99.66	1934.0	7560.0	0.114	2.10568
121.0	20.28	742.6	12.78	-23290.0	-21710.0	112.8	71.77	99.68	1939.0	7530.0	0.114	2.10566
121.2	20.92	742.6	12.78	-23280.0	-21640.0	112.9	71.76	99.69	1944.0	7500.0	0.115	2.10565
121.4	21.56	742.7	12.78	-23270.0	-21580.0	113.0	71.75	99.71	1948.0	7470.0	0.115	2.10563
121.6	22.21	742.7	12.78	-23250.0	-21520.0	113.1	71.74	99.72	1953.0	7450.0	0.115	2.10562
121.8	22.87	742.8	12.78	-23240.0	-21450.0	113.2	71.74	99.74	1958.0	7420.0	0.115	2.10561
122.0	23.53	742.9	12.78	-23230.0	-21390.0	113.3	71.74	99.76	1962.0	7390.0	0.115	2.10560
122.2	24.19	742.9	12.78	-23220.0	-21320.0	113.4	71.74	99.77	1967.0	7360.0	0.115	2.10559
122.4	24.86	743.0	12.78	-23200.0	-21260.0	113.5	71.74	99.79	1971.0	7330.0	0.115	2.10559
122.6	25.54	743.1	12.78	-23190.0	-21190.0	113.6	71.74	99.80	1976.0	7310.0	0.115	2.10559
122.8	26.22	743.1	12.79	-23180.0	-21130.0	113.7	71.75	99.82	1980.0	7280.0	0.115	2.10559
123.0	26.91	743.2	12.79	-23170.0	-21060.0	113.8	71.76	99.83	1984.0	7260.0	0.116	2.10559
123.2	27.61	743.3	12.79	-23150.0	-21000.0	113.9	71.77	99.85	1989.0	7230.0	0.116	2.10560
123.4	28.31	743.3	12.79	-23140.0	-20930.0	114.0	71.79	99.86	1993.0	7210.0	0.116	2.10561
123.6	29.01	743.4	12.79	-23130.0	-20860.0	114.1	71.80	99.88	1997.0	7180.0	0.116	2.10562
123.8	29.72	743.5	12.79	-23120.0	-20790.0	114.2	71.82	99.89	2002.0	7160.0	0.116	2.10563
124.0	30.44	743.6	12.79	-23110.0	-20730.0	114.3	71.84	99.91	2006.0	7140.0	0.116	2.10565
124.2	31.16	743.6	12.79	-23090.0	-20660.0	114.4	71.87	99.92	2010.0	7110.0	0.116	2.10567
124.4	31.89	743.7	12.80	-23080.0	-20590.0	114.4	71.89	99.94	2014.0	7090.0	0.116	2.10569
124.6	32.63	743.8	12.80	-23070.0	-20520.0	114.5	71.92	99.95	2018.0	7070.0	0.117	2.10571
124.8	33.37	743.9	12.80	-23060.0	-20450.0	114.6	71.95	99.97	2022.0	7050.0	0.117	2.10574
125.0	34.12	744.0	12.80	-23050.0	-20380.0	114.7	71.98	99.98	2026.0	7030.0	0.117	2.10577
125.2	34.87	744.0	12.80	-23030.0	-20310.0	114.8	72.02	100.00	2030.0	7010.0	0.117	2.10580

[a]Triple point

Thermophysical properties of iso-butane

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.01 MPa isobar						
113.60[a]	741.4	12.75	-23800.0	-23800.0	108.4	74.04	98.99	1726.0	9110.0	0.110	2.10784
120.0	735.1	12.65	-23160.0	-23160.0	113.9	74.26	100.1	1698.0	6160.0	0.116	2.09372
130.0	725.5	12.48	-22150.0	-22150.0	122.0	74.76	101.6	1651.0	3710.0	0.124	2.07237
140.0	715.8	12.32	-21120.0	-21120.0	129.6	75.49	103.2	1603.0	2460.0	0.130	2.05163
150.0	706.2	12.15	-20080.0	-20080.0	136.8	76.39	104.9	1555.0	1740.0	0.134	2.03143
160.0	696.5	11.98	-19030.0	-19030.0	143.6	77.41	106.8	1507.0	1300.0	0.137	2.01166
170.0	686.9	11.82	-17950.0	-17950.0	150.1	78.50	108.7	1460.0	1000.0	0.138	1.99226
180.0	677.2	11.65	-16850.0	-16850.0	156.4	79.67	110.7	1414.0	801.0	0.138	1.97313
190.0	667.4	11.48	-15730.0	-15730.0	162.5	80.90	112.8	1366.0	654.0	0.137	1.95420
200.0	657.6	11.31	-14600.0	-14600.0	168.3	82.19	114.9	1319.0	545.0	0.135	1.93542
210.0	647.6	11.14	-13440.0	-13430.0	174.0	83.57	117.2	1270.0	461.0	0.133	1.91672
214.699[b]	642.9	11.06	-12880.0	-12880.0	176.6	84.25	118.3	1247.0	428.0	0.131	1.90792
214.699[b]	0.3289	0.005660	8954.0	10720.0	286.5	67.37	76.07	184.7	5.45	0.00868	1.00036
215.0	0.3278	0.005641	8975.0	10750.0	286.6	67.43	76.14	184.8	5.46	0.00870	1.00036
220.0	0.3202	0.005509	9316.0	11130.0	288.4	68.58	77.25	186.9	5.57	0.00905	1.00035
230.0	0.3059	0.005264	10010.0	11920.0	291.9	70.94	79.54	190.9	5.81	0.00978	1.00033
240.0	0.2929	0.005040	10740.0	12720.0	295.3	73.35	81.91	194.7	6.04	0.0105	1.00032
260.0	0.2700	0.004646	12260.0	14410.0	302.0	78.36	86.85	202.2	6.52	0.0122	1.00029
280.0	0.2505	0.004310	13880.0	16200.0	308.7	83.57	92.01	209.3	7.01	0.0140	1.00027
300.0	0.2336	0.004020	15600.0	18090.0	315.2	88.93	97.34	216.2	7.49	0.0160	1.00025
320.0	0.2189	0.003767	17440.0	20090.0	321.7	94.38	102.8	222.8	7.98	0.0181	1.00023
340.0	0.2059	0.003544	19380.0	22200.0	328.0	99.87	108.2	229.2	8.46	0.0203	1.00022
360.0	0.1945	0.003346	21430.0	24420.0	334.4	105.4	113.7	235.4	8.95	0.0227	1.00021
380.0	0.1842	0.003170	23590.0	26750.0	340.7	110.8	119.1	241.5	9.43	0.0252	1.00020
400.0	0.1749	0.003011	25860.0	29190.0	346.9	116.1	124.5	247.4	9.92	0.0278	1.00019
420.0	0.1666	0.002867	28240.0	31730.0	353.1	121.3	129.7	253.2	10.4	0.0305	1.00018
440.0	0.1590	0.002736	30720.0	34370.0	359.3	126.4	134.8	258.8	10.9	0.0333	1.00017
460.0	0.1521	0.002617	33300.0	37120.0	365.4	131.4	139.7	264.4	11.3	0.0362	1.00016
480.0	0.1457	0.002508	35970.0	39960.0	371.4	136.2	144.5	269.8	11.8	0.0391	1.00016
500.0	0.1399	0.002408	38740.0	42900.0	377.4	140.9	149.2	275.1	12.3	0.0421	1.00015
520.0	0.1345	0.002315	41610.0	45930.0	383.4	145.4	153.7	280.3	12.7	0.0451	1.00014
540.0	0.1295	0.002229	44560.0	49050.0	389.2	149.8	158.1	285.4	13.2	0.0482	1.00014
560.0	0.1249	0.002149	47600.0	52250.0	395.1	154.0	162.3	290.5	13.6	0.0513	1.00013
580.0	0.1206	0.002075	50720.0	55540.0	400.8	158.1	166.4	295.4	14.1	0.0544	1.00013
600.0	0.1165	0.002006	53920.0	58910.0	406.6	162.1	170.4	300.3	14.5	0.0576	1.00012
					0.05 MPa isobar						
113.60[a]	741.4	12.75	-23800.0	-23790.0	108.5	74.03	98.99	1727.0	9100.0	0.110	2.10783
120.0	735.1	12.65	-23160.0	-23150.0	113.9	74.25	100.1	1699.0	6160.0	0.116	2.09375
200.0	657.6	11.31	-14600.0	-14590.0	168.3	82.19	114.9	1319.0	545.0	0.135	1.93548
244.875[b]	611.7	10.52	-9204.0	-9200.0	192.6	89.08	125.8	1095.0	280.0	0.120	1.85135
244.875[b]	1.471	0.02532	10990.0	12960.0	283.1	75.52	85.05	193.4	6.20	0.0111	1.00159
245.0	1.464	0.02519	11000.0	12980.0	283.2	75.54	85.06	193.5	6.20	0.0111	1.00158
260.0	1.373	0.02362	12160.0	14280.0	288.3	79.09	88.33	199.6	6.56	0.0123	1.00148
280.0	1.268	0.02182	13800.0	16100.0	295.0	84.09	93.08	207.2	7.04	0.0141	1.00136
300.0	1.180	0.02030	15540.0	18010.0	301.6	89.30	98.13	214.4	7.52	0.0161	1.00126
320.0	1.103	0.01898	17390.0	20020.0	308.1	94.66	103.4	221.3	8.01	0.0182	1.00118
340.0	1.037	0.01783	19340.0	22140.0	314.5	100.1	108.7	228.0	8.49	0.0204	1.00111
360.0	0.9776	0.01682	21400.0	24370.0	320.9	105.5	114.1	234.4	8.98	0.0228	1.00104
380.0	0.9251	0.01592	23560.0	26710.0	327.2	110.9	119.4	240.6	9.46	0.0253	1.00098
400.0	0.8781	0.01511	25840.0	29150.0	333.5	116.2	124.7	246.6	9.94	0.0279	1.00093
420.0	0.8357	0.01438	28210.0	31690.0	339.7	121.4	129.9	252.4	10.4	0.0306	1.00089
440.0	0.7973	0.01372	30700.0	34340.0	345.8	126.5	134.9	258.2	10.9	0.0333	1.00085
460.0	0.7623	0.01312	33280.0	37090.0	352.0	131.4	139.9	263.8	11.4	0.0362	1.00081
480.0	0.7302	0.01256	35950.0	39930.0	358.0	136.2	144.7	269.3	11.8	0.0391	1.00077
500.0	0.7008	0.01206	38730.0	42870.0	364.0	140.9	149.3	274.6	12.3	0.0421	1.00074
520.0	0.6736	0.01159	41590.0	45900.0	370.0	145.4	153.8	279.9	12.7	0.0451	1.00071

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	0.6485	0.01116	44540.0	49020.0	375.8	149.8	158.2	285.1	13.2	0.0482	1.00068
560.0	0.6252	0.01076	47580.0	52230.0	381.7	154.0	162.4	290.1	13.7	0.0513	1.00066
580.0	0.6036	0.01038	50700.0	55520.0	387.4	158.1	166.5	295.1	14.1	0.0544	1.00064
600.0	0.5833	0.01004	53910.0	58890.0	393.1	162.1	170.4	300.0	14.5	0.0576	1.00061
					0.10 MPa isobar						
113.60[a]	741.4	12.75	-23800.0	-23790.0	108.5	74.02	98.99	1728.0	9100.0	0.110	2.10782
120.0	735.2	12.65	-23160.0	-23150.0	113.9	74.24	100.1	1700.0	6160.0	0.116	2.09379
200.0	657.7	11.31	-14600.0	-14590.0	168.3	82.19	114.9	1319.0	546.0	0.135	1.93554
250.0	606.3	10.43	-8558.0	-8549.0	195.2	90.00	127.2	1069.0	263.0	0.117	1.84170
261.197[b]	594.1	10.22	-7117.0	-7107.0	200.8	92.08	130.4	1010.0	229.0	0.112	1.82018
261.197[b]	2.806	0.04828	12140.0	14210.0	282.4	80.33	90.64	196.5	6.63	0.0125	1.00302
265.0	2.746	0.04725	12450.0	14570.0	283.8	81.19	91.36	198.2	6.72	0.0129	1.00295
280.0	2.580	0.04439	13710.0	15960.0	288.9	84.76	94.51	204.4	7.08	0.0142	1.00277
300.0	2.391	0.04113	15470.0	17900.0	295.6	89.78	99.17	212.1	7.56	0.0161	1.00256
320.0	2.230	0.03836	17330.0	19930.0	302.2	95.01	104.1	219.4	8.04	0.0182	1.00238
340.0	2.091	0.03597	19290.0	22070.0	308.6	100.3	109.3	226.3	8.52	0.0205	1.00223
360.0	1.969	0.03387	21350.0	24300.0	315.0	105.7	114.5	233.0	9.01	0.0228	1.00210
380.0	1.861	0.03202	23520.0	26650.0	321.4	111.0	119.8	239.3	9.49	0.0253	1.00198
400.0	1.765	0.03037	25800.0	29100.0	327.6	116.3	125.0	245.5	9.97	0.0279	1.00188
420.0	1.679	0.02888	28180.0	31650.0	333.8	121.5	130.1	251.5	10.4	0.0306	1.00178
440.0	1.600	0.02754	30670.0	34300.0	340.0	126.6	135.1	257.4	10.9	0.0334	1.00170
460.0	1.529	0.02631	33250.0	37050.0	346.1	131.5	140.0	263.0	11.4	0.0362	1.00162
480.0	1.464	0.02520	35930.0	39900.0	352.2	136.3	144.8	268.6	11.9	0.0392	1.00155
500.0	1.405	0.02417	38700.0	42840.0	358.2	140.9	149.4	274.0	12.3	0.0421	1.00149
520.0	1.350	0.02323	41570.0	45880.0	364.1	145.4	153.9	279.4	12.8	0.0452	1.00143
540.0	1.300	0.02236	44520.0	49000.0	370.0	149.8	158.3	284.6	13.2	0.0482	1.00137
560.0	1.253	0.02155	47560.0	52200.0	375.9	154.0	162.5	289.7	13.7	0.0513	1.00132
580.0	1.209	0.02080	50690.0	55500.0	381.6	158.1	166.6	294.7	14.1	0.0545	1.00127
600.0	1.168	0.02010	53890.0	58870.0	387.4	162.1	170.5	299.7	14.6	0.0576	1.00123
					0.101325 MPa isobar						
113.60[a]	741.4	12.75	-23800.0	-23790.0	108.5	74.02	98.99	1728.0	9100.0	0.110	2.10782
120.0	735.2	12.65	-23160.0	-23150.0	113.9	74.24	100.1	1700.0	6160.0	0.116	2.09379
200.0	657.7	11.31	-14600.0	-14590.0	168.3	82.19	114.9	1319.0	546.0	0.135	1.93554
250.0	606.3	10.43	-8558.0	-8549.0	195.2	90.00	127.2	1069.0	263.0	0.117	1.84171
261.531[b]	593.7	10.21	-7074.0	-7064.0	201.0	92.15	130.5	1008.0	228.0	0.112	1.81954
261.531[b]	2.841	0.04887	12170.0	14240.0	282.4	80.43	90.76	196.6	6.64	0.0126	1.00306
265.0	2.784	0.04790	12450.0	14570.0	283.7	81.22	91.41	198.1	6.72	0.0129	1.00299
280.0	2.615	0.04499	13710.0	15960.0	288.8	84.78	94.55	204.3	7.08	0.0142	1.00281
300.0	2.423	0.04169	15470.0	17900.0	295.5	89.80	99.19	212.1	7.56	0.0161	1.00260
320.0	2.260	0.03888	17320.0	19930.0	302.0	95.02	104.2	219.4	8.04	0.0182	1.00242
340.0	2.119	0.03645	19280.0	22060.0	308.5	100.3	109.3	226.3	8.53	0.0205	1.00226
360.0	1.995	0.03433	21350.0	24300.0	314.9	105.7	114.5	232.9	9.01	0.0228	1.00213
380.0	1.886	0.03245	23520.0	26650.0	321.2	111.0	119.8	239.3	9.49	0.0253	1.00201
400.0	1.789	0.03077	25800.0	29090.0	327.5	116.3	125.0	245.5	9.97	0.0279	1.00190
420.0	1.701	0.02927	28180.0	31650.0	333.7	121.5	130.1	251.5	10.4	0.0306	1.00181
440.0	1.622	0.02790	30670.0	34300.0	339.9	126.6	135.1	257.3	10.9	0.0334	1.00172
460.0	1.550	0.02666	33250.0	37050.0	346.0	131.5	140.0	263.0	11.4	0.0362	1.00164
480.0	1.484	0.02553	35930.0	39900.0	352.1	136.3	144.8	268.6	11.9	0.0392	1.00157
500.0	1.424	0.02449	38700.0	42840.0	358.1	140.9	149.4	274.0	12.3	0.0421	1.00151
520.0	1.368	0.02354	41570.0	45870.0	364.0	145.4	153.9	279.4	12.8	0.0452	1.00145
540.0	1.317	0.02266	44520.0	49000.0	369.9	149.8	158.3	284.6	13.2	0.0482	1.00139
560.0	1.269	0.02184	47560.0	52200.0	375.8	154.0	162.5	289.7	13.7	0.0513	1.00134
580.0	1.225	0.02108	50690.0	55490.0	381.5	158.1	166.6	294.7	14.1	0.0545	1.00129
600.0	1.184	0.02037	53890.0	58870.0	387.2	162.1	170.5	299.7	14.6	0.0576	1.00125

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.20 MPa isobar						
113.60[a]	741.4	12.75	-23790.0	-23780.0	108.5	74.00	99.00	1729.0	9080.0	0.110	2.10780
200.0	657.7	11.32	-14600.0	-14580.0	168.3	82.19	114.9	1320.0	546.0	0.135	1.93568
250.0	606.4	10.43	-8563.0	-8543.0	195.2	90.00	127.2	1070.0	263.0	0.117	1.84191
280.251[b]	572.4	9.848	-4583.0	-4563.0	210.2	95.92	136.3	908.4	184.0	0.104	1.78277
280.251[b]	5.371	0.09241	13530.0	15690.0	282.5	86.28	97.93	198.4	7.18	0.0145	1.00577
285.0	5.235	0.09006	13950.0	16170.0	284.2	87.32	98.68	200.7	7.29	0.0149	1.00562
300.0	4.916	0.08459	15310.0	17670.0	289.3	90.80	101.5	207.3	7.64	0.0163	1.00527
320.0	4.558	0.07842	17190.0	19750.0	296.0	95.74	105.8	215.4	8.12	0.0184	1.00488
340.0	4.255	0.07321	19180.0	21910.0	302.5	100.9	110.6	223.0	8.60	0.0206	1.00455
360.0	3.995	0.06873	21260.0	24170.0	309.0	106.1	115.5	230.1	9.07	0.0230	1.00426
380.0	3.767	0.06481	23440.0	26530.0	315.4	111.3	120.5	236.9	9.55	0.0254	1.00401
400.0	3.566	0.06135	25730.0	28990.0	321.7	116.6	125.6	243.4	10.0	0.0280	1.00379
420.0	3.386	0.05826	28120.0	31550.0	327.9	121.7	130.6	249.6	10.5	0.0307	1.00360
440.0	3.225	0.05548	30610.0	34220.0	334.1	126.7	135.5	255.7	11.0	0.0335	1.00342
460.0	3.078	0.05296	33200.0	36970.0	340.3	131.6	140.4	261.6	11.4	0.0363	1.00326
480.0	2.945	0.05067	35880.0	39830.0	346.3	136.4	145.1	267.3	11.9	0.0392	1.00312
500.0	2.824	0.04858	38660.0	42780.0	352.3	141.0	149.7	272.9	12.4	0.0422	1.00299
520.0	2.712	0.04666	41530.0	45820.0	358.3	145.5	154.1	278.3	12.8	0.0452	1.00287
540.0	2.609	0.04489	44490.0	48940.0	364.2	149.8	158.4	283.6	13.3	0.0483	1.00276
560.0	2.514	0.04325	47530.0	52150.0	370.0	154.1	162.6	288.9	13.7	0.0514	1.00265
580.0	2.425	0.04172	50650.0	55450.0	375.8	158.2	166.7	294.0	14.2	0.0545	1.00256
600.0	2.343	0.04031	53860.0	58820.0	381.5	162.1	170.6	299.0	14.6	0.0577	1.00247
					0.30 MPa isobar						
113.70[a]	741.4	12.75	-23790.0	-23770.0	108.5	73.97	99.00	1731.0	9070.0	0.110	2.10778
200.0	657.8	11.32	-14600.0	-14580.0	168.3	82.19	114.9	1321.0	547.0	0.135	1.93581
250.0	606.6	10.44	-8567.0	-8538.0	195.2	90.00	127.1	1071.0	264.0	0.117	1.84211
260.0	595.7	10.25	-7282.0	-7253.0	200.2	91.85	130.0	1019.0	233.0	0.113	1.82293
280.0	572.8	9.856	-4623.0	-4592.0	210.0	95.86	136.2	910.9	185.0	0.104	1.78353
292.941[b]	557.2	9.586	-2832.0	-2801.0	216.3	98.67	140.8	839.2	160.0	0.0979	1.75696
292.941[b]	7.885	0.1357	14470.0	16690.0	282.8	90.42	103.3	198.4	7.57	0.0159	1.00847
295.0	7.778	0.1338	14670.0	16910.0	283.6	90.84	103.6	199.5	7.62	0.0161	1.00836
300.0	7.605	0.1308	15140.0	17430.0	285.3	91.92	104.3	202.0	7.73	0.0166	1.00816
320.0	6.999	0.1204	17060.0	19550.0	292.2	96.53	107.8	211.1	8.20	0.0186	1.00750
340.0	6.503	0.1119	19060.0	21740.0	298.8	101.4	112.0	219.4	8.67	0.0208	1.00695
360.0	6.083	0.1047	21160.0	24030.0	305.4	106.5	116.6	227.1	9.14	0.0231	1.00649
380.0	5.721	0.09843	23360.0	26410.0	311.8	111.7	121.4	234.3	9.61	0.0256	1.00610
400.0	5.404	0.09298	25660.0	28880.0	318.1	116.8	126.3	241.2	10.1	0.0281	1.00575
420.0	5.124	0.08816	28060.0	31460.0	324.4	121.9	131.1	247.7	10.6	0.0308	1.00545
440.0	4.873	0.08385	30550.0	34130.0	330.6	126.8	136.0	254.0	11.0	0.0336	1.00517
460.0	4.648	0.07996	33150.0	36900.0	336.8	131.7	140.7	260.1	11.5	0.0364	1.00493
480.0	4.443	0.07644	35830.0	39760.0	342.9	136.5	145.4	266.0	11.9	0.0393	1.00471
500.0	4.257	0.07323	38620.0	42710.0	348.9	141.1	149.9	271.7	12.4	0.0423	1.00451
520.0	4.086	0.07029	41490.0	45760.0	354.9	145.5	154.3	277.3	12.9	0.0453	1.00432
540.0	3.928	0.06759	44450.0	48890.0	360.8	149.9	158.6	282.7	13.3	0.0484	1.00415
560.0	3.783	0.06509	47490.0	52100.0	366.6	154.1	162.8	288.0	13.8	0.0515	1.00399
580.0	3.648	0.06277	50620.0	55400.0	372.4	158.2	166.9	293.2	14.2	0.0546	1.00385
600.0	3.523	0.06062	53820.0	58770.0	378.1	162.1	170.8	298.3	14.6	0.0578	1.00371
					0.40 MPa isobar						
113.70[a]	741.4	12.75	-23790.0	-23760.0	108.6	73.95	99.01	1732.0	9060.0	0.110	2.10777
200.0	657.9	11.32	-14610.0	-14570.0	168.2	82.19	114.9	1321.0	548.0	0.135	1.93594
250.0	606.7	10.44	-8571.0	-8533.0	195.1	90.00	127.1	1072.0	264.0	0.117	1.84231
260.0	595.8	10.25	-7287.0	-7248.0	200.2	91.85	129.9	1020.0	233.0	0.113	1.82315
280.0	573.0	9.858	-4629.0	-4588.0	210.0	95.86	136.2	912.1	185.0	0.104	1.78380
302.754[b]	544.9	9.374	-1441.0	-1398.0	221.0	100.9	144.5	785.1	144.0	0.0936	1.73635
302.754[b]	10.39	0.1787	15210.0	17450.0	283.2	93.71	107.9	197.6	7.89	0.0170	1.01116
305.0	10.24	0.1762	15430.0	17700.0	284.1	94.15	108.0	198.9	7.94	0.0173	1.01100
310.0	10.00	0.1721	15920.0	18250.0	285.8	95.19	108.6	201.5	8.06	0.0177	1.01074

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
320.0	9.573	0.1647	16910.0	19340.0	289.3	97.38	110.0	206.6	8.29	0.0188	1.01027
340.0	8.843	0.1521	18940.0	21570.0	296.1	102.1	113.5	215.7	8.75	0.0209	1.00947
360.0	8.239	0.1418	21060.0	23880.0	302.7	107.0	117.7	224.0	9.21	0.0232	1.00881
380.0	7.727	0.1329	23280.0	26280.0	309.2	112.0	122.3	231.7	9.68	0.0257	1.00825
400.0	7.283	0.1253	25580.0	28780.0	315.5	117.0	126.9	238.9	10.1	0.0283	1.00776
420.0	6.894	0.1186	27990.0	31360.0	321.9	122.1	131.7	245.8	10.6	0.0309	1.00734
440.0	6.548	0.1127	30490.0	34040.0	328.1	127.0	136.4	252.3	11.1	0.0337	1.00696
460.0	6.238	0.1073	33090.0	36820.0	334.3	131.8	141.1	258.6	11.5	0.0365	1.00662
480.0	5.958	0.1025	35790.0	39690.0	340.4	136.5	145.7	264.6	12.0	0.0394	1.00632
500.0	5.704	0.09813	38570.0	42650.0	346.4	141.1	150.2	270.5	12.5	0.0424	1.00604
520.0	5.471	0.09413	41450.0	45690.0	352.4	145.6	154.6	276.2	12.9	0.0454	1.00579
540.0	5.258	0.09046	44410.0	48830.0	358.3	149.9	158.8	281.7	13.3	0.0484	1.00556
560.0	5.061	0.08708	47450.0	52050.0	364.1	154.1	163.0	287.2	13.8	0.0515	1.00535
580.0	4.879	0.08394	50580.0	55350.0	369.9	158.2	167.0	292.4	14.2	0.0547	1.00515
600.0	4.710	0.08104	53790.0	58730.0	375.7	162.2	170.9	297.6	14.7	0.0578	1.00497
					0.50 MPa isobar						
113.80[a]	741.4	12.75	-23780.0	-23740.0	108.6	73.92	99.01	1733.0	9050.0	0.110	2.10775
200.0	658.0	11.32	-14610.0	-14560.0	168.2	82.19	114.9	1322.0	548.0	0.135	1.93607
250.0	606.8	10.44	-8575.0	-8527.0	195.1	90.00	127.1	1073.0	264.0	0.117	1.84251
260.0	595.9	10.25	-7291.0	-7243.0	200.2	91.85	129.9	1021.0	234.0	0.113	1.82337
280.0	573.2	9.861	-4634.0	-4584.0	210.0	95.86	136.1	913.4	185.0	0.104	1.78408
300.0	548.6	9.439	-1844.0	-1791.0	219.6	100.3	143.3	802.2	148.0	0.0949	1.74265
310.878[b]	534.2	9.191	-262.6	-208.2	224.8	102.8	147.8	739.9	132.0	0.0901	1.71877
310.878[b]	12.90	0.2219	15830.0	18080.0	283.7	96.49	111.9	196.3	8.18	0.0181	1.01387
315.0	12.60	0.2168	16250.0	18550.0	285.2	97.28	112.2	198.8	8.27	0.0185	1.01354
320.0	12.30	0.2117	16750.0	19120.0	286.9	98.29	112.6	201.6	8.38	0.0190	1.01322
330.0	11.77	0.2024	17780.0	20250.0	290.4	100.4	113.8	206.9	8.60	0.0200	1.01263
340.0	11.29	0.1942	18820.0	21390.0	293.8	102.7	115.3	211.8	8.83	0.0211	1.01210
360.0	10.47	0.1802	20960.0	23730.0	300.5	107.4	119.0	220.8	9.29	0.0234	1.01120
380.0	9.789	0.1684	23190.0	26160.0	307.1	112.3	123.2	229.0	9.75	0.0258	1.01046
400.0	9.205	0.1584	25510.0	28660.0	313.5	117.3	127.7	236.6	10.2	0.0284	1.00982
420.0	8.698	0.1496	27920.0	31260.0	319.8	122.2	132.3	243.8	10.7	0.0310	1.00926
430.0	8.467	0.1457	29170.0	32600.0	323.0	124.7	134.6	247.2	10.9	0.0324	1.00901
440.0	8.250	0.1419	30430.0	33960.0	326.1	127.1	136.9	250.6	11.1	0.0338	1.00877
460.0	7.850	0.1351	33040.0	36740.0	332.3	131.9	141.5	257.0	11.6	0.0366	1.00834
480.0	7.491	0.1289	35740.0	39620.0	338.4	136.6	146.0	263.3	12.0	0.0395	1.00795
500.0	7.166	0.1233	38520.0	42580.0	344.5	141.2	150.5	269.3	12.5	0.0424	1.00760
520.0	6.869	0.1182	41400.0	45630.0	350.4	145.7	154.8	275.1	12.9	0.0455	1.00727
540.0	6.598	0.1135	44370.0	48770.0	356.4	150.0	159.0	280.8	13.4	0.0485	1.00698
560.0	6.348	0.1092	47420.0	51990.0	362.2	154.2	163.2	286.3	13.8	0.0516	1.00671
580.0	6.117	0.1052	50550.0	55300.0	368.0	158.2	167.2	291.7	14.3	0.0547	1.00646
600.0	5.903	0.1016	53760.0	58680.0	373.8	162.2	171.1	296.9	14.7	0.0579	1.00623
					0.60 MPa isobar						
113.80[a]	741.4	12.76	-23780.0	-23730.0	108.6	73.90	99.02	1735.0	9040.0	0.110	2.10773
200.0	658.1	11.32	-14610.0	-14560.0	168.2	82.19	114.9	1323.0	549.0	0.135	1.93621
250.0	606.9	10.44	-8580.0	-8522.0	195.1	90.00	127.1	1074.0	265.0	0.118	1.84271
260.0	596.1	10.25	-7296.0	-7238.0	200.1	91.85	129.9	1022.0	234.0	0.113	1.82359
280.0	573.4	9.864	-4640.0	-4579.0	210.0	95.86	136.1	914.6	186.0	0.104	1.78435
300.0	548.9	9.443	-1852.0	-1788.0	219.6	100.3	143.2	803.8	149.0	0.0949	1.74300
317.875[b]	524.8	9.028	772.5	838.9	228.1	104.5	150.9	700.7	122.0	0.0873	1.70318
317.875[b]	15.43	0.2655	16360.0	18620.0	284.1	98.92	115.7	194.8	8.44	0.0190	1.01660
320.0	15.22	0.2619	16580.0	18880.0	284.9	99.30	115.7	196.2	8.48	0.0192	1.01638
330.0	14.49	0.2493	17630.0	20030.0	288.4	101.3	116.3	202.2	8.70	0.0202	1.01557
340.0	13.85	0.2384	18690.0	21200.0	291.9	103.4	117.3	207.6	8.92	0.0213	1.01487
360.0	12.79	0.2200	20850.0	23580.0	298.7	107.9	120.4	217.4	9.37	0.0235	1.01370
380.0	11.91	0.2049	23100.0	26020.0	305.3	112.7	124.2	226.2	9.82	0.0260	1.01274
400.0	11.17	0.1922	25430.0	28550.0	311.8	117.6	128.5	234.3	10.3	0.0285	1.01193
420.0	10.54	0.1813	27850.0	31160.0	318.2	122.5	132.9	241.7	10.7	0.0311	1.01123

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
430.0	10.25	0.1763	29100.0	32500.0	321.3	124.9	135.1	245.3	11.0	0.0325	1.01092
440.0	9.979	0.1717	30370.0	33870.0	324.4	127.3	137.4	248.8	11.2	0.0339	1.01062
460.0	9.485	0.1632	32980.0	36660.0	330.7	132.1	141.9	255.5	11.6	0.0367	1.01008
480.0	9.042	0.1556	35690.0	39540.0	336.8	136.7	146.4	261.9	12.1	0.0396	1.00960
500.0	8.642	0.1487	38480.0	42510.0	342.8	141.3	150.8	268.1	12.5	0.0425	1.00917
520.0	8.280	0.1424	41360.0	45570.0	348.8	145.7	155.1	274.1	13.0	0.0455	1.00877
540.0	7.948	0.1367	44330.0	48720.0	354.8	150.0	159.3	279.8	13.4	0.0486	1.00841
560.0	7.643	0.1315	47380.0	51940.0	360.6	154.2	163.3	285.5	13.9	0.0517	1.00808
580.0	7.363	0.1267	50510.0	55250.0	366.4	158.3	167.3	290.9	14.3	0.0548	1.00778
600.0	7.103	0.1222	53720.0	58630.0	372.2	162.2	171.2	296.3	14.7	0.0580	1.00750
				0.80 MPa isobar							
113.90[a]	741.4	12.76	-23770.0	-23710.0	108.7	73.85	99.02	1738.0	9010.0	0.110	2.10769
200.0	658.2	11.32	-14620.0	-14550.0	168.2	82.19	114.8	1324.0	550.0	0.136	1.93647
250.0	607.2	10.45	-8588.0	-8511.0	195.1	90.00	127.0	1076.0	265.0	0.118	1.84310
260.0	596.3	10.26	-7305.0	-7227.0	200.1	91.85	129.8	1024.0	235.0	0.113	1.82403
280.0	573.7	9.870	-4652.0	-4571.0	209.9	95.85	136.0	917.1	186.0	0.104	1.78490
300.0	549.3	9.451	-1866.0	-1782.0	219.6	100.2	143.1	806.8	149.0	0.0951	1.74370
320.0	522.3	8.986	1074.0	1163.0	229.1	105.0	151.7	692.0	120.0	0.0866	1.69916
329.623[b]	507.9	8.739	2556.0	2647.0	233.6	107.5	156.8	634.4	108.0	0.0826	1.67587
329.623[b]	20.59	0.3543	17250.0	19510.0	284.8	103.1	122.8	191.2	8.91	0.0206	1.02219
330.0	20.51	0.3529	17300.0	19560.0	284.9	103.1	122.8	191.5	8.91	0.0206	1.02211
340.0	19.43	0.3343	18390.0	20790.0	288.6	104.9	122.4	198.4	9.12	0.0217	1.02091
350.0	18.51	0.3184	19500.0	22010.0	292.2	106.9	122.8	204.6	9.33	0.0227	1.01990
360.0	17.71	0.3046	20620.0	23240.0	295.6	109.0	123.7	210.2	9.54	0.0239	1.01901
380.0	16.36	0.2815	22900.0	25750.0	302.4	113.5	126.6	220.3	9.98	0.0262	1.01753
400.0	15.26	0.2625	25270.0	28310.0	309.0	118.1	130.2	229.4	10.4	0.0287	1.01632
420.0	14.33	0.2465	27710.0	30960.0	315.4	122.9	134.2	237.6	10.9	0.0314	1.01530
430.0	13.91	0.2394	28970.0	32310.0	318.6	125.2	136.3	241.5	11.1	0.0327	1.01485
440.0	13.53	0.2327	30250.0	33680.0	321.8	127.6	138.5	245.2	11.3	0.0341	1.01442
450.0	13.16	0.2265	31550.0	35080.0	324.9	130.0	140.6	248.9	11.5	0.0355	1.01403
460.0	12.82	0.2206	32870.0	36500.0	328.0	132.3	142.8	252.4	11.8	0.0369	1.01366
480.0	12.20	0.2099	35580.0	39390.0	334.2	136.9	147.1	259.2	12.2	0.0398	1.01298
500.0	11.64	0.2003	38380.0	42380.0	340.3	141.4	151.3	265.7	12.6	0.0427	1.01237
520.0	11.14	0.1916	41270.0	45450.0	346.3	145.8	155.6	271.9	13.1	0.0457	1.01182
540.0	10.68	0.1837	44250.0	48600.0	352.2	150.1	159.7	278.0	13.5	0.0487	1.01132
560.0	10.26	0.1765	47300.0	51830.0	358.1	154.3	163.7	283.8	14.0	0.0518	1.01087
580.0	9.876	0.1699	50440.0	55150.0	363.9	158.3	167.7	289.4	14.4	0.0549	1.01045
600.0	9.520	0.1638	53660.0	58540.0	369.7	162.2	171.5	294.9	14.8	0.0581	1.01006
				1.00 MPa isobar							
114.00[a]	741.4	12.76	-23770.0	-23690.0	108.7	73.80	99.03	1741.0	8990.0	0.110	2.10765
200.0	658.4	11.33	-14620.0	-14530.0	168.2	82.19	114.8	1326.0	551.0	0.136	1.93673
250.0	607.4	10.45	-8596.0	-8501.0	195.0	90.00	127.0	1078.0	266.0	0.118	1.84350
260.0	596.6	10.26	-7315.0	-7217.0	200.1	91.85	129.8	1026.0	235.0	0.113	1.82447
280.0	574.0	9.876	-4663.0	-4562.0	209.9	95.85	135.9	919.6	187.0	0.104	1.78544
300.0	549.7	9.458	-1881.0	-1775.0	219.5	100.2	143.0	809.9	150.0	0.0952	1.74440
320.0	522.9	8.996	1055.0	1166.0	229.0	105.0	151.5	695.8	121.0	0.0867	1.70010
339.375[b]	493.0	8.482	4083.0	4201.0	238.2	110.0	162.4	578.7	96.9	0.0789	1.65187
339.375[b]	25.94	0.4462	17980.0	20230.0	285.4	106.6	129.8	187.1	9.34	0.0221	1.02801
340.0	25.81	0.4440	18060.0	20310.0	285.7	106.7	129.6	187.6	9.35	0.0221	1.02787
350.0	24.33	0.4187	19210.0	21600.0	289.4	108.3	128.2	195.4	9.54	0.0231	1.02623
360.0	23.10	0.3975	20360.0	22880.0	293.0	110.2	128.0	202.2	9.74	0.0242	1.02487
370.0	22.05	0.3793	21520.0	24160.0	296.5	112.2	128.4	208.4	9.94	0.0254	1.02371
380.0	21.12	0.3634	22700.0	25450.0	300.0	114.3	129.4	214.0	10.1	0.0265	1.02269
400.0	19.57	0.3366	25090.0	28060.0	306.7	118.7	132.2	224.2	10.6	0.0290	1.02097
420.0	18.28	0.3146	27560.0	30740.0	313.2	123.3	135.7	233.3	11.0	0.0316	1.01956
430.0	17.72	0.3049	28830.0	32110.0	316.4	125.6	137.6	237.5	11.2	0.0329	1.01894
440.0	17.20	0.2959	30110.0	33490.0	319.6	128.0	139.6	241.5	11.4	0.0343	1.01837
450.0	16.71	0.2876	31420.0	34900.0	322.8	130.3	141.6	245.5	11.7	0.0357	1.01784
460.0	16.26	0.2798	32750.0	36330.0	325.9	132.6	143.7	249.2	11.9	0.0371	1.01735

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	15.84	0.2725	34100.0	37770.0	329.0	134.9	145.8	252.9	12.1	0.0385	1.01688
480.0	15.44	0.2656	35480.0	39240.0	332.1	137.1	147.8	256.5	12.3	0.0399	1.01644
500.0	14.71	0.2530	38290.0	42240.0	338.2	141.6	152.0	263.3	12.8	0.0429	1.01565
520.0	14.05	0.2417	41180.0	45320.0	344.3	146.0	156.1	269.8	13.2	0.0459	1.01493
540.0	13.46	0.2315	44160.0	48480.0	350.2	150.2	160.1	276.1	13.6	0.0489	1.01428
560.0	12.91	0.2222	47230.0	51730.0	356.1	154.4	164.1	282.1	14.1	0.0520	1.01369
580.0	12.42	0.2137	50370.0	55050.0	361.9	158.4	168.0	288.0	14.5	0.0551	1.01316
600.0	11.96	0.2058	53590.0	58450.0	367.7	162.3	171.8	293.6	14.9	0.0582	1.01266
					1.20 MPa isobar						
114.10[a]	741.4	12.76	-23760.0	-23670.0	108.8	73.76	99.04	1744.0	8970.0	0.110	2.10761
200.0	658.5	11.33	-14630.0	-14520.0	168.1	82.19	114.8	1327.0	553.0	0.136	1.93700
250.0	607.6	10.45	-8605.0	-8490.0	195.0	90.00	126.9	1080.0	267.0	0.118	1.84389
260.0	596.9	10.27	-7324.0	-7207.0	200.0	91.85	129.7	1028.0	236.0	0.113	1.82490
280.0	574.4	9.882	-4675.0	-4553.0	209.9	95.84	135.8	922.0	187.0	0.104	1.78597
300.0	550.2	9.466	-1896.0	-1769.0	219.5	100.2	142.8	812.9	150.0	0.0954	1.74509
320.0	523.5	9.007	1036.0	1169.0	228.9	105.0	151.2	699.6	121.0	0.0869	1.70103
340.0	492.8	8.479	4157.0	4298.0	238.4	110.2	162.4	579.9	96.8	0.0789	1.65160
347.786[b]	479.2	8.244	5439.0	5585.0	242.2	112.3	168.1	530.2	88.2	0.0758	1.62997
347.786[b]	31.51	0.5421	18600.0	20820.0	286.0	109.8	136.9	182.6	9.75	0.0234	1.03410
350.0	31.02	0.5337	18870.0	21120.0	286.8	110.1	136.1	184.7	9.79	0.0236	1.03355
360.0	29.13	0.5012	20070.0	22470.0	290.6	111.5	133.6	193.2	9.96	0.0246	1.03146
370.0	27.58	0.4746	21270.0	23800.0	294.3	113.3	132.8	200.6	10.1	0.0257	1.02974
380.0	26.27	0.4520	22470.0	25130.0	297.8	115.2	132.8	207.2	10.3	0.0269	1.02829
390.0	25.13	0.4324	23680.0	26460.0	301.3	117.3	133.5	213.2	10.5	0.0281	1.02703
400.0	24.13	0.4152	24910.0	27800.0	304.7	119.4	134.5	218.8	10.7	0.0293	1.02593
420.0	22.43	0.3858	27410.0	30520.0	311.3	123.8	137.4	228.8	11.2	0.0319	1.02404
430.0	21.69	0.3731	28680.0	31900.0	314.5	126.0	139.1	233.4	11.4	0.0332	1.02323
440.0	21.01	0.3615	29980.0	33300.0	317.8	128.3	140.9	237.8	11.6	0.0345	1.02249
450.0	20.39	0.3507	31290.0	34720.0	321.0	130.6	142.8	242.0	11.8	0.0359	1.02180
460.0	19.81	0.3407	32630.0	36150.0	324.1	132.8	144.7	246.0	12.0	0.0373	1.02116
470.0	19.26	0.3314	33990.0	37610.0	327.2	135.1	146.7	249.9	12.2	0.0387	1.02057
480.0	18.76	0.3227	35370.0	39090.0	330.4	137.3	148.6	253.7	12.4	0.0401	1.02001
490.0	18.28	0.3146	36770.0	40580.0	333.4	139.5	150.6	257.3	12.7	0.0416	1.01949
500.0	17.84	0.3069	38190.0	42100.0	336.5	141.7	152.6	260.9	12.9	0.0430	1.01900
520.0	17.01	0.2927	41090.0	45190.0	342.6	146.1	156.6	267.7	13.3	0.0460	1.01811
540.0	16.27	0.2800	44080.0	48360.0	348.6	150.3	160.6	274.2	13.7	0.0490	1.01730
560.0	15.60	0.2685	47150.0	51620.0	354.5	154.4	164.5	280.5	14.1	0.0521	1.01657
580.0	14.99	0.2579	50290.0	54950.0	360.3	158.4	168.4	286.5	14.6	0.0552	1.01590
600.0	14.43	0.2483	53520.0	58350.0	366.1	162.3	172.1	292.3	15.0	0.0584	1.01529
					1.40 MPa isobar						
114.10[a]	741.4	12.76	-23760.0	-23650.0	108.8	73.71	99.05	1746.0	8940.0	0.110	2.10757
200.0	658.7	11.33	-14630.0	-14510.0	168.1	82.19	114.8	1328.0	554.0	0.136	1.93726
250.0	607.9	10.46	-8613.0	-8479.0	195.0	90.00	126.9	1081.0	267.0	0.118	1.84429
260.0	597.1	10.27	-7333.0	-7197.0	200.0	91.85	129.6	1030.0	237.0	0.113	1.82534
280.0	574.7	9.887	-4686.0	-4544.0	209.8	95.84	135.7	924.4	188.0	0.104	1.78651
300.0	550.6	9.473	-1910.0	-1762.0	219.4	100.2	142.7	815.8	151.0	0.0955	1.74577
320.0	524.1	9.017	1017.0	1172.0	228.9	105.0	151.0	703.4	122.0	0.0871	1.70195
340.0	493.7	8.494	4130.0	4295.0	238.3	110.1	161.9	584.8	97.4	0.0791	1.65294
350.0	476.2	8.192	5778.0	5949.0	243.1	112.9	169.3	521.6	86.5	0.0752	1.62523
355.222[b]	466.1	8.019	6671.0	6846.0	245.7	114.4	174.1	486.8	81.0	0.0732	1.60942
355.222[b]	37.37	0.6430	19140.0	21310.0	286.4	112.6	144.6	177.8	10.2	0.0247	1.04053
360.0	36.05	0.6203	19740.0	22000.0	288.3	113.2	141.9	182.8	10.2	0.0251	1.03907
370.0	33.76	0.5808	20990.0	23400.0	292.2	114.6	138.6	191.9	10.4	0.0261	1.03651
380.0	31.90	0.5489	22220.0	24770.0	295.8	116.2	137.2	199.8	10.6	0.0273	1.03445
390.0	30.34	0.5221	23460.0	26140.0	299.4	118.1	136.9	206.7	10.7	0.0284	1.03272
400.0	29.00	0.4990	24710.0	27510.0	302.9	120.1	137.3	213.0	10.9	0.0296	1.03123
410.0	27.82	0.4787	25970.0	28890.0	306.3	122.2	138.2	218.8	11.1	0.0309	1.02993
420.0	26.78	0.4607	27240.0	30280.0	309.6	124.3	139.3	224.1	11.3	0.0321	1.02877
430.0	25.83	0.4444	28530.0	31680.0	312.9	126.5	140.8	229.2	11.5	0.0334	1.02773
440.0	24.97	0.4297	29840.0	33090.0	316.2	128.7	142.3	233.9	11.7	0.0348	1.02678

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
450.0	24.19	0.4161	31160.0	34530.0	319.4	130.9	144.0	238.4	11.9	0.0361	1.02591
460.0	23.46	0.4037	32510.0	35980.0	322.6	133.1	145.8	242.8	12.1	0.0375	1.02512
470.0	22.79	0.3921	33870.0	37440.0	325.7	135.3	147.6	246.9	12.4	0.0389	1.02438
480.0	22.17	0.3814	35260.0	38930.0	328.8	137.5	149.5	250.9	12.6	0.0403	1.02369
490.0	21.58	0.3713	36660.0	40430.0	331.9	139.7	151.4	254.7	12.8	0.0418	1.02305
500.0	21.04	0.3619	38090.0	41960.0	335.0	141.9	153.3	258.5	13.0	0.0432	1.02245
520.0	20.04	0.3447	41000.0	45060.0	341.1	146.2	157.2	265.6	13.4	0.0462	1.02135
540.0	19.14	0.3293	43990.0	48250.0	347.1	150.4	161.1	272.4	13.8	0.0492	1.02037
560.0	18.33	0.3154	47070.0	51510.0	353.0	154.5	164.9	278.9	14.2	0.0523	1.01949
580.0	17.60	0.3027	50220.0	54840.0	358.9	158.5	168.7	285.1	14.7	0.0554	1.01869
600.0	16.93	0.2912	53450.0	58250.0	364.7	162.4	172.4	291.1	15.1	0.0585	1.01796
				1.60 MPa isobar							
114.20[a]	741.4	12.76	-23750.0	-23620.0	108.9	73.67	99.06	1749.0	8920.0	0.110	2.10754
200.0	658.9	11.34	-14640.0	-14500.0	168.1	82.19	114.8	1330.0	555.0	0.136	1.93752
250.0	608.1	10.46	-8621.0	-8468.0	194.9	90.00	126.8	1083.0	268.0	0.118	1.84468
260.0	597.4	10.28	-7342.0	-7187.0	200.0	91.85	129.6	1032.0	237.0	0.114	1.82577
280.0	575.0	9.893	-4697.0	-4536.0	209.8	95.84	135.6	926.8	188.0	0.105	1.78704
300.0	551.0	9.480	-1924.0	-1755.0	219.4	100.2	142.5	818.8	151.0	0.0957	1.74645
320.0	524.7	9.027	997.8	1175.0	228.8	104.9	150.8	707.0	122.0	0.0873	1.70286
340.0	494.6	8.509	4104.0	4292.0	238.3	110.1	161.5	589.7	98.0	0.0793	1.65426
350.0	477.3	8.211	5746.0	5941.0	243.0	112.8	168.6	527.4	87.2	0.0755	1.62690
360.0	457.6	7.872	7469.0	7672.0	247.9	115.7	178.3	460.7	76.8	0.0716	1.59618
361.909[b]	453.4	7.801	7810.0	8015.0	248.9	116.3	180.6	447.2	74.8	0.0708	1.58977
361.909[b]	43.58	0.7497	19590.0	21730.0	286.8	115.3	153.1	172.9	10.6	0.0259	1.04739
365.0	42.45	0.7303	20000.0	22200.0	288.1	115.5	150.3	176.6	10.6	0.0262	1.04612
370.0	40.82	0.7024	20660.0	22940.0	290.1	116.1	146.9	182.1	10.7	0.0267	1.04431
380.0	38.16	0.6565	21950.0	24380.0	293.9	117.4	142.9	191.6	10.8	0.0277	1.04133
390.0	36.02	0.6197	23220.0	25800.0	297.6	119.0	141.2	199.7	11.0	0.0288	1.03895
400.0	34.23	0.5890	24500.0	27210.0	301.2	120.9	140.6	206.9	11.1	0.0300	1.03696
410.0	32.70	0.5626	25780.0	28620.0	304.7	122.8	140.8	213.4	11.3	0.0312	1.03526
420.0	31.36	0.5396	27070.0	30030.0	308.1	124.8	141.6	219.3	11.5	0.0324	1.03377
430.0	30.17	0.5191	28370.0	31450.0	311.4	126.9	142.6	224.8	11.7	0.0337	1.03245
440.0	29.10	0.5007	29690.0	32880.0	314.7	129.1	143.9	230.0	11.9	0.0350	1.03127
450.0	28.13	0.4840	31020.0	34330.0	317.9	131.2	145.4	234.8	12.1	0.0363	1.03020
460.0	27.24	0.4687	32380.0	35790.0	321.2	133.4	147.0	239.5	12.3	0.0377	1.02922
470.0	26.42	0.4546	33750.0	37270.0	324.3	135.6	148.7	243.9	12.5	0.0391	1.02831
480.0	25.67	0.4416	35140.0	38770.0	327.5	137.8	150.4	248.1	12.7	0.0405	1.02748
490.0	24.96	0.4295	36550.0	40280.0	330.6	139.9	152.3	252.1	12.9	0.0420	1.02670
500.0	24.31	0.4182	37980.0	41810.0	333.7	142.1	154.1	256.1	13.1	0.0434	1.02598
510.0	23.69	0.4076	39440.0	43360.0	336.8	144.2	156.0	259.8	13.3	0.0449	1.02530
520.0	23.11	0.3976	40910.0	44930.0	339.8	146.3	157.8	263.5	13.5	0.0464	1.02467
540.0	22.05	0.3794	43910.0	48120.0	345.8	150.5	161.6	270.6	13.9	0.0494	1.02350
560.0	21.10	0.3629	46990.0	51390.0	351.8	154.6	165.4	277.3	14.3	0.0524	1.02246
580.0	20.23	0.3481	50140.0	54740.0	357.7	158.6	169.1	283.7	14.8	0.0555	1.02151
600.0	19.44	0.3345	53380.0	58160.0	363.5	162.4	172.8	289.9	15.2	0.0586	1.02066
				1.80 MPa isobar							
114.30[a]	741.4	12.76	-23740.0	-23600.0	108.9	73.63	99.07	1752.0	8900.0	0.110	2.10750
200.0	659.0	11.34	-14640.0	-14480.0	168.1	82.19	114.7	1331.0	556.0	0.136	1.93778
250.0	608.4	10.47	-8630.0	-8458.0	194.9	90.00	126.8	1085.0	269.0	0.118	1.84507
260.0	597.7	10.28	-7351.0	-7176.0	199.9	91.85	129.5	1034.0	238.0	0.114	1.82620
280.0	575.4	9.899	-4709.0	-4527.0	209.7	95.83	135.6	929.2	189.0	0.105	1.78757
300.0	551.5	9.488	-1938.0	-1749.0	219.3	100.2	142.4	821.7	152.0	0.0958	1.74713
320.0	525.2	9.037	979.2	1178.0	228.8	104.9	150.6	710.7	123.0	0.0874	1.70376
340.0	495.4	8.523	4078.0	4289.0	238.2	110.0	161.0	594.4	98.6	0.0795	1.65556
350.0	478.3	8.229	5714.0	5933.0	243.0	112.8	168.0	533.0	87.8	0.0757	1.62853
360.0	459.0	7.897	7428.0	7656.0	247.8	115.7	177.2	467.5	77.5	0.0719	1.59835
365.0	448.1	7.709	8323.0	8556.0	250.3	117.2	183.4	432.5	72.4	0.0699	1.58153

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
368.001[b]	441.0	7.587	8876.0	9113.0	251.8	118.2	187.9	410.4	69.3	0.0687	1.57066
368.001[b]	50.20	0.8636	19990.0	22070.0	287.0	117.8	162.9	167.7	11.0	0.0271	1.05474
370.0	49.24	0.8471	20270.0	22400.0	287.9	117.9	160.0	170.5	11.0	0.0273	1.05366
375.0	47.09	0.8101	20960.0	23180.0	290.0	118.2	154.6	176.8	11.0	0.0277	1.05124
380.0	45.27	0.7788	21630.0	23940.0	292.0	118.8	151.0	182.4	11.1	0.0282	1.04920
390.0	42.29	0.7276	22960.0	25430.0	295.9	120.1	146.7	192.1	11.2	0.0292	1.04587
400.0	39.91	0.6866	24260.0	26890.0	299.6	121.7	144.7	200.4	11.3	0.0304	1.04321
410.0	37.92	0.6524	25570.0	28330.0	303.1	123.5	144.0	207.7	11.5	0.0317	1.04099
415.0	37.04	0.6372	26220.0	29050.0	304.9	124.4	144.0	211.1	11.6	0.0322	1.04001
420.0	36.22	0.6231	26880.0	29770.0	306.6	125.4	144.1	214.3	11.7	0.0327	1.03910
430.0	34.73	0.5975	28200.0	31210.0	310.0	127.4	144.7	220.3	11.9	0.0340	1.03744
440.0	33.41	0.5748	29530.0	32660.0	313.3	129.5	145.7	225.9	12.0	0.0353	1.03598
450.0	32.23	0.5544	30880.0	34130.0	316.6	131.6	146.9	231.2	12.2	0.0366	1.03466
460.0	31.15	0.5360	32240.0	35600.0	319.9	133.7	148.3	236.1	12.4	0.0379	1.03347
470.0	30.17	0.5191	33620.0	37090.0	323.1	135.8	149.8	240.8	12.6	0.0393	1.03239
480.0	29.27	0.5035	35020.0	38600.0	326.3	138.0	151.4	245.3	12.8	0.0407	1.03139
490.0	28.43	0.4891	36440.0	40120.0	329.4	140.1	153.1	249.5	13.0	0.0422	1.03046
500.0	27.65	0.4758	37880.0	41660.0	332.5	142.3	154.9	253.7	13.2	0.0436	1.02961
510.0	26.93	0.4633	39330.0	43220.0	335.6	144.4	156.7	257.6	13.4	0.0451	1.02881
520.0	26.25	0.4516	40810.0	44800.0	338.6	146.5	158.5	261.5	13.6	0.0465	1.02806
540.0	25.01	0.4302	43820.0	48000.0	344.7	150.6	162.2	268.8	14.0	0.0495	1.02669
560.0	23.90	0.4111	46900.0	51280.0	350.7	154.7	165.8	275.7	14.4	0.0526	1.02548
580.0	22.90	0.3939	50070.0	54640.0	356.5	158.6	169.5	282.3	14.9	0.0557	1.02438
600.0	21.99	0.3783	53300.0	58060.0	362.4	162.5	173.1	288.7	15.3	0.0588	1.02339
					2.00 MPa isobar						
114.40[a]	741.4	12.76	-23740.0	-23580.0	109.0	73.58	99.08	1755.0	8880.0	0.110	2.10746
200.0	659.2	11.34	-14650.0	-14470.0	168.0	82.19	114.7	1332.0	558.0	0.136	1.93804
250.0	608.6	10.47	-8638.0	-8447.0	194.9	90.01	126.7	1087.0	269.0	0.118	1.84546
260.0	597.9	10.29	-7360.0	-7166.0	199.9	91.85	129.5	1036.0	239.0	0.114	1.82662
280.0	575.7	9.904	-4720.0	-4518.0	209.7	95.83	135.5	931.6	190.0	0.105	1.78810
300.0	551.9	9.495	-1952.0	-1742.0	219.3	100.2	142.3	824.6	153.0	0.0960	1.74780
320.0	525.8	9.046	960.9	1182.0	228.7	104.9	150.3	714.3	123.0	0.0876	1.70465
340.0	496.2	8.537	4052.0	4287.0	238.1	110.0	160.6	599.1	99.2	0.0797	1.65684
350.0	479.4	8.247	5682.0	5925.0	242.9	112.7	167.3	538.4	88.4	0.0759	1.63013
360.0	460.4	7.921	7387.0	7640.0	247.7	115.6	176.1	474.2	78.2	0.0722	1.60045
370.0	438.0	7.535	9197.0	9462.0	252.7	118.7	189.4	403.7	68.1	0.0683	1.56602
372.0	432.9	7.448	9576.0	9844.0	253.7	119.3	193.0	388.4	66.1	0.0674	1.55826
373.602[b]	428.6	7.374	9885.0	10160.0	254.6	119.9	196.4	375.8	64.4	0.0668	1.55178
373.602[b]	57.31	0.9861	20330.0	22360.0	287.2	120.1	174.6	162.4	11.4	0.0284	1.06269
375.0	56.42	0.9708	20540.0	22600.0	287.9	120.2	171.5	164.6	11.4	0.0285	1.06169
380.0	53.61	0.9224	21260.0	23430.0	290.1	120.4	163.2	171.9	11.4	0.0289	1.05851
385.0	51.30	0.8826	21970.0	24230.0	292.2	120.8	157.8	178.2	11.5	0.0293	1.05591
390.0	49.34	0.8489	22660.0	25010.0	294.2	121.3	154.2	183.7	11.5	0.0298	1.05370
400.0	46.12	0.7935	24010.0	26530.0	298.0	122.6	149.9	193.4	11.6	0.0309	1.05009
410.0	43.54	0.7491	25350.0	28020.0	301.7	124.3	147.9	201.7	11.7	0.0322	1.04720
415.0	42.42	0.7298	26020.0	28760.0	303.5	125.1	147.4	205.5	11.8	0.0326	1.04594
420.0	41.38	0.7120	26680.0	29490.0	305.2	126.0	147.1	209.1	11.9	0.0331	1.04479
425.0	40.43	0.6955	27350.0	30230.0	307.0	127.0	147.0	212.5	12.0	0.0337	1.04372
430.0	39.54	0.6802	28020.0	30960.0	308.7	127.9	147.1	215.7	12.1	0.0343	1.04272
440.0	37.92	0.6524	29370.0	32440.0	312.1	129.9	147.6	221.8	12.2	0.0356	1.04092
450.0	36.49	0.6278	30730.0	33920.0	315.4	132.0	148.5	227.5	12.4	0.0369	1.03933
460.0	35.20	0.6056	32110.0	35410.0	318.7	134.0	149.7	232.8	12.6	0.0382	1.03790
470.0	34.03	0.5855	33500.0	36910.0	321.9	136.1	151.0	237.7	12.8	0.0396	1.03660
480.0	32.97	0.5672	34900.0	38430.0	325.1	138.2	152.5	242.5	13.0	0.0410	1.03542
490.0	31.99	0.5503	36330.0	39960.0	328.3	140.3	154.1	247.0	13.2	0.0424	1.03433
500.0	31.08	0.5347	37770.0	41510.0	331.4	142.4	155.7	251.3	13.4	0.0438	1.03333
510.0	30.23	0.5201	39230.0	43080.0	334.5	144.5	157.4	255.4	13.6	0.0452	1.03240
520.0	29.44	0.5066	40710.0	44660.0	337.6	146.6	159.2	259.4	13.8	0.0467	1.03153
530.0	28.71	0.4939	42210.0	46260.0	340.6	148.7	160.9	263.3	13.9	0.0482	1.03071

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	28.01	0.4819	43730.0	47880.0	343.7	150.7	162.7	267.0	14.1	0.0497	1.02995
560.0	26.74	0.4600	46820.0	51170.0	349.6	154.8	166.3	274.2	14.6	0.0527	1.02854
580.0	25.59	0.4403	49990.0	54530.0	355.5	158.7	169.9	281.0	15.0	0.0558	1.02729
600.0	24.56	0.4225	53230.0	57960.0	361.4	162.5	173.4	287.5	15.4	0.0589	1.02615
					2.50 MPa isobar						
114.60[a]	741.4	12.76	-23720.0	-23530.0	109.1	73.48	99.10	1761.0	8820.0	0.110	2.10737
200.0	659.6	11.35	-14660.0	-14440.0	168.0	82.19	114.7	1336.0	561.0	0.136	1.93869
250.0	609.2	10.48	-8658.0	-8420.0	194.8	90.01	126.6	1091.0	271.0	0.118	1.84643
260.0	598.6	10.30	-7383.0	-7140.0	199.8	91.85	129.3	1041.0	240.0	0.114	1.82768
280.0	576.5	9.918	-4747.0	-4495.0	209.6	95.83	135.3	937.4	191.0	0.105	1.78940
300.0	552.9	9.513	-1987.0	-1724.0	219.2	100.2	142.0	831.6	154.0	0.0963	1.74944
320.0	527.2	9.070	915.7	1191.0	228.6	104.9	149.8	723.1	125.0	0.0880	1.70684
340.0	498.2	8.571	3990.0	4282.0	237.9	109.9	159.7	610.4	101.0	0.0802	1.65993
350.0	481.9	8.290	5607.0	5909.0	242.6	112.6	165.9	551.6	89.9	0.0765	1.63396
360.0	463.6	7.977	7292.0	7605.0	247.4	115.4	173.8	490.0	79.9	0.0729	1.60542
370.0	442.6	7.615	9067.0	9396.0	252.3	118.4	185.0	423.7	70.1	0.0691	1.57297
375.0	430.4	7.406	10000.0	10340.0	254.9	120.0	192.9	387.7	65.2	0.0672	1.55447
380.0	416.6	7.168	10980.0	11330.0	257.5	121.7	204.2	348.6	60.2	0.0651	1.53360
385.0	400.1	6.883	12030.0	12390.0	260.3	123.7	222.5	304.3	54.8	0.0630	1.50893
385.927[b]	396.6	6.823	12230.0	12600.0	260.8	124.1	227.4	295.3	53.8	0.0626	1.50374
385.927[b]	78.12	1.344	20930.0	22790.0	287.2	125.8	219.5	148.5	12.7	0.0326	1.08625
390.0	73.18	1.259	21650.0	23640.0	289.4	125.4	196.3	157.3	12.5	0.0325	1.08058
395.0	68.73	1.182	22460.0	24580.0	291.8	125.4	181.1	165.9	12.5	0.0327	1.07549
400.0	65.26	1.123	23230.0	25460.0	294.0	125.6	172.1	173.2	12.4	0.0331	1.07154
405.0	62.41	1.074	23970.0	26300.0	296.1	126.0	166.2	179.6	12.4	0.0341	1.06830
410.0	59.99	1.032	24700.0	27120.0	298.1	126.5	162.2	185.2	12.4	0.0346	1.06555
415.0	57.89	0.9960	25420.0	27930.0	300.1	127.1	159.4	190.4	12.5	0.0341	1.06317
420.0	56.04	0.9641	26130.0	28720.0	302.0	127.8	157.3	195.1	12.5	0.0344	1.06108
425.0	54.37	0.9355	26830.0	29500.0	303.8	128.6	155.9	199.5	12.5	0.0348	1.05920
430.0	52.87	0.9096	27530.0	30280.0	305.6	129.4	154.9	203.6	12.6	0.0353	1.05750
435.0	51.50	0.8860	28230.0	31050.0	307.4	130.2	154.2	207.5	12.7	0.0359	1.05596
440.0	50.23	0.8643	28930.0	31820.0	309.2	131.1	153.8	211.2	12.7	0.0364	1.05454
445.0	49.07	0.8442	29630.0	32590.0	310.9	132.0	153.6	214.7	12.8	0.0370	1.05323
450.0	47.98	0.8255	30330.0	33360.0	312.6	133.0	153.6	218.0	12.9	0.0376	1.05201
460.0	46.01	0.7916	31740.0	34890.0	316.0	134.9	153.9	224.2	13.0	0.0389	1.04980
470.0	44.27	0.7616	33150.0	36440.0	319.3	136.9	154.6	230.0	13.2	0.0402	1.04785
480.0	42.70	0.7347	34580.0	37990.0	322.6	138.9	155.6	235.4	13.4	0.0415	1.04610
490.0	41.29	0.7103	36030.0	39550.0	325.8	140.9	156.7	240.6	13.5	0.0429	1.04452
500.0	40.00	0.6881	37490.0	41120.0	329.0	142.9	158.1	245.4	13.7	0.0443	1.04308
510.0	38.81	0.6676	38960.0	42710.0	332.1	144.9	159.5	250.0	13.9	0.0458	1.04176
520.0	37.71	0.6487	40460.0	44310.0	335.2	147.0	161.0	254.4	14.1	0.0472	1.04054
530.0	36.69	0.6312	41970.0	45930.0	338.3	149.0	162.6	258.7	14.3	0.0487	1.03940
540.0	35.73	0.6148	43500.0	47560.0	341.4	151.0	164.2	262.8	14.4	0.0501	1.03835
550.0	34.84	0.5995	45040.0	49210.0	344.4	153.0	165.9	266.7	14.6	0.0516	1.03736
560.0	34.00	0.5850	46610.0	50880.0	347.4	155.0	167.6	270.5	14.8	0.0531	1.03643
580.0	32.47	0.5586	49790.0	54270.0	353.3	158.9	171.0	277.8	15.2	0.0562	1.03473
600.0	31.09	0.5349	53050.0	57720.0	359.2	162.7	174.4	284.8	15.6	0.0593	1.03321
					3.00 MPa isobar						
114.80[a]	741.5	12.76	-23710.0	-23470.0	109.2	73.38	99.12	1768.0	8770.0	0.111	2.10729
200.0	659.9	11.35	-14670.0	-14410.0	167.9	82.20	114.6	1339.0	564.0	0.136	1.93933
250.0	609.8	10.49	-8679.0	-8393.0	194.7	90.02	126.5	1096.0	273.0	0.119	1.84738
300.0	553.9	9.530	-2021.0	-1707.0	219.0	100.1	141.7	838.6	155.0	0.0967	1.75106
320.0	528.5	9.093	871.6	1201.0	228.4	104.8	149.3	731.6	126.0	0.0884	1.70896
340.0	500.1	8.604	3930.0	4279.0	237.7	109.8	158.8	621.3	102.0	0.0807	1.66290
350.0	484.2	8.331	5535.0	5895.0	242.4	112.4	164.6	564.2	91.4	0.0771	1.63760
360.0	466.7	8.029	7202.0	7576.0	247.2	115.2	171.9	504.8	81.5	0.0735	1.61005
370.0	446.7	7.686	8950.0	9340.0	252.0	118.1	181.5	442.0	72.0	0.0699	1.57921
380.0	422.9	7.276	10810.0	11220.0	257.0	121.3	196.4	373.0	62.5	0.0662	1.54301

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
385.0	408.6	7.030	11810.0	12230.0	259.7	123.0	208.4	334.4	57.6	0.0642	1.52151
390.0	391.3	6.733	12870.0	13320.0	262.5	125.0	228.3	290.9	52.4	0.0623	1.49593
392.0	383.1	6.591	13330.0	13790.0	263.7	125.9	241.0	271.2	50.1	0.0617	1.48384
394.0	373.6	6.428	13820.0	14290.0	264.9	126.9	259.7	249.5	47.6	0.0613	1.46999
396.0	362.1	6.230	14350.0	14840.0	266.3	128.0	291.5	224.6	44.8	0.0612	1.45335
396.410[b]	359.3	6.182	14470.0	14960.0	266.6	128.3	301.3	218.9	44.1	0.0613	1.44941
396.410[b]	106.2	1.828	21150.0	22790.0	286.4	131.3	330.0	133.7	14.3	0.0414	1.11879
400.0	96.31	1.657	22000.0	23810.0	289.0	130.2	250.2	145.1	13.9	0.0404	1.10716
402.0	92.55	1.592	22410.0	24290.0	290.1	129.9	230.3	150.1	13.8	0.0405	1.10278
404.0	89.42	1.538	22790.0	24740.0	291.3	129.7	216.6	154.4	13.7	0.0412	1.09914
406.0	86.74	1.492	23150.0	25160.0	292.3	129.6	206.5	158.4	13.6	0.0436	1.09604
410.0	82.31	1.416	23840.0	25960.0	294.3	129.5	192.8	165.4	13.5	0.0414	1.09091
412.0	80.43	1.384	24170.0	26340.0	295.2	129.6	187.8	168.5	13.4	0.0389	1.08874
414.0	78.71	1.354	24490.0	26710.0	296.1	129.6	183.7	171.5	13.4	0.0378	1.08677
416.0	77.14	1.327	24810.0	27070.0	297.0	129.7	180.3	174.2	13.4	0.0373	1.08496
418.0	75.69	1.302	25120.0	27430.0	297.8	129.9	177.4	176.9	13.3	0.0370	1.08329
420.0	74.34	1.279	25440.0	27780.0	298.7	130.0	175.0	179.4	13.3	0.0368	1.08174
422.0	73.07	1.257	25740.0	28130.0	299.5	130.2	172.8	181.8	13.3	0.0367	1.08030
425.0	71.33	1.227	26200.0	28640.0	300.7	130.5	170.1	185.3	13.3	0.0367	1.07830
430.0	68.73	1.182	26950.0	29480.0	302.7	131.1	166.7	190.6	13.3	0.0369	1.07533
435.0	66.45	1.143	27690.0	30310.0	304.6	131.8	164.2	195.5	13.3	0.0372	1.07273
440.0	64.41	1.108	28420.0	31130.0	306.4	132.5	162.4	200.0	13.4	0.0377	1.07041
445.0	62.58	1.077	29150.0	31940.0	308.3	133.3	161.1	204.3	13.4	0.0381	1.06833
450.0	60.91	1.048	29880.0	32740.0	310.1	134.1	160.2	208.3	13.4	0.0386	1.06644
455.0	59.38	1.022	30600.0	33540.0	311.8	135.0	159.6	212.0	13.5	0.0392	1.06470
460.0	57.96	0.9972	31330.0	34340.0	313.6	135.8	159.2	215.6	13.5	0.0398	1.06310
465.0	56.65	0.9747	32050.0	35130.0	315.3	136.7	159.0	219.1	13.6	0.0404	1.06162
470.0	55.43	0.9537	32780.0	35930.0	317.0	137.7	158.9	222.4	13.7	0.0410	1.06024
480.0	53.21	0.9154	34240.0	37520.0	320.3	139.5	159.2	228.6	13.8	0.0423	1.05774
490.0	51.23	0.8815	35710.0	39110.0	323.6	141.5	159.9	234.3	13.9	0.0436	1.05551
500.0	49.46	0.8509	37190.0	40710.0	326.9	143.4	160.8	239.7	14.1	0.0449	1.05352
510.0	47.85	0.8232	38680.0	42330.0	330.1	145.4	161.9	244.8	14.3	0.0463	1.05171
520.0	46.38	0.7979	40190.0	43950.0	333.2	147.3	163.1	249.7	14.4	0.0477	1.05007
530.0	45.02	0.7746	41720.0	45590.0	336.3	149.3	164.5	254.3	14.6	0.0492	1.04855
540.0	43.77	0.7530	43260.0	47240.0	339.4	151.3	165.9	258.7	14.8	0.0506	1.04715
550.0	42.60	0.7329	44810.0	48910.0	342.5	153.3	167.4	263.0	14.9	0.0521	1.04585
560.0	41.51	0.7142	46390.0	50590.0	345.5	155.2	168.9	267.1	15.1	0.0536	1.04464
570.0	40.49	0.6967	47980.0	52290.0	348.5	157.1	170.5	271.1	15.3	0.0551	1.04350
580.0	39.53	0.6802	49590.0	54000.0	351.5	159.0	172.1	274.9	15.5	0.0566	1.04244
600.0	37.77	0.6499	52860.0	57470.0	357.4	162.8	175.3	282.3	15.9	0.0597	1.04049
				3.20 MPa isobar							
114.90[a]	741.5	12.76	-23700.0	-23450.0	109.3	73.34	99.13	1771.0	8750.0	0.111	2.10725
200.0	660.1	11.36	-14680.0	-14400.0	167.9	82.20	114.6	1340.0	565.0	0.136	1.93959
250.0	610.0	10.50	-8687.0	-8382.0	194.7	90.02	126.4	1098.0	274.0	0.119	1.84776
300.0	554.3	9.537	-2035.0	-1699.0	219.0	100.1	141.6	841.3	156.0	0.0968	1.75170
320.0	529.1	9.102	854.2	1206.0	228.4	104.8	149.2	735.0	126.0	0.0886	1.70980
340.0	500.9	8.617	3907.0	4278.0	237.7	109.8	158.4	625.6	102.0	0.0809	1.66406
360.0	467.8	8.049	7168.0	7566.0	247.1	115.1	171.1	510.5	82.1	0.0738	1.61182
370.0	448.3	7.712	8906.0	9320.0	251.9	118.0	180.3	448.9	72.7	0.0702	1.58154
380.0	425.2	7.315	10750.0	11190.0	256.9	121.1	194.0	381.9	63.4	0.0666	1.54638
385.0	411.5	7.080	11730.0	12180.0	259.5	122.8	204.5	344.9	58.6	0.0647	1.52582
390.0	395.4	6.803	12770.0	13240.0	262.2	124.7	220.7	304.1	53.6	0.0628	1.50188
392.0	387.9	6.674	13210.0	13690.0	263.3	125.5	230.3	286.1	51.4	0.0622	1.49086
394.0	379.5	6.530	13670.0	14160.0	264.5	126.4	243.3	266.7	49.2	0.0617	1.47861
396.0	369.9	6.364	14170.0	14670.0	265.8	127.4	262.3	245.4	46.7	0.0615	1.46459
398.0	358.2	6.163	14700.0	15220.0	267.2	128.6	294.3	221.1	43.9	0.0618	1.44777
399.0	351.2	6.041	15000.0	15530.0	268.0	129.2	321.2	207.2	42.4	0.0622	1.43762
400.0	342.6	5.895	15330.0	15870.0	268.8	130.0	365.5	191.4	40.6	0.0630	1.42548
400.185[b]	340.9	5.865	15390.0	15940.0	269.0	130.2	376.4	188.4	40.2	0.0631	1.42304
400.185[b]	121.4	2.089	21080.0	22610.0	285.7	133.5	440.7	127.5	15.3	0.0485	1.13675
405.0	103.8	1.786	22370.0	24160.0	289.5	131.7	261.8	144.4	14.4	0.0494	1.11588

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
406.0	101.6	1.747	22590.0	24420.0	290.2	131.5	249.3	147.0	14.3	0.0520	1.11324
408.0	97.70	1.681	22990.0	24900.0	291.3	131.3	231.0	151.7	14.2	0.0949	1.10873
410.0	94.47	1.625	23380.0	25350.0	292.4	131.1	218.1	155.9	14.1	0.0472	1.10496
412.0	91.68	1.577	23740.0	25770.0	293.5	131.0	208.5	159.7	14.0	0.0427	1.10171
414.0	89.23	1.535	24100.0	26180.0	294.5	130.9	201.0	163.2	13.9	0.0407	1.09886
416.0	87.04	1.497	24440.0	26580.0	295.4	131.0	195.1	166.5	13.8	0.0396	1.09632
418.0	85.06	1.463	24780.0	26960.0	296.3	131.0	190.2	169.6	13.8	0.0389	1.09403
420.0	83.26	1.432	25100.0	27340.0	297.2	131.1	186.1	172.5	13.8	0.0384	1.09195
422.0	81.60	1.404	25430.0	27710.0	298.1	131.2	182.7	175.3	13.7	0.0382	1.09003
424.0	80.06	1.377	25750.0	28070.0	299.0	131.4	179.8	177.9	13.7	0.0380	1.08827
426.0	78.64	1.353	26060.0	28430.0	299.8	131.5	177.3	180.4	13.7	0.0379	1.08663
428.0	77.31	1.330	26370.0	28780.0	300.6	131.7	175.2	182.8	13.7	0.0379	1.08509
430.0	76.06	1.309	26680.0	29130.0	301.5	131.9	173.3	185.1	13.7	0.0379	1.08366
435.0	73.23	1.260	27440.0	29980.0	303.4	132.5	169.6	190.5	13.6	0.0380	1.08042
440.0	70.75	1.217	28200.0	30830.0	305.4	133.1	166.9	195.4	13.6	0.0383	1.07759
445.0	68.55	1.179	28940.0	31650.0	307.2	133.8	164.9	200.0	13.7	0.0387	1.07507
450.0	66.57	1.145	29680.0	32480.0	309.1	134.6	163.5	204.3	13.7	0.0392	1.07281
455.0	64.77	1.114	30420.0	33290.0	310.9	135.4	162.4	208.4	13.7	0.0397	1.07076
460.0	63.12	1.086	31150.0	34100.0	312.6	136.2	161.7	212.2	13.8	0.0402	1.06888
465.0	61.60	1.060	31890.0	34910.0	314.4	137.1	161.2	215.8	13.8	0.0408	1.06716
470.0	60.19	1.036	32620.0	35710.0	316.1	138.0	161.0	219.3	13.9	0.0414	1.06556
480.0	57.65	0.9918	34090.0	37320.0	319.5	139.8	160.9	225.8	14.0	0.0426	1.06269
490.0	55.41	0.9533	35570.0	38930.0	322.8	141.7	161.2	231.9	14.1	0.0439	1.06016
500.0	53.41	0.9189	37060.0	40550.0	326.1	143.6	161.9	237.5	14.3	0.0452	1.05790
510.0	51.60	0.8878	38570.0	42170.0	329.3	145.6	162.9	242.8	14.4	0.0466	1.05587
520.0	49.96	0.8596	40080.0	43810.0	332.5	147.5	164.0	247.9	14.6	0.0480	1.05403
530.0	48.46	0.8337	41610.0	45450.0	335.6	149.5	165.3	252.7	14.7	0.0494	1.05234
540.0	47.07	0.8098	43160.0	47110.0	338.7	151.4	166.6	257.2	14.9	0.0508	1.05079
550.0	45.78	0.7876	44720.0	48780.0	341.8	153.4	168.0	261.6	15.1	0.0523	1.04935
560.0	44.58	0.7670	46300.0	50470.0	344.8	155.3	169.5	265.8	15.3	0.0538	1.04801
570.0	43.46	0.7478	47890.0	52170.0	347.8	157.2	171.0	269.9	15.4	0.0553	1.04676
580.0	42.41	0.7297	49510.0	53890.0	350.8	159.1	172.6	273.8	15.6	0.0568	1.04559
600.0	40.49	0.6966	52780.0	57370.0	356.7	162.9	175.7	281.3	16.0	0.0598	1.04345
					3.40 MPa isobar						
115.00[a]	741.5	12.76	-23700.0	-23430.0	109.3	73.30	99.13	1773.0	8730.0	0.111	2.10722
200.0	660.3	11.36	-14680.0	-14390.0	167.8	82.20	114.6	1342.0	567.0	0.136	1.93985
250.0	610.3	10.50	-8695.0	-8371.0	194.6	90.02	126.4	1099.0	274.0	0.119	1.84814
300.0	554.7	9.544	-2048.0	-1692.0	218.9	100.1	141.4	844.0	156.0	0.0970	1.75234
320.0	529.6	9.111	837.0	1210.0	228.3	104.8	149.0	738.3	127.0	0.0888	1.71062
340.0	501.6	8.630	3884.0	4278.0	237.6	109.7	158.1	629.8	103.0	0.0811	1.66519
360.0	468.9	8.068	7134.0	7556.0	247.0	115.1	170.5	516.1	82.7	0.0740	1.61354
370.0	449.8	7.738	8863.0	9302.0	251.8	117.9	179.2	455.6	73.3	0.0705	1.58380
380.0	427.3	7.352	10690.0	11150.0	256.7	121.0	191.9	390.4	64.2	0.0670	1.54958
385.0	414.2	7.126	11660.0	12130.0	259.3	122.6	201.2	354.9	59.5	0.0651	1.52982
390.0	399.0	6.865	12680.0	13170.0	261.9	124.4	214.8	316.2	54.7	0.0633	1.50721
395.0	380.4	6.545	13780.0	14300.0	264.8	126.5	238.2	272.4	49.4	0.0619	1.47988
396.0	376.1	6.470	14010.0	14540.0	265.4	126.9	245.3	262.6	48.3	0.0618	1.47351
398.0	366.3	6.303	14510.0	15050.0	266.7	127.9	264.3	241.8	45.9	0.0618	1.45938
400.0	354.6	6.100	15050.0	15600.0	268.1	129.1	295.8	218.3	43.2	0.0626	1.44248
401.0	347.5	5.979	15340.0	15910.0	268.9	129.7	321.5	205.0	41.6	0.0635	1.43236
402.0	339.1	5.834	15670.0	16250.0	269.7	130.5	362.2	190.1	39.9	0.0647	1.42039
403.0	328.3	5.648	16050.0	16650.0	270.7	131.5	440.2	172.8	37.8	0.0666	1.40520
403.5	321.3	5.527	16270.0	16890.0	271.3	132.1	517.9	162.6	36.5	0.0678	1.39534
403.6	319.6	5.499	16320.0	16940.0	271.4	132.3	540.6	160.3	36.2	0.0681	1.39306
403.7	317.9	5.469	16370.0	16990.0	271.5	132.4	567.2	158.0	35.9	0.0683	1.39064
403.741[b]	317.5	5.463	16390.0	17010.0	271.6	132.4	572.3	157.5	35.8	0.0684	1.39010
403.741[b]	141.5	2.434	20860.0	22260.0	284.6	135.8	715.2	121.1	16.6	0.0607	1.16076
405.0	130.7	2.249	21400.0	22910.0	286.2	134.8	459.3	127.8	16.0	0.0622	1.14778
406.0	124.7	2.146	21740.0	23330.0	287.2	134.3	380.2	132.1	15.6	0.0661	1.14064
407.0	120.2	2.068	22040.0	23680.0	288.1	133.8	335.0	135.8	15.4	0.0782	1.13519
408.0	116.5	2.004	22310.0	24000.0	288.9	133.5	305.3	139.1	15.2	0.138	1.13076

Thermophysical properties of isc-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
409.0	113.3	1.949	22550.0	24300.0	289.6	133.2	284.0	142.1	15.1	0.0667	1.12702
410.0	110.6	1.902	22780.0	24570.0	290.3	133.0	267.8	144.8	14.9	0.0563	1.12377
411.0	108.1	1.860	23010.0	24830.0	290.9	132.8	255.1	147.3	14.8	0.0514	1.12090
412.0	105.9	1.823	23220.0	25080.0	291.5	132.7	244.8	149.7	14.7	0.0484	1.11833
413.0	104.0	1.788	23420.0	25320.0	292.1	132.6	236.3	152.0	14.6	0.0464	1.11599
414.0	102.1	1.757	23620.0	25560.0	292.7	132.5	229.1	154.1	14.6	0.0449	1.11386
416.0	98.89	1.701	24000.0	26000.0	293.7	132.4	217.6	158.1	14.5	0.0429	1.11006
418.0	96.07	1.653	24370.0	26430.0	294.8	132.3	208.8	161.7	14.4	0.0416	1.10677
420.0	93.57	1.610	24730.0	26840.0	295.7	132.3	201.8	165.1	14.3	0.0407	1.10385
422.0	91.33	1.571	25070.0	27240.0	296.7	132.3	196.2	168.3	14.2	0.0401	1.10124
424.0	89.29	1.536	25410.0	27620.0	297.6	132.4	191.5	171.3	14.2	0.0397	1.09888
426.0	87.43	1.504	25740.0	28000.0	298.5	132.5	187.7	174.1	14.1	0.0394	1.09672
428.0	85.72	1.475	26070.0	28370.0	299.4	132.6	184.4	176.8	14.1	0.0392	1.09473
430.0	84.13	1.447	26390.0	28740.0	300.2	132.8	181.6	179.4	14.0	0.0391	1.09290
432.0	82.65	1.422	26710.0	29100.0	301.1	132.9	179.1	181.8	14.0	0.0390	1.09119
435.0	80.60	1.387	27180.0	29630.0	302.3	133.2	176.1	185.3	14.0	0.0390	1.08882
440.0	77.57	1.335	27960.0	30500.0	304.3	133.8	172.2	190.7	14.0	0.0392	1.08534
445.0	74.91	1.289	28720.0	31360.0	306.2	134.4	169.3	195.7	14.0	0.0394	1.08229
450.0	72.56	1.248	29470.0	32200.0	308.1	135.1	167.2	200.4	14.0	0.0398	1.07959
455.0	70.44	1.212	30220.0	33030.0	309.9	135.9	165.6	204.7	14.0	0.0402	1.07716
460.0	68.51	1.179	30970.0	33860.0	311.7	136.7	164.5	208.8	14.0	0.0407	1.07497
465.0	66.75	1.148	31720.0	34680.0	313.5	137.5	163.7	212.6	14.1	0.0412	1.07296
470.0	65.13	1.121	32460.0	35490.0	315.2	138.3	163.2	216.3	14.1	0.0418	1.07112
475.0	63.63	1.095	33200.0	36310.0	317.0	139.2	162.8	219.8	14.1	0.0423	1.06941
480.0	62.23	1.071	33950.0	37120.0	318.7	140.1	162.7	223.2	14.2	0.0429	1.06782
490.0	59.70	1.027	35440.0	38750.0	322.0	142.0	162.7	229.5	14.3	0.0442	1.06495
500.0	57.46	0.9885	36940.0	40380.0	325.3	143.8	163.2	235.4	14.4	0.0455	1.06241
510.0	55.44	0.9538	38450.0	42010.0	328.6	145.7	164.0	240.9	14.6	0.0468	1.06014
520.0	53.62	0.9224	39970.0	43660.0	331.7	147.7	164.9	246.1	14.7	0.0482	1.05808
530.0	51.95	0.8938	41510.0	45310.0	334.9	149.6	166.1	251.0	14.9	0.0496	1.05621
540.0	50.42	0.8674	43060.0	46980.0	338.0	151.5	167.3	255.7	15.0	0.0510	1.05449
550.0	49.00	0.8431	44630.0	48660.0	341.1	153.5	168.7	260.3	15.2	0.0525	1.05291
560.0	47.69	0.8205	46210.0	50350.0	344.2	155.4	170.1	264.6	15.4	0.0540	1.05144
570.0	46.47	0.7994	47810.0	52060.0	347.2	157.3	171.6	268.8	15.6	0.0554	1.05007
580.0	45.32	0.7797	49420.0	53780.0	350.2	159.2	173.1	272.8	15.7	0.0569	1.04879
600.0	43.23	0.7437	52700.0	57280.0	356.1	162.9	176.1	280.5	16.1	0.0600	1.04645
					3.50 MPa isobar						
115.00[a]	741.5	12.76	-23690.0	-23420.0	109.4	73.28	99.14	1775.0	8720.0	0.111	2.10720
200.0	660.3	11.36	-14690.0	-14380.0	167.8	82.20	114.6	1342.0	567.0	0.136	1.93998
250.0	610.4	10.50	-8699.0	-8365.0	194.6	90.02	126.4	1100.0	275.0	0.119	1.84833
300.0	554.9	9.547	-2055.0	-1688.0	218.9	100.1	141.4	845.4	156.0	0.0970	1.75265
320.0	529.9	9.116	828.5	1212.0	228.3	104.8	148.9	740.0	127.0	0.0888	1.71103
340.0	502.0	8.636	3872.0	4278.0	237.6	109.7	158.0	631.8	103.0	0.0812	1.66576
360.0	469.5	8.077	7118.0	7551.0	246.9	115.0	170.1	518.8	83.0	0.0741	1.61438
370.0	450.5	7.750	8842.0	9293.0	251.7	117.9	178.7	458.8	73.7	0.0707	1.58490
380.0	428.4	7.370	10660.0	11140.0	256.6	120.9	190.9	394.5	64.6	0.0672	1.55111
385.0	415.5	7.148	11620.0	12110.0	259.2	122.5	199.7	359.6	60.0	0.0653	1.53172
390.0	400.7	6.894	12630.0	13140.0	261.8	124.3	212.3	321.9	55.2	0.0635	1.50969
395.0	382.9	6.587	13720.0	14250.0	264.6	126.3	233.0	279.7	50.1	0.0621	1.48343
396.0	378.8	6.516	13950.0	14480.0	265.2	126.7	239.0	270.4	49.0	0.0619	1.47741
398.0	369.7	6.360	14430.0	14980.0	266.5	127.7	254.6	250.8	46.7	0.0619	1.46420
400.0	359.0	6.177	14940.0	15510.0	267.8	128.7	278.4	229.1	44.2	0.0625	1.44883
402.0	345.8	5.949	15510.0	16100.0	269.3	130.0	320.9	204.2	41.3	0.0644	1.42989
403.0	337.4	5.806	15840.0	16440.0	270.1	130.8	359.3	189.9	39.6	0.0660	1.41806
404.0	327.0	5.625	16210.0	16830.0	271.1	131.7	429.2	173.4	37.6	0.0686	1.40329
404.5	320.3	5.510	16430.0	17060.0	271.7	132.3	493.6	164.0	36.4	0.0703	1.39395
405.0	311.8	5.364	16680.0	17330.0	272.3	133.0	613.4	153.1	34.9	0.0725	1.38214
405.2	307.5	5.291	16800.0	17460.0	272.7	133.3	699.0	148.1	34.2	0.0735	1.37621
405.4	302.3	5.201	16940.0	17620.0	273.0	133.8	838.4	142.5	33.3	0.0747	1.36906

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
405.437[b]	300.8	5.175	16980.0	17660.0	273.1	133.9	892.9	140.9	33.1	0.0749	1.36692
405.437[b]	155.2	2.670	20640.0	21950.0	283.7	136.9	1086.0	117.8	17.6	0.0723	1.17746
410.0	121.4	2.089	22400.0	24070.0	288.9	134.2	317.6	138.3	15.6	0.0623	1.13662
411.0	117.9	2.029	22650.0	24380.0	289.7	133.9	293.9	141.3	15.4	0.0560	1.13251
412.0	115.0	1.978	22890.0	24660.0	290.4	133.7	276.1	144.1	15.2	0.0522	1.12896
413.0	112.3	1.933	23120.0	24930.0	291.0	133.5	262.2	146.7	15.1	0.0496	1.12584
414.0	110.0	1.892	23340.0	25190.0	291.6	133.4	251.0	149.1	15.0	0.0476	1.12306
415.0	107.8	1.855	23550.0	25430.0	292.2	133.2	241.7	151.4	14.9	0.0462	1.12054
416.0	105.9	1.822	23750.0	25670.0	292.8	133.1	234.0	153.5	14.8	0.0450	1.11824
418.0	102.4	1.762	24140.0	26130.0	293.9	133.0	221.7	157.5	14.7	0.0433	1.11418
420.0	99.43	1.711	24510.0	26560.0	294.9	132.9	212.3	161.2	14.6	0.0422	1.11067
422.0	96.78	1.665	24880.0	26980.0	295.9	132.9	204.9	164.7	14.5	0.0414	1.10757
424.0	94.41	1.624	25230.0	27380.0	296.9	132.9	199.0	167.9	14.4	0.0408	1.10480
426.0	92.26	1.587	25570.0	27770.0	297.8	133.0	194.1	170.9	14.4	0.0404	1.10230
428.0	90.30	1.554	25910.0	28160.0	298.7	133.1	190.0	173.7	14.3	0.0401	1.10002
430.0	88.50	1.523	26240.0	28530.0	299.6	133.2	186.5	176.4	14.3	0.0399	1.09793
432.0	86.83	1.494	26560.0	28900.0	300.4	133.3	183.5	179.0	14.2	0.0397	1.09599
434.0	85.28	1.467	26880.0	29270.0	301.3	133.5	181.0	181.5	14.2	0.0396	1.09419
436.0	83.82	1.442	27200.0	29630.0	302.1	133.7	178.8	183.9	14.2	0.0396	1.09252
440.0	81.18	1.397	27830.0	30340.0	303.7	134.1	175.1	188.4	14.1	0.0396	1.08946
445.0	78.26	1.346	28600.0	31200.0	305.7	134.7	171.7	193.6	14.1	0.0398	1.08610
450.0	75.69	1.302	29370.0	32060.0	307.6	135.4	169.2	198.4	14.1	0.0401	1.08315
455.0	73.39	1.263	30120.0	32900.0	309.4	136.1	167.4	202.9	14.1	0.0405	1.08051
460.0	71.31	1.227	30880.0	33730.0	311.3	136.9	166.0	207.1	14.1	0.0410	1.07813
465.0	69.42	1.194	31630.0	34560.0	313.1	137.7	165.0	211.0	14.2	0.0415	1.07597
470.0	67.68	1.164	32370.0	35380.0	314.8	138.5	164.3	214.8	14.2	0.0420	1.07399
475.0	66.07	1.137	33120.0	36200.0	316.6	139.4	163.9	218.4	14.3	0.0426	1.07216
480.0	64.58	1.111	33870.0	37020.0	318.3	140.3	163.6	221.9	14.3	0.0431	1.07047
490.0	61.89	1.065	35370.0	38650.0	321.6	142.1	163.5	228.3	14.4	0.0444	1.06741
500.0	59.52	1.024	36870.0	40290.0	324.9	143.9	163.9	234.3	14.5	0.0456	1.06472
510.0	57.39	0.9874	38390.0	41930.0	328.2	145.8	164.5	239.9	14.7	0.0470	1.06231
520.0	55.47	0.9543	39910.0	43580.0	331.4	147.7	165.4	245.2	14.8	0.0483	1.06015
530.0	53.72	0.9242	41450.0	45240.0	334.6	149.7	166.5	250.2	15.0	0.0497	1.05817
540.0	52.11	0.8966	43010.0	46910.0	337.7	151.6	167.7	255.0	15.1	0.0511	1.05637
550.0	50.63	0.8711	44580.0	48600.0	340.8	153.5	169.0	259.6	15.3	0.0526	1.05471
560.0	49.26	0.8475	46160.0	50290.0	343.8	155.4	170.4	264.0	15.4	0.0541	1.05317
570.0	47.98	0.8255	47760.0	52000.0	346.9	157.3	171.8	268.2	15.6	0.0555	1.05174
580.0	46.78	0.8049	49380.0	53730.0	349.9	159.2	173.3	272.3	15.8	0.0570	1.05040
600.0	44.60	0.7674	52670.0	57230.0	355.8	163.0	176.3	280.0	16.1	0.0601	1.04797
				3.60 MPa isobar							
115.10[a]	741.5	12.76	-23690.0	-23410.0	109.4	73.26	99.14	1776.0	8710.0	0.111	2.10719
200.0	660.4	11.36	-14690.0	-14370.0	167.8	82.20	114.6	1343.0	568.0	0.136	1.94010
250.0	610.5	10.50	-8703.0	-8360.0	194.6	90.03	126.4	1101.0	275.0	0.119	1.84852
300.0	555.1	9.551	-2062.0	-1685.0	218.9	100.1	141.3	846.7	157.0	0.0971	1.75297
320.0	530.1	9.120	820.0	1215.0	228.3	104.8	148.8	741.6	127.0	0.0889	1.71144
340.0	502.3	8.642	3861.0	4277.0	237.5	109.7	157.8	633.9	104.0	0.0813	1.66632
360.0	470.0	8.087	7102.0	7547.0	246.9	115.0	169.8	521.5	83.3	0.0743	1.61522
370.0	451.2	7.763	8821.0	9285.0	251.6	117.8	178.2	462.1	74.0	0.0708	1.58598
380.0	429.4	7.387	10630.0	11120.0	256.5	120.8	189.9	398.5	65.0	0.0673	1.55261
385.0	416.7	7.170	11590.0	12090.0	259.1	122.5	198.3	364.2	60.4	0.0655	1.53356
390.0	402.3	6.922	12590.0	13110.0	261.7	124.2	210.0	327.4	55.7	0.0637	1.51206
395.0	385.2	6.627	13660.0	14200.0	264.5	126.1	228.6	286.6	50.8	0.0623	1.48675
396.0	381.2	6.559	13880.0	14430.0	265.1	126.5	233.8	277.7	49.7	0.0621	1.48101
398.0	372.7	6.412	14350.0	14910.0	266.3	127.4	246.9	259.1	47.5	0.0620	1.46856
400.0	362.9	6.243	14850.0	15420.0	267.6	128.4	265.7	238.8	45.1	0.0625	1.45437
402.0	351.1	6.041	15390.0	15980.0	269.0	129.6	295.9	216.2	42.5	0.0640	1.43751
403.0	344.1	5.921	15680.0	16290.0	269.7	130.2	319.8	203.6	41.0	0.0655	1.42752
404.0	335.9	5.779	16000.0	16630.0	270.5	131.0	355.7	189.8	39.3	0.0678	1.41587
405.0	325.7	5.604	16370.0	17010.0	271.5	131.9	417.9	174.3	37.4	0.0715	1.40155
405.5	319.4	5.496	16580.0	17230.0	272.0	132.4	471.1	165.5	36.2	0.0743	1.39273

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
406.0	311.7	5.363	16820.0	17490.0	272.7	133.1	559.5	155.8	34.9	0.0782	1.38198
406.5	301.4	5.185	17110.0	17810.0	273.5	133.9	742.6	144.4	33.2	0.0841	1.36771
406.6	298.8	5.140	17180.0	17880.0	273.6	134.1	807.1	141.9	32.8	0.0857	1.36411
406.8	292.5	5.033	17350.0	18060.0	274.1	134.6	1006.0	136.3	31.8	0.0896	1.35556
406.9	288.6	4.966	17450.0	18170.0	274.4	134.9	1174.0	133.2	31.3	0.0919	1.35027
407.0	283.9	4.884	17560.0	18300.0	274.7	135.2	1449.0	129.7	30.6	0.0947	1.34382
407.073[b]	257.5	4.430	18160.0	18970.0	276.3	137.0	20570.0	116.6	27.1	0.0972	1.30826
407.073[b]	176.1	3.030	20230.0	21420.0	282.3	138.1	2461.0	114.4	19.1	0.104	1.20333
410.0	136.3	2.344	21890.0	23420.0	287.2	135.7	421.6	130.7	16.4	0.0694	1.15441
410.5	133.3	2.293	22050.0	23620.0	287.7	135.4	389.5	132.7	16.3	0.0649	1.15082
411.0	130.7	2.248	22210.0	23810.0	288.2	135.2	364.5	134.5	16.1	0.0615	1.14767
411.5	128.3	2.208	22360.0	23990.0	288.6	135.0	344.5	136.2	16.0	0.0588	1.14486
412.0	126.2	2.171	22500.0	24160.0	289.0	134.9	328.0	137.8	15.9	0.0566	1.14232
413.0	122.5	2.107	22760.0	24470.0	289.8	134.6	302.4	140.8	15.7	0.0533	1.13786
414.0	119.3	2.052	23010.0	24760.0	290.5	134.4	283.3	143.6	15.5	0.0508	1.13403
415.0	116.4	2.003	23240.0	25040.0	291.2	134.2	268.4	146.2	15.4	0.0490	1.13068
416.0	113.9	1.960	23470.0	25300.0	291.8	134.0	256.5	148.6	15.3	0.0475	1.12769
417.0	111.6	1.921	23680.0	25550.0	292.4	133.9	246.7	150.9	15.2	0.0463	1.12500
418.0	109.6	1.885	23890.0	25800.0	293.0	133.8	238.4	153.1	15.1	0.0453	1.12255
420.0	105.9	1.822	24280.0	26260.0	294.1	133.6	225.4	157.2	14.9	0.0438	1.11823
422.0	102.7	1.767	24660.0	26700.0	295.1	133.5	215.5	160.9	14.8	0.0428	1.11451
424.0	99.94	1.719	25030.0	27120.0	296.1	133.5	207.8	164.3	14.7	0.0420	1.11123
426.0	97.44	1.676	25390.0	27530.0	297.1	133.5	201.5	167.6	14.6	0.0414	1.10831
428.0	95.19	1.638	25730.0	27930.0	298.0	133.6	196.4	170.6	14.6	0.0410	1.10568
430.0	93.13	1.602	26070.0	28320.0	298.9	133.7	192.1	173.5	14.5	0.0407	1.10328
432.0	91.24	1.570	26410.0	28700.0	299.8	133.8	188.5	176.2	14.5	0.0405	1.10109
434.0	89.50	1.540	26730.0	29070.0	300.7	133.9	185.4	178.8	14.4	0.0403	1.09906
436.0	87.87	1.512	27060.0	29440.0	301.5	134.1	182.7	181.3	14.4	0.0402	1.09717
438.0	86.35	1.486	27380.0	29800.0	302.4	134.3	180.4	183.7	14.3	0.0402	1.09541
440.0	84.93	1.461	27700.0	30160.0	303.2	134.5	178.4	186.0	14.3	0.0402	1.09377
445.0	81.72	1.406	28480.0	31040.0	305.2	135.0	174.4	191.4	14.3	0.0403	1.09006
450.0	78.91	1.358	29260.0	31910.0	307.1	135.7	171.4	196.4	14.3	0.0405	1.08682
455.0	76.42	1.315	30020.0	32760.0	309.0	136.4	169.2	201.0	14.3	0.0409	1.08396
460.0	74.17	1.276	30780.0	33600.0	310.8	137.1	167.6	205.4	14.3	0.0413	1.08138
465.0	72.14	1.241	31540.0	34440.0	312.6	137.9	166.4	209.5	14.3	0.0417	1.07905
470.0	70.28	1.209	32290.0	35270.0	314.4	138.7	165.6	213.3	14.3	0.0422	1.07692
475.0	68.56	1.180	33040.0	36090.0	316.1	139.5	165.0	217.0	14.4	0.0428	1.07497
480.0	66.97	1.152	33790.0	36920.0	317.9	140.4	164.6	220.5	14.4	0.0433	1.07316
490.0	64.12	1.103	35300.0	38560.0	321.3	142.2	164.3	227.2	14.5	0.0445	1.06991
500.0	61.60	1.060	36810.0	40200.0	324.6	144.1	164.5	233.3	14.6	0.0458	1.06705
510.0	59.36	1.021	38330.0	41850.0	327.8	145.9	165.1	239.0	14.8	0.0471	1.06451
520.0	57.34	0.9865	39860.0	43510.0	331.1	147.8	165.9	244.4	14.9	0.0485	1.06223
530.0	55.50	0.9549	41400.0	45170.0	334.2	149.7	166.9	249.5	15.0	0.0498	1.06016
540.0	53.82	0.9260	42960.0	46850.0	337.4	151.7	168.1	254.3	15.2	0.0513	1.05826
550.0	52.27	0.8993	44530.0	48530.0	340.5	153.6	169.3	259.0	15.4	0.0527	1.05652
560.0	50.84	0.8746	46120.0	50230.0	343.5	155.5	170.7	263.4	15.5	0.0542	1.05491
570.0	49.50	0.8517	47720.0	51950.0	346.6	157.4	172.1	267.7	15.7	0.0556	1.05342
580.0	48.26	0.8302	49340.0	53680.0	349.6	159.3	173.6	271.8	15.8	0.0571	1.05202
600.0	45.99	0.7912	52630.0	57180.0	355.5	163.0	176.6	279.6	16.2	0.0602	1.04949
					3.70 MPa isobar						
115.10[a]	741.5	12.76	-23690.0	-23400.0	109.4	73.24	99.15	1777.0	8700.0	0.111	2.10717
200.0	660.5	11.36	-14690.0	-14370.0	167.8	82.20	114.6	1344.0	568.0	0.136	1.94023
250.0	610.6	10.51	-8707.0	-8354.0	194.6	90.03	126.3	1102.0	275.0	0.119	1.84871
300.0	555.3	9.554	-2068.0	-1681.0	218.9	100.1	141.3	848.1	157.0	0.0972	1.75328
320.0	530.4	9.125	811.5	1217.0	228.2	104.8	148.7	743.2	128.0	0.0890	1.71185
340.0	502.7	8.648	3850.0	4277.0	237.5	109.7	157.7	635.9	104.0	0.0814	1.66687
360.0	470.6	8.096	7085.0	7542.0	246.8	115.0	169.5	524.2	83.6	0.0744	1.61605
370.0	451.9	7.775	8801.0	9276.0	251.6	117.8	177.7	465.2	74.3	0.0710	1.58704
380.0	430.3	7.404	10610.0	11110.0	256.5	120.8	189.1	402.4	65.4	0.0675	1.55407
385.0	417.9	7.190	11560.0	12070.0	259.0	122.4	197.0	368.7	60.8	0.0657	1.53534
390.0	403.9	6.948	12550.0	13080.0	261.6	124.1	208.0	332.7	56.2	0.0640	1.51434

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
395.0	387.3	6.663	13600.0	14160.0	264.3	126.0	224.7	293.1	51.4	0.0625	1.48987
396.0	383.6	6.599	13830.0	14390.0	264.9	126.4	229.3	284.6	50.3	0.0623	1.48438
398.0	375.5	6.460	14280.0	14860.0	266.1	127.2	240.5	266.8	48.2	0.0621	1.47256
400.0	366.3	6.302	14760.0	15350.0	267.3	128.2	255.9	247.7	46.0	0.0625	1.45930
402.0	355.7	6.119	15280.0	15880.0	268.7	129.2	278.9	226.8	43.5	0.0638	1.44396
404.0	342.6	5.894	15850.0	16480.0	270.1	130.4	318.3	203.2	40.7	0.0671	1.42526
405.0	334.5	5.754	16170.0	16810.0	271.0	131.2	351.7	190.0	39.1	0.0705	1.41381
406.0	324.6	5.585	16530.0	17190.0	271.9	132.0	406.6	175.3	37.2	0.0766	1.39997
406.5	318.7	5.482	16730.0	17400.0	272.4	132.6	450.6	167.2	36.1	0.0822	1.39163
407.0	311.6	5.361	16950.0	17640.0	273.0	133.2	517.5	158.4	34.9	0.0922	1.38178
407.5	302.7	5.208	17220.0	17930.0	273.7	133.9	632.9	148.6	33.5	0.120	1.36952
407.6	300.6	5.172	17280.0	17990.0	273.9	134.0	667.0	146.5	33.1	0.135	1.36663
407.8	295.9	5.091	17410.0	18130.0	274.2	134.4	755.1	142.1	32.4	0.259	1.36021
408.0	290.4	4.996	17560.0	18300.0	274.6	134.8	885.3	137.5	31.6	0.166	1.35263
408.2	283.5	4.878	17730.0	18490.0	275.1	135.3	1098.0	132.4	30.6	0.124	1.34329
408.4	274.4	4.720	17960.0	18750.0	275.7	136.0	1508.0	126.8	29.3	0.108	1.33088
408.6	260.2	4.476	18310.0	19140.0	276.7	136.9	2557.0	120.6	27.4	0.0990	1.31184
409.0	198.7	3.419	19860.0	20940.0	281.1	138.7	3385.0	114.2	21.0	0.0911	1.23174
409.1	190.5	3.277	20100.0	21230.0	281.8	138.6	2426.0	114.9	20.3	0.0895	1.22131
409.2	184.6	3.176	20280.0	21440.0	282.3	138.4	1902.0	115.7	19.9	0.0878	1.21392
409.4	176.4	3.034	20540.0	21760.0	283.1	138.2	1362.0	117.3	19.2	0.0844	1.20360
410.0	162.2	2.791	21050.0	22380.0	284.6	137.5	806.2	121.2	18.2	0.0762	1.18605
411.0	149.6	2.573	21590.0	23020.0	286.2	136.8	539.8	126.4	17.3	0.0672	1.17052
411.5	145.2	2.498	21800.0	23280.0	286.8	136.5	477.3	128.6	17.1	0.0641	1.16519
412.0	141.5	2.435	21980.0	23500.0	287.3	136.2	433.0	130.7	16.8	0.0615	1.16073
412.5	138.3	2.380	22160.0	23710.0	287.8	136.0	399.9	132.6	16.6	0.0593	1.15688
413.0	135.5	2.332	22320.0	23900.0	288.3	135.8	374.0	134.4	16.5	0.0574	1.15351
413.5	133.0	2.289	22470.0	24090.0	288.7	135.6	353.1	136.1	16.3	0.0559	1.15050
414.0	130.8	2.250	22610.0	24260.0	289.2	135.5	335.9	137.7	16.2	0.0545	1.14778
415.0	126.8	2.182	22880.0	24580.0	289.9	135.2	309.1	140.7	16.0	0.0522	1.14301
416.0	123.4	2.123	23140.0	24880.0	290.7	134.9	289.2	143.4	15.8	0.0503	1.13894
417.0	120.4	2.072	23370.0	25160.0	291.3	134.8	273.6	146.0	15.7	0.0488	1.13537
418.0	117.7	2.026	23600.0	25430.0	292.0	134.6	261.2	148.4	15.5	0.0476	1.13221
419.0	115.3	1.984	23820.0	25680.0	292.6	134.5	250.9	150.7	15.4	0.0466	1.12936
420.0	113.2	1.947	24030.0	25930.0	293.2	134.4	242.3	152.9	15.3	0.0457	1.12677
422.0	109.3	1.880	24430.0	26400.0	294.3	134.2	228.8	157.0	15.2	0.0444	1.12221
424.0	106.0	1.823	24820.0	26850.0	295.3	134.1	218.5	160.7	15.0	0.0434	1.11828
426.0	103.0	1.773	25190.0	27280.0	296.4	134.1	210.4	164.1	14.9	0.0426	1.11484
428.0	100.4	1.728	25550.0	27690.0	297.3	134.1	203.9	167.4	14.8	0.0421	1.11177
430.0	98.06	1.687	25900.0	28090.0	298.3	134.2	198.6	170.4	14.8	0.0416	1.10901
432.0	95.92	1.650	26240.0	28480.0	299.2	134.2	194.1	173.3	14.7	0.0413	1.10650
434.0	93.94	1.616	26580.0	28870.0	300.1	134.4	190.4	176.1	14.6	0.0411	1.10420
436.0	92.12	1.585	26910.0	29250.0	300.9	134.5	187.2	178.7	14.6	0.0409	1.10208
438.0	90.43	1.556	27240.0	29620.0	301.8	134.6	184.4	181.2	14.6	0.0408	1.10011
440.0	88.85	1.529	27560.0	29980.0	302.6	134.8	182.0	183.6	14.5	0.0408	1.09828
445.0	85.31	1.468	28360.0	30880.0	304.6	135.3	177.3	189.2	14.5	0.0408	1.09418
450.0	82.24	1.415	29140.0	31760.0	306.6	135.9	173.8	194.4	14.4	0.0409	1.09063
455.0	79.53	1.368	29920.0	32620.0	308.5	136.6	171.2	199.2	14.4	0.0412	1.08751
460.0	77.11	1.327	30680.0	33470.0	310.4	137.3	169.3	203.7	14.4	0.0416	1.08472
465.0	74.92	1.289	31440.0	34310.0	312.2	138.1	167.9	207.9	14.4	0.0420	1.08221
470.0	72.92	1.255	32200.0	35150.0	314.0	138.9	166.8	211.9	14.5	0.0425	1.07992
475.0	71.09	1.223	32960.0	35980.0	315.7	139.7	166.1	215.6	14.5	0.0430	1.07783
480.0	69.40	1.194	33710.0	36810.0	317.5	140.6	165.6	219.3	14.5	0.0436	1.07590
485.0	67.84	1.167	34470.0	37640.0	319.2	141.4	165.3	222.7	14.6	0.0441	1.07411
490.0	66.37	1.142	35230.0	38470.0	320.9	142.3	165.1	226.0	14.6	0.0447	1.07244
500.0	63.71	1.096	36740.0	40120.0	324.2	144.2	165.2	232.2	14.7	0.0460	1.06942
510.0	61.35	1.056	38270.0	41770.0	327.5	146.0	165.7	238.1	14.8	0.0473	1.06674
520.0	59.23	1.019	39800.0	43430.0	330.7	147.9	166.4	243.5	15.0	0.0486	1.06434
530.0	57.30	0.9858	41350.0	45100.0	333.9	149.8	167.4	248.7	15.1	0.0500	1.06216
540.0	55.54	0.9556	42910.0	46780.0	337.0	151.7	168.5	253.6	15.3	0.0514	1.06018
550.0	53.92	0.9277	44480.0	48470.0	340.1	153.6	169.7	258.3	15.4	0.0528	1.05835
560.0	52.42	0.9019	46070.0	50170.0	343.2	155.5	171.0	262.8	15.6	0.0543	1.05667

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
570.0	51.03	0.8780	47680.0	51890.0	346.2	157.4	172.4	267.1	15.7	0.0557	1.05511
580.0	49.73	0.8557	49300.0	53620.0	349.3	159.3	173.8	271.3	15.9	0.0572	1.05365
590.0	48.52	0.8347	50930.0	55370.0	352.2	161.2	175.3	275.3	16.1	0.0587	1.05229
600.0	47.37	0.8151	52590.0	57130.0	355.2	163.0	176.8	279.2	16.2	0.0602	1.05101
				3.80 MPa isobar							
115.10[a]	741.5	12.76	-23690.0	-23390.0	109.4	73.23	99.15	1778.0	8690.0	0.111	2.10716
200.0	660.6	11.36	-14360.0	-14360.0	167.8	82.20	114.5	1344.0	569.0	0.136	1.94036
250.0	610.7	10.51	8711.0	8349.0	194.6	90.03	126.3	1103.0	276.0	0.119	1.84890
300.0	555.5	9.557	-2075.0	-1677.0	218.9	100.1	141.2	849.4	157.0	0.0972	1.75359
320.0	530.6	9.129	803.1	1219.0	228.2	104.8	148.6	744.9	128.0	0.0891	1.71225
340.0	503.0	8.654	3838.0	4277.0	237.5	109.7	157.5	638.0	104.0	0.0815	1.66742
360.0	471.1	8.105	7069.0	7538.0	246.8	115.0	169.2	526.9	83.9	0.0745	1.61686
370.0	452.6	7.787	8781.0	9269.0	251.5	117.8	177.2	468.4	74.7	0.0711	1.58809
380.0	431.3	7.420	10580.0	11090.0	256.4	120.7	188.2	406.3	65.7	0.0677	1.55550
385.0	419.1	7.210	11520.0	12050.0	258.9	122.3	195.8	373.1	61.3	0.0659	1.53708
390.0	405.4	6.974	12510.0	13050.0	261.5	124.0	206.1	337.8	56.7	0.0642	1.51652
395.0	389.3	6.698	13550.0	14120.0	264.2	125.8	221.3	299.4	52.0	0.0627	1.49281
400.0	369.4	6.356	14690.0	15290.0	267.1	127.9	248.1	255.9	46.7	0.0625	1.46377
402.0	359.6	6.187	15180.0	15800.0	268.4	128.9	266.3	236.3	44.4	0.0636	1.44959
404.0	347.9	5.986	15720.0	16360.0	269.8	130.0	294.8	214.8	41.8	0.0665	1.43289
406.0	333.1	5.731	16330.0	16990.0	271.4	131.4	347.3	190.3	38.8	0.0751	1.41189
407.0	323.6	5.567	16680.0	17360.0	272.3	132.2	395.5	176.4	37.1	0.0893	1.39852
408.0	311.4	5.358	17090.0	17800.0	273.3	133.2	483.7	160.9	34.9	0.157	1.38155
408.5	303.6	5.223	17330.0	18060.0	274.0	133.9	562.6	152.3	33.6	0.101	1.37073
408.6	301.8	5.193	17380.0	18110.0	274.1	134.0	583.6	150.5	33.4	0.0976	1.36828
408.8	298.0	5.127	17500.0	18240.0	274.4	134.3	633.6	146.8	32.7	0.0924	1.36301
409.0	293.7	5.053	17620.0	18370.0	274.7	134.6	697.5	143.0	32.1	0.0886	1.35714
409.2	288.8	4.969	17750.0	18520.0	275.1	135.0	781.9	139.1	31.4	0.0856	1.35049
409.5	280.0	4.818	17990.0	18780.0	275.7	135.6	971.3	133.0	30.1	0.0819	1.33849
410.0	258.0	4.439	18550.0	19410.0	277.3	137.0	1641.0	122.7	27.2	0.0768	1.30895
410.5	222.1	3.821	19470.0	20460.0	279.8	138.5	2371.0	116.4	23.3	0.0731	1.26172
411.0	192.5	3.311	20310.0	21450.0	282.3	138.6	1535.0	117.2	20.6	0.0708	1.22383
411.5	176.8	3.042	20820.0	22070.0	283.8	138.3	999.0	119.8	19.3	0.0683	1.20412
412.0	167.0	2.874	21180.0	22500.0	284.8	137.9	754.6	122.4	18.6	0.0659	1.19198
413.0	154.5	2.659	21700.0	23130.0	286.3	137.2	536.8	127.1	17.7	0.0616	1.17660
413.5	150.1	2.582	21910.0	23380.0	286.9	137.0	479.1	129.1	17.4	0.0598	1.17112
414.0	146.3	2.517	22100.0	23610.0	287.5	136.7	436.9	131.1	17.2	0.0582	1.16649
414.5	143.0	2.460	22280.0	23820.0	288.0	136.5	404.6	132.9	17.0	0.0568	1.16248
415.0	140.1	2.410	22440.0	24020.0	288.5	136.3	379.0	134.6	16.8	0.0556	1.15895
415.5	137.5	2.365	22590.0	24200.0	288.9	136.2	358.2	136.2	16.7	0.0544	1.15579
416.0	135.1	2.324	22740.0	24380.0	289.3	136.0	341.0	137.8	16.5	0.0534	1.15294
417.0	130.9	2.253	23020.0	24700.0	290.1	135.7	313.9	140.8	16.3	0.0516	1.14793
418.0	127.4	2.191	23270.0	25010.0	290.9	135.5	293.6	143.5	16.1	0.0501	1.14364
419.0	124.2	2.137	23510.0	25290.0	291.5	135.3	277.7	146.0	15.9	0.0489	1.13990
420.0	121.4	2.089	23740.0	25560.0	292.2	135.2	264.9	148.4	15.8	0.0478	1.13657
421.0	118.9	2.046	23960.0	25820.0	292.8	135.0	254.4	150.7	15.7	0.0469	1.13358
422.0	116.6	2.007	24180.0	26070.0	293.4	134.9	245.6	152.9	15.6	0.0462	1.13086
424.0	112.6	1.937	24590.0	26550.0	294.5	134.8	231.6	156.9	15.4	0.0449	1.12608
426.0	109.1	1.877	24980.0	27000.0	295.6	134.7	221.0	160.6	15.3	0.0440	1.12197
428.0	106.1	1.825	25350.0	27430.0	296.6	134.7	212.7	164.1	15.1	0.0433	1.11837
430.0	103.3	1.778	25720.0	27850.0	297.6	134.7	206.0	167.3	15.0	0.0427	1.11516
432.0	100.9	1.736	26070.0	28260.0	298.5	134.7	200.6	170.4	15.0	0.0423	1.11228
434.0	98.65	1.697	26420.0	28660.0	299.4	134.8	196.0	173.3	14.9	0.0419	1.10966
436.0	96.60	1.662	26760.0	29040.0	300.3	134.9	192.1	176.0	14.8	0.0417	1.10727
438.0	94.70	1.629	27090.0	29420.0	301.2	135.0	188.8	178.7	14.8	0.0415	1.10506
440.0	92.95	1.599	27420.0	29800.0	302.0	135.2	186.0	181.2	14.7	0.0414	1.10301
442.0	91.31	1.571	27750.0	30170.0	302.9	135.4	183.5	183.6	14.7	0.0414	1.10111
445.0	89.04	1.532	28230.0	30710.0	304.1	135.7	180.4	187.1	14.7	0.0413	1.09847
450.0	85.68	1.474	29030.0	31610.0	306.1	136.2	176.3	192.4	14.6	0.0414	1.09458
455.0	82.73	1.423	29810.0	32480.0	308.0	136.9	173.3	197.4	14.6	0.0416	1.09117
460.0	80.12	1.378	30580.0	33340.0	309.9	137.6	171.1	202.0	14.6	0.0419	1.08816

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
465.0	77.76	1.338	31350.0	34190.0	311.8	138.3	169.4	206.3	14.6	0.0423	1.08545
470.0	75.63	1.301	32110.0	35030.0	313.6	139.1	168.2	210.4	14.6	0.0428	1.08300
475.0	73.67	1.268	32870.0	35870.0	315.3	139.9	167.3	214.3	14.6	0.0433	1.08076
480.0	71.88	1.237	33630.0	36710.0	317.1	140.7	166.6	218.0	14.6	0.0438	1.07870
485.0	70.21	1.208	34390.0	37540.0	318.8	141.6	166.2	221.5	14.7	0.0443	1.07679
490.0	68.66	1.181	35150.0	38370.0	320.5	142.5	166.0	224.9	14.7	0.0449	1.07502
500.0	65.85	1.133	36670.0	40030.0	323.9	144.3	165.9	231.2	14.8	0.0461	1.07183
510.0	63.36	1.090	38200.0	41690.0	327.2	146.1	166.3	237.2	14.9	0.0474	1.06900
520.0	61.13	1.052	39740.0	43360.0	330.4	148.0	166.9	242.7	15.1	0.0487	1.06647
530.0	59.11	1.017	41290.0	45030.0	333.6	149.9	167.8	248.0	15.2	0.0501	1.06419
540.0	57.27	0.9854	42860.0	46710.0	336.7	151.8	168.9	253.0	15.3	0.0515	1.06211
550.0	55.58	0.9563	44430.0	48410.0	339.8	153.7	170.0	257.7	15.5	0.0529	1.06020
560.0	54.02	0.9294	46020.0	50110.0	342.9	155.6	171.3	262.3	15.6	0.0544	1.05844
570.0	52.57	0.9045	47630.0	51830.0	346.0	157.5	172.7	266.6	15.8	0.0558	1.05681
580.0	51.22	0.8812	49250.0	53570.0	349.0	159.3	174.1	270.8	16.0	0.0573	1.05530
590.0	49.96	0.8595	50890.0	55310.0	352.0	161.2	175.5	274.9	16.1	0.0588	1.05388
600.0	48.77	0.8390	52550.0	57080.0	354.9	163.0	177.0	278.8	16.3	0.0603	1.05255
					4.00 MPa isobar						
115.20[a]	741.5	12.76	-23680.0	-23370.0	109.5	73.19	99.16	1781.0	8670.0	0.111	2.10712
200.0	660.7	11.37	-14700.0	-14350.0	167.8	82.20	114.5	1346.0	570.0	0.136	1.94061
250.0	610.9	10.51	-8718.0	-8338.0	194.5	90.03	126.3	1105.0	276.0	0.119	1.84927
300.0	555.9	9.564	-2088.0	-1670.0	218.8	100.1	141.1	852.0	158.0	0.0974	1.75421
320.0	531.1	9.138	786.3	1224.0	228.2	104.7	148.5	748.1	128.0	0.0892	1.71306
340.0	503.7	8.666	3816.0	4278.0	237.4	109.7	157.2	642.0	105.0	0.0817	1.66851
360.0	472.2	8.123	7038.0	7530.0	246.7	114.9	168.6	532.1	84.5	0.0747	1.61847
370.0	453.9	7.810	8741.0	9253.0	251.4	117.7	176.3	474.5	75.3	0.0714	1.59014
380.0	433.1	7.452	10530.0	11070.0	256.2	120.6	186.6	413.8	66.5	0.0680	1.55827
385.0	421.3	7.249	11460.0	12010.0	258.7	122.2	193.6	381.6	62.1	0.0663	1.54041
390.0	408.2	7.022	12430.0	13000.0	261.3	123.8	202.7	347.7	57.6	0.0646	1.52067
395.0	393.1	6.762	13460.0	14050.0	263.9	125.6	215.6	311.2	53.0	0.0631	1.49826
400.0	374.9	6.450	14550.0	15170.0	266.8	127.5	236.2	270.9	48.1	0.0626	1.47165
402.0	366.3	6.301	15020.0	15660.0	268.0	128.4	248.8	253.3	46.0	0.0633	1.45916
404.0	356.5	6.133	15520.0	16170.0	269.3	129.4	266.3	234.4	43.8	0.0656	1.44505
406.0	345.0	5.935	16050.0	16730.0	270.6	130.5	292.6	214.0	41.3	0.0724	1.42860
408.0	330.7	5.689	16650.0	17350.0	272.2	131.8	337.5	191.3	38.4	0.139	1.40838
409.0	321.8	5.537	16990.0	17710.0	273.0	132.5	374.7	179.0	36.8	0.0851	1.39597
409.5	316.7	5.449	17170.0	17900.0	273.5	133.0	400.1	172.5	35.9	0.0805	1.38889
410.0	311.1	5.352	17360.0	18110.0	274.0	133.4	432.5	165.8	34.9	0.0776	1.38105
410.5	304.7	5.242	17570.0	18340.0	274.6	133.9	475.1	158.8	33.9	0.0753	1.37221
411.0	297.3	5.116	17810.0	18590.0	275.2	134.5	532.7	151.7	32.7	0.0734	1.36206
411.5	288.7	4.966	18070.0	18870.0	275.9	135.2	612.7	144.5	31.4	0.0716	1.35017
414.0	215.7	3.711	20110.0	21190.0	281.5	138.7	1107.0	121.1	22.8	0.0631	1.25340
416.0	173.2	2.980	21550.0	22890.0	285.6	138.3	622.0	125.9	19.2	0.0590	1.19958
418.0	154.2	2.654	22400.0	23900.0	288.0	137.5	425.5	132.9	17.8	0.0553	1.17617
418.5	150.9	2.596	22570.0	24110.0	288.5	137.4	398.9	134.5	17.6	0.0545	1.17210
419.0	147.9	2.545	22730.0	24300.0	289.0	137.2	377.0	136.0	17.4	0.0538	1.16847
419.5	145.2	2.499	22890.0	24490.0	289.4	137.0	358.5	137.5	17.3	0.0531	1.16519
420.0	142.8	2.456	23030.0	24660.0	289.8	136.9	342.8	138.9	17.1	0.0524	1.16219
421.0	138.4	2.381	23310.0	24990.0	290.6	136.7	317.4	141.7	16.9	0.0512	1.15690
422.0	134.6	2.316	23570.0	25300.0	291.3	136.5	297.9	144.3	16.7	0.0502	1.15234
423.0	131.3	2.259	23820.0	25590.0	292.0	136.3	282.3	146.7	16.5	0.0492	1.14833
424.0	128.3	2.208	24050.0	25870.0	292.7	136.2	269.6	149.0	16.3	0.0484	1.14476
425.0	125.6	2.162	24280.0	26130.0	293.3	136.1	259.1	151.3	16.2	0.0477	1.14155
426.0	123.2	2.120	24500.0	26380.0	293.9	136.0	250.2	153.4	16.1	0.0470	1.13862
428.0	118.9	2.045	24910.0	26870.0	295.0	135.8	236.0	157.3	15.9	0.0460	1.13347
430.0	115.1	1.981	25310.0	27330.0	296.1	135.7	225.1	161.0	15.7	0.0451	1.12904
432.0	111.9	1.925	25690.0	27770.0	297.1	135.7	216.5	164.4	15.6	0.0444	1.12517
434.0	109.0	1.875	26060.0	28200.0	298.1	135.7	209.6	167.6	15.4	0.0439	1.12172
436.0	106.3	1.829	26420.0	28610.0	299.1	135.8	203.9	170.7	15.4	0.0435	1.11862
438.0	103.9	1.788	26780.0	29010.0	300.0	135.9	199.2	173.6	15.3	0.0432	1.11580

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	101.7	1.750	27120.0	29410.0	300.9	136.0	195.1	176.3	15.2	0.0429	1.11323
442.0	99.72	1.716	27460.0	29790.0	301.8	136.1	191.7	178.9	15.1	0.0427	1.11086
444.0	97.84	1.683	27800.0	30180.0	302.6	136.2	188.7	181.5	15.1	0.0426	1.10866
446.0	96.09	1.653	28130.0	30550.0	303.5	136.4	186.2	183.9	15.0	0.0425	1.10662
450.0	92.91	1.599	28780.0	31290.0	305.1	136.8	181.9	188.4	15.0	0.0424	1.10292
455.0	89.43	1.539	29590.0	32180.0	307.1	137.4	177.9	193.7	14.9	0.0425	1.09887
460.0	86.38	1.486	30380.0	33070.0	309.0	138.0	174.9	198.6	14.9	0.0427	1.09533
465.0	83.65	1.439	31160.0	33940.0	310.9	138.7	172.7	203.2	14.9	0.0430	1.09218
470.0	81.21	1.397	31930.0	34790.0	312.7	139.5	171.0	207.5	14.9	0.0434	1.08936
475.0	78.98	1.359	32700.0	35650.0	314.5	140.2	169.8	211.6	14.9	0.0438	1.08679
480.0	76.95	1.324	33470.0	36490.0	316.3	141.0	168.9	215.4	14.9	0.0443	1.08445
485.0	75.07	1.292	34240.0	37340.0	318.1	141.9	168.2	219.1	14.9	0.0448	1.08230
490.0	73.33	1.262	35010.0	38180.0	319.8	142.7	167.8	222.6	14.9	0.0454	1.08031
500.0	70.21	1.208	36540.0	39850.0	323.2	144.5	167.4	229.2	15.0	0.0465	1.07674
510.0	67.45	1.161	38080.0	41520.0	326.5	146.3	167.5	235.4	15.1	0.0477	1.07360
520.0	65.00	1.118	39630.0	43200.0	329.7	148.2	168.0	241.1	15.2	0.0490	1.07080
530.0	62.79	1.080	41180.0	44890.0	332.9	150.0	168.7	246.5	15.4	0.0504	1.06829
540.0	60.78	1.046	42750.0	46580.0	336.1	151.9	169.7	251.6	15.5	0.0518	1.06602
550.0	58.94	1.014	44330.0	48280.0	339.2	153.8	170.8	256.5	15.6	0.0532	1.06394
560.0	57.24	0.9848	45930.0	49990.0	342.3	155.7	172.0	261.2	15.8	0.0546	1.06202
570.0	55.67	0.9578	47540.0	51720.0	345.4	157.5	173.2	265.6	15.9	0.0560	1.06025
580.0	54.21	0.9327	49170.0	53460.0	348.4	159.4	174.6	269.9	16.1	0.0575	1.05861
590.0	52.85	0.9092	50810.0	55210.0	351.4	161.3	176.0	274.1	16.3	0.0590	1.05708
600.0	51.57	0.8872	52470.0	56980.0	354.4	163.1	177.4	278.1	16.4	0.0605	1.05565
				4.20 MPa isobar							
115.30[a]	741.5	12.76	-23670.0	-23350.0	109.5	73.15	99.17	1784.0	8650.0	0.111	2.10709
200.0	660.9	11.37	-14700.0	-14340.0	167.7	82.20	114.5	1347.0	572.0	0.136	1.94087
250.0	611.2	10.52	-8726.0	-8327.0	194.5	90.04	126.2	1106.0	277.0	0.119	1.84964
300.0	556.3	9.571	-2101.0	-1662.0	218.8	100.1	141.0	854.7	158.0	0.0975	1.75483
320.0	531.6	9.147	769.7	1229.0	228.1	104.7	148.3	751.3	129.0	0.0894	1.71385
340.0	504.4	8.678	3794.0	4278.0	237.3	109.6	156.9	645.9	105.0	0.0819	1.66959
360.0	473.2	8.141	7007.0	7523.0	246.6	114.9	168.1	537.2	85.1	0.0750	1.62004
370.0	455.3	7.833	8703.0	9239.0	251.3	117.6	175.5	480.5	75.9	0.0716	1.59213
380.0	434.9	7.483	10480.0	11040.0	256.1	120.5	185.2	421.0	67.2	0.0683	1.56093
390.0	410.8	7.067	12360.0	12960.0	261.1	123.6	199.8	357.0	58.5	0.0650	1.52454
395.0	396.4	6.821	13370.0	13980.0	263.7	125.3	210.9	322.1	54.1	0.0635	1.50322
400.0	379.6	6.531	14430.0	15080.0	266.5	127.2	227.5	284.4	49.4	0.0628	1.47848
402.0	371.8	6.397	14880.0	15540.0	267.6	128.0	236.9	268.2	47.4	0.0632	1.46717
404.0	363.2	6.249	15350.0	16030.0	268.8	128.9	249.2	251.1	45.4	0.0649	1.45473
406.0	353.5	6.082	15850.0	16540.0	270.1	129.8	265.7	233.0	43.2	0.0704	1.44076
408.0	342.2	5.888	16380.0	17090.0	271.4	130.9	289.6	213.7	40.8	0.125	1.42465
409.0	335.7	5.776	16660.0	17390.0	272.2	131.5	306.1	203.5	39.5	0.0812	1.41548
410.0	328.5	5.652	16960.0	17710.0	272.9	132.1	327.4	192.9	38.1	0.0755	1.40529
411.0	320.3	5.510	17290.0	18050.0	273.8	132.8	356.0	181.9	36.6	0.0727	1.39379
412.0	310.7	5.346	17640.0	18420.0	274.7	133.6	395.6	170.4	35.0	0.0707	1.38050
412.5	305.3	5.253	17830.0	18630.0	275.2	134.1	421.5	164.6	34.1	0.0698	1.37298
413.0	299.3	5.150	18030.0	18850.0	275.7	134.5	452.8	158.8	33.1	0.0689	1.36473
413.5	292.7	5.035	18250.0	19080.0	276.3	135.0	490.7	153.0	32.1	0.0679	1.35561
414.0	285.2	4.908	18480.0	19340.0	276.9	135.6	536.1	147.3	31.0	0.0669	1.34549
416.0	246.6	4.242	19640.0	20630.0	280.0	137.9	749.6	129.8	26.1	0.0623	1.29363
418.0	204.3	3.516	20960.0	22150.0	283.7	139.0	714.6	126.0	21.8	0.0588	1.23880
420.0	176.7	3.041	22000.0	23380.0	286.6	138.7	518.3	130.1	19.6	0.0563	1.20393
422.0	160.3	2.757	22760.0	24290.0	288.7	138.1	400.4	135.6	18.4	0.0540	1.18352
425.0	144.8	2.492	23660.0	25340.0	291.2	137.5	314.2	143.5	17.4	0.0512	1.16462
426.0	141.0	2.426	23910.0	25650.0	292.0	137.3	296.8	145.9	17.2	0.0504	1.15997
427.0	137.6	2.367	24160.0	25940.0	292.6	137.2	282.6	148.2	17.0	0.0496	1.15584
428.0	134.5	2.314	24400.0	26210.0	293.3	137.1	270.7	150.4	16.8	0.0490	1.15214
429.0	131.7	2.266	24620.0	26480.0	293.9	137.0	260.8	152.5	16.7	0.0484	1.14879
430.0	129.2	2.223	24840.0	26730.0	294.5	136.9	252.2	154.5	16.5	0.0478	1.14574
432.0	124.7	2.145	25270.0	27220.0	295.6	136.8	238.4	158.3	16.3	0.0469	1.14033
434.0	120.8	2.078	25670.0	27690.0	296.7	136.7	227.7	161.9	16.1	0.0462	1.13567

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
436.0	117.3	2.018	26060.0	28140.0	297.7	136.7	219.2	165.2	16.0	0.0455	1.13157
438.0	114.3	1.966	26430.0	28570.0	298.7	136.7	212.2	168.4	15.8	0.0450	1.12792
440.0	111.5	1.918	26800.0	28990.0	299.7	136.8	206.5	171.4	15.7	0.0446	1.12464
442.0	109.0	1.875	27150.0	29390.0	300.6	136.8	201.7	174.3	15.6	0.0443	1.12166
444.0	106.6	1.835	27500.0	29790.0	301.5	137.0	197.6	177.0	15.6	0.0441	1.11894
446.0	104.5	1.798	27850.0	30190.0	302.4	137.1	194.1	179.6	15.5	0.0439	1.11643
448.0	102.5	1.764	28190.0	30570.0	303.2	137.2	191.1	182.1	15.4	0.0437	1.11410
450.0	100.7	1.732	28530.0	30950.0	304.1	137.4	188.4	184.5	15.4	0.0436	1.11194
455.0	96.55	1.661	29350.0	31880.0	306.1	137.9	183.1	190.1	15.3	0.0435	1.10711
460.0	92.98	1.600	30160.0	32780.0	308.1	138.5	179.3	195.3	15.2	0.0436	1.10294
465.0	89.83	1.546	30950.0	33670.0	310.0	139.1	176.3	200.2	15.2	0.0438	1.09928
470.0	87.03	1.497	31740.0	34550.0	311.9	139.8	174.2	204.7	15.1	0.0441	1.09603
475.0	84.50	1.454	32530.0	35410.0	313.8	140.6	172.5	208.9	15.1	0.0444	1.09310
480.0	82.20	1.414	33300.0	36270.0	315.6	141.4	171.2	213.0	15.1	0.0449	1.09044
485.0	80.09	1.378	34080.0	37130.0	317.3	142.2	170.3	216.8	15.2	0.0453	1.08802
490.0	78.15	1.344	34850.0	37980.0	319.1	143.0	169.7	220.5	15.2	0.0458	1.08578
495.0	76.35	1.314	35630.0	38820.0	320.8	143.9	169.2	224.0	15.2	0.0464	1.08371
500.0	74.67	1.285	36400.0	39670.0	322.5	144.7	168.9	227.3	15.2	0.0469	1.08179
510.0	71.63	1.232	37950.0	41360.0	325.8	146.5	168.8	233.7	15.3	0.0481	1.07831
520.0	68.94	1.186	39510.0	43050.0	329.1	148.3	169.1	239.6	15.4	0.0494	1.07524
530.0	66.52	1.144	41070.0	44740.0	332.3	150.2	169.7	245.1	15.5	0.0507	1.07248
540.0	64.33	1.107	42650.0	46440.0	335.5	152.0	170.5	250.4	15.7	0.0520	1.07000
550.0	62.33	1.072	44240.0	48150.0	338.7	153.9	171.5	255.4	15.8	0.0534	1.06773
560.0	60.50	1.041	45840.0	49870.0	341.8	155.8	172.6	260.1	15.9	0.0548	1.06565
570.0	58.80	1.012	47450.0	51600.0	344.8	157.6	173.8	264.7	16.1	0.0563	1.06374
580.0	57.23	0.9846	49080.0	53350.0	347.9	159.5	175.1	269.1	16.2	0.0577	1.06197
590.0	55.77	0.9594	50730.0	55110.0	350.9	161.3	176.5	273.3	16.4	0.0592	1.06032
600.0	54.39	0.9358	52390.0	56880.0	353.8	163.2	177.8	277.4	16.5	0.0607	1.05877
					4.40 MPa isobar						
115.40[a]	741.5	12.76	-23670.0	-23320.0	109.6	73.12	99.18	1786.0	8630.0	0.111	2.10706
200.0	661.0	11.37	-14710.0	-14320.0	167.7	82.21	114.5	1348.0	573.0	0.136	1.94112
250.0	611.4	10.52	-8734.0	-8316.0	194.5	90.04	126.2	1108.0	278.0	0.119	1.85002
300.0	556.7	9.577	-2114.0	-1655.0	218.7	100.1	140.9	857.3	159.0	0.0977	1.75544
320.0	532.1	9.155	753.3	1234.0	228.0	104.7	148.1	754.4	129.0	0.0895	1.71464
340.0	505.1	8.690	3773.0	4279.0	237.3	109.6	156.7	649.8	106.0	0.0821	1.67065
360.0	474.2	8.158	6976.0	7516.0	246.5	114.8	167.6	542.2	85.6	0.0752	1.62158
370.0	456.5	7.854	8665.0	9226.0	251.2	117.5	174.7	486.3	76.6	0.0719	1.59406
380.0	436.6	7.512	10430.0	11020.0	256.0	120.4	183.9	428.1	67.9	0.0687	1.56348
390.0	413.2	7.110	12300.0	12920.0	260.9	123.5	197.2	365.8	59.4	0.0654	1.52818
395.0	399.6	6.874	13290.0	13930.0	263.5	125.1	207.0	332.4	55.0	0.0638	1.50779
400.0	383.8	6.603	14330.0	14990.0	266.2	126.9	220.8	296.7	50.6	0.0630	1.48455
405.0	364.7	6.275	15450.0	16150.0	269.0	128.9	242.9	257.7	45.8	0.0660	1.45683
406.0	360.3	6.199	15680.0	16390.0	269.6	129.3	249.1	249.4	44.7	0.0688	1.45050
408.0	350.7	6.034	16180.0	16910.0	270.9	130.3	264.5	232.1	42.6	0.113	1.43672
410.0	339.7	5.844	16700.0	17460.0	272.2	131.3	285.9	214.0	40.3	0.0733	1.42102
411.0	333.4	5.737	16980.0	17750.0	273.0	131.9	300.0	204.5	39.1	0.0713	1.41221
412.0	326.6	5.619	17270.0	18060.0	273.7	132.5	317.5	194.9	37.8	0.0699	1.40256
413.0	319.0	5.488	17580.0	18380.0	274.5	133.1	339.5	185.0	36.4	0.0689	1.39189
414.0	310.4	5.340	17910.0	18740.0	275.4	133.8	367.7	174.9	35.0	0.0678	1.37993
415.0	300.5	5.171	18270.0	19120.0	276.3	134.6	404.0	165.0	33.4	0.0667	1.36635
416.0	289.2	4.975	18660.0	19550.0	277.3	135.5	449.9	155.3	31.6	0.0653	1.35077
420.0	228.3	3.928	20630.0	21750.0	282.6	138.7	613.4	131.4	24.2	0.0590	1.26962
425.0	171.3	2.947	22850.0	24340.0	288.7	138.8	405.6	136.7	19.3	0.0542	1.19708
430.0	146.4	2.519	24290.0	26040.0	292.7	138.0	291.9	148.1	17.6	0.0506	1.16652
431.0	143.0	2.461	24540.0	26330.0	293.4	137.9	279.6	150.2	17.4	0.0500	1.16240
432.0	140.0	2.408	24770.0	26600.0	294.0	137.8	269.0	152.3	17.3	0.0495	1.15867
433.0	137.2	2.360	25000.0	26860.0	294.6	137.8	260.0	154.2	17.1	0.0490	1.15528
434.0	134.6	2.315	25220.0	27120.0	295.2	137.7	252.1	156.2	17.0	0.0486	1.15216
436.0	130.0	2.236	25640.0	27610.0	296.3	137.6	239.2	159.8	16.7	0.0478	1.14661
438.0	125.9	2.167	26050.0	28080.0	297.4	137.6	229.0	163.3	16.5	0.0471	1.14179

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	122.4	2.106	26440.0	28530.0	298.4	137.6	220.7	166.5	16.4	0.0466	1.13754
442.0	119.2	2.051	26820.0	28960.0	299.4	137.6	214.0	169.6	16.2	0.0461	1.13375
444.0	116.3	2.001	27190.0	29380.0	300.4	137.7	208.3	172.5	16.1	0.0457	1.13032
446.0	113.7	1.956	27550.0	29800.0	301.3	137.8	203.6	175.3	16.0	0.0454	1.12721
448.0	111.3	1.915	27900.0	30200.0	302.2	137.9	199.5	178.0	15.9	0.0452	1.12436
450.0	109.1	1.876	28250.0	30600.0	303.1	138.0	196.0	180.6	15.8	0.0450	1.12173
452.0	107.0	1.841	28590.0	30980.0	303.9	138.2	193.0	183.0	15.8	0.0448	1.11929
454.0	105.1	1.808	28930.0	31370.0	304.8	138.4	190.3	185.4	15.7	0.0447	1.11703
460.0	99.96	1.720	29930.0	32490.0	307.2	139.0	184.1	192.1	15.6	0.0446	1.11103
465.0	96.32	1.657	30740.0	33400.0	309.2	139.6	180.4	197.2	15.5	0.0447	1.10678
470.0	93.10	1.602	31550.0	34290.0	311.1	140.2	177.6	201.9	15.5	0.0449	1.10303
475.0	90.23	1.552	32340.0	35180.0	313.0	140.9	175.4	206.4	15.4	0.0451	1.09969
480.0	87.63	1.508	33130.0	36050.0	314.8	141.7	173.8	210.6	15.4	0.0455	1.09668
485.0	85.27	1.467	33920.0	36920.0	316.6	142.5	172.6	214.6	15.4	0.0459	1.09394
490.0	83.10	1.430	34700.0	37780.0	318.4	143.3	171.7	218.4	15.4	0.0464	1.09144
495.0	81.10	1.395	35480.0	38630.0	320.1	144.1	171.0	222.0	15.4	0.0468	1.08913
500.0	79.24	1.363	36260.0	39490.0	321.8	145.0	170.6	225.4	15.5	0.0474	1.08699
510.0	75.90	1.306	37820.0	41190.0	325.2	146.7	170.2	232.0	15.5	0.0485	1.08315
520.0	72.94	1.255	39390.0	42890.0	328.5	148.5	170.2	238.1	15.6	0.0497	1.07976
530.0	70.31	1.210	40960.0	44600.0	331.7	150.3	170.7	243.8	15.7	0.0510	1.07675
540.0	67.93	1.169	42540.0	46310.0	334.9	152.2	171.4	249.2	15.8	0.0523	1.07404
550.0	65.77	1.132	44140.0	48020.0	338.1	154.0	172.2	254.3	16.0	0.0537	1.07159
560.0	63.79	1.097	45740.0	49750.0	341.2	155.9	173.3	259.2	16.1	0.0551	1.06934
570.0	61.97	1.066	47360.0	51490.0	344.3	157.7	174.4	263.8	16.2	0.0565	1.06727
580.0	60.28	1.037	49000.0	53240.0	347.3	159.6	175.6	268.3	16.4	0.0579	1.06536
590.0	58.71	1.010	50650.0	55000.0	350.3	161.4	176.9	272.6	16.5	0.0594	1.06359
600.0	57.24	0.9847	52310.0	56780.0	353.3	163.2	178.3	276.7	16.7	0.0609	1.06193
				4.60 MPa isobar							
115.50[a]	741.5	12.76	-23660.0	-23300.0	109.6	73.08	99.18	1789.0	8610.0	0.111	2.10703
200.0	661.2	11.38	-14710.0	-14310.0	167.7	82.21	114.5	1349.0	574.0	0.137	1.94137
250.0	611.6	10.52	-8742.0	-8305.0	194.4	90.05	126.1	1110.0	278.0	0.119	1.85039
300.0	557.1	9.584	-2127.0	-1647.0	218.7	100.1	140.8	859.8	159.0	0.0978	1.75605
320.0	532.6	9.164	737.0	1239.0	228.0	104.7	148.0	757.6	130.0	0.0897	1.71542
340.0	505.8	8.701	3751.0	4280.0	237.2	109.6	156.4	653.7	106.0	0.0823	1.67170
360.0	475.2	8.175	6947.0	7509.0	246.4	114.8	167.1	547.2	86.2	0.0754	1.62309
370.0	457.8	7.876	8629.0	9213.0	251.1	117.5	173.9	492.1	77.2	0.0722	1.59595
380.0	438.3	7.540	10380.0	10990.0	255.8	120.3	182.7	434.8	68.6	0.0690	1.56594
390.0	415.6	7.150	12230.0	12880.0	260.7	123.3	195.0	374.3	60.2	0.0657	1.53162
395.0	402.4	6.924	13210.0	13870.0	263.3	124.9	203.7	342.1	55.9	0.0642	1.51204
400.0	387.5	6.667	14230.0	14920.0	265.9	126.7	215.4	308.0	51.6	0.0632	1.49002
405.0	370.0	6.366	15320.0	16040.0	268.7	128.5	233.0	271.5	47.1	0.0654	1.46442
406.0	366.0	6.298	15540.0	16270.0	269.3	128.9	237.6	263.8	46.1	0.0677	1.45870
408.0	357.6	6.152	16010.0	16760.0	270.5	129.8	248.6	248.0	44.2	0.104	1.44647
410.0	348.1	5.989	16500.0	17270.0	271.7	130.7	262.8	231.7	42.1	0.0714	1.43293
412.0	337.4	5.804	17020.0	17810.0	273.0	131.7	281.8	214.6	39.9	0.0689	1.41769
414.0	324.9	5.590	17580.0	18400.0	274.5	132.8	308.1	197.1	37.6	0.0676	1.40013
415.0	317.8	5.468	17880.0	18720.0	275.2	133.4	325.2	188.2	36.3	0.0669	1.39021
416.0	310.0	5.333	18190.0	19050.0	276.0	134.1	345.8	179.3	35.0	0.0662	1.37935
417.0	301.3	5.184	18520.0	19410.0	276.9	134.7	370.4	170.6	33.6	0.0654	1.36738
418.0	291.7	5.018	18880.0	19800.0	277.8	135.5	399.1	162.2	32.1	0.0643	1.35415
419.0	281.0	4.834	19260.0	20210.0	278.8	136.2	431.1	154.6	30.6	0.0632	1.33957
425.0	206.8	3.559	21870.0	23160.0	285.8	139.4	485.2	135.2	22.2	0.0564	1.24188
430.0	168.2	2.894	23630.0	25220.0	290.6	139.1	347.0	142.8	19.2	0.0531	1.19324
431.0	163.2	2.807	23920.0	25560.0	291.4	139.0	327.6	144.8	18.8	0.0525	1.18700
432.0	158.7	2.730	24200.0	25880.0	292.1	138.9	311.1	146.8	18.5	0.0519	1.18148
433.0	154.7	2.661	24460.0	26180.0	292.8	138.8	297.0	148.8	18.3	0.0514	1.17654
434.0	151.0	2.599	24700.0	26470.0	293.5	138.7	284.9	150.8	18.1	0.0509	1.17210
435.0	147.7	2.542	24940.0	26750.0	294.2	138.6	274.5	152.8	17.9	0.0505	1.16807
436.0	144.7	2.490	25180.0	27020.0	294.8	138.6	265.4	154.6	17.7	0.0500	1.16439
438.0	139.4	2.398	25620.0	27540.0	296.0	138.5	250.4	158.3	17.4	0.0492	1.15789
440.0	134.7	2.318	26040.0	28030.0	297.1	138.4	238.6	161.7	17.1	0.0486	1.15230

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
442.0	130.7	2.248	26450.0	28500.0	298.1	138.4	229.1	165.0	16.9	0.0480	1.14740
444.0	127.0	2.186	26840.0	28950.0	299.1	138.4	221.3	168.2	16.8	0.0475	1.14306
446.0	123.8	2.130	27220.0	29380.0	300.1	138.5	214.9	171.1	16.6	0.0471	1.13917
448.0	120.8	2.079	27590.0	29810.0	301.1	138.6	209.5	174.0	16.5	0.0467	1.13564
450.0	118.1	2.032	27960.0	30220.0	302.0	138.7	204.9	176.7	16.4	0.0465	1.13243
452.0	115.7	1.990	28310.0	30630.0	302.9	138.8	200.9	179.3	16.3	0.0462	1.12948
454.0	113.4	1.950	28670.0	31020.0	303.8	138.9	197.5	181.8	16.2	0.0460	1.12676
456.0	111.2	1.913	29010.0	31420.0	304.6	139.1	194.5	184.3	16.1	0.0459	1.12423
458.0	109.2	1.879	29350.0	31800.0	305.5	139.3	191.8	186.6	16.1	0.0458	1.12188
460.0	107.4	1.847	29690.0	32180.0	306.3	139.5	189.5	188.9	16.0	0.0457	1.11967
465.0	103.1	1.774	30530.0	33120.0	308.3	140.0	184.8	194.2	15.9	0.0456	1.11471
470.0	99.45	1.711	31340.0	34030.0	310.3	140.6	181.3	199.2	15.8	0.0457	1.11039
475.0	96.19	1.655	32150.0	34930.0	312.2	141.3	178.6	203.9	15.7	0.0459	1.10658
480.0	93.27	1.605	32950.0	35820.0	314.1	142.0	176.6	208.2	15.7	0.0462	1.10317
485.0	90.62	1.559	33750.0	36700.0	315.9	142.8	175.0	212.4	15.7	0.0465	1.10009
490.0	88.20	1.517	34540.0	37570.0	317.7	143.5	173.8	216.3	15.7	0.0469	1.09729
495.0	85.98	1.479	35330.0	38440.0	319.4	144.4	172.9	220.1	15.7	0.0474	1.09472
500.0	83.93	1.444	36120.0	39300.0	321.2	145.2	172.3	223.7	15.7	0.0479	1.09234
505.0	82.03	1.411	36900.0	40160.0	322.9	146.0	171.8	227.1	15.7	0.0484	1.09015
510.0	80.25	1.381	37690.0	41020.0	324.6	146.9	171.6	230.4	15.7	0.0489	1.08810
520.0	77.03	1.325	39260.0	42730.0	327.9	148.7	171.4	236.7	15.8	0.0501	1.08439
530.0	74.16	1.276	40840.0	44450.0	331.2	150.5	171.7	242.5	15.9	0.0513	1.08111
540.0	71.58	1.232	42430.0	46170.0	334.4	152.3	172.2	248.0	16.0	0.0526	1.07816
550.0	69.25	1.191	44030.0	47890.0	337.5	154.1	173.0	253.3	16.1	0.0539	1.07550
560.0	67.12	1.155	45650.0	49630.0	340.7	156.0	174.0	258.2	16.2	0.0553	1.07307
570.0	65.16	1.121	47270.0	51370.0	343.8	157.8	175.0	263.0	16.4	0.0567	1.07085
580.0	63.35	1.090	48910.0	53130.0	346.8	159.6	176.2	267.5	16.5	0.0581	1.06879
590.0	61.67	1.061	50560.0	54900.0	349.8	161.5	177.4	271.9	16.6	0.0596	1.06689
600.0	60.10	1.034	52230.0	56680.0	352.8	163.3	178.7	276.1	16.8	0.0611	1.06512
					4.80 MPa isobar						
115.50[a]	741.5	12.76	-23660.0	-23280.0	109.7	73.05	99.19	1791.0	8590.0	0.111	2.10700
200.0	661.3	11.38	-14720.0	-14300.0	167.7	82.21	114.4	1351.0	575.0	0.137	1.94163
250.0	611.9	10.53	-8750.0	-8294.0	194.4	90.05	126.1	1111.0	279.0	0.120	1.85076
300.0	557.4	9.590	-2140.0	-1639.0	218.6	100.1	140.7	862.4	160.0	0.0979	1.75666
320.0	533.1	9.172	720.8	1244.0	227.9	104.7	147.8	760.6	130.0	0.0899	1.71619
340.0	506.4	8.713	3730.0	4281.0	237.1	109.6	156.1	657.5	107.0	0.0824	1.67273
360.0	476.1	8.192	6917.0	7503.0	246.3	114.7	166.6	552.0	86.7	0.0756	1.62456
370.0	459.0	7.897	8593.0	9201.0	251.0	117.4	173.2	497.6	77.8	0.0724	1.59778
380.0	439.8	7.567	10340.0	10970.0	255.7	120.2	181.6	441.4	69.2	0.0693	1.56831
390.0	417.8	7.188	12170.0	12840.0	260.6	123.2	193.0	382.3	61.0	0.0661	1.53488
395.0	405.1	6.970	13140.0	13830.0	263.1	124.8	200.8	351.2	56.8	0.0646	1.51600
400.0	391.0	6.727	14140.0	14850.0	265.7	126.4	211.0	318.6	52.6	0.0635	1.49503
405.0	374.6	6.445	15200.0	15940.0	268.4	128.2	225.4	284.0	48.3	0.0650	1.47110
410.0	354.9	6.106	16340.0	17120.0	271.3	130.2	247.8	247.1	43.6	0.0699	1.44264
412.0	345.6	5.947	16820.0	17630.0	272.5	131.1	260.8	231.6	41.6	0.0679	1.42939
414.0	335.2	5.768	17330.0	18170.0	273.8	132.1	277.4	215.7	39.6	0.0670	1.41463
416.0	323.4	5.563	17880.0	18740.0	275.2	133.1	299.2	199.5	37.3	0.0662	1.39794
417.0	316.8	5.450	18170.0	19050.0	275.9	133.7	312.7	191.5	36.2	0.0658	1.38870
418.0	309.6	5.326	18470.0	19370.0	276.7	134.3	328.1	183.5	35.0	0.0652	1.37876
419.0	301.8	5.193	18780.0	19710.0	277.5	134.9	345.6	175.8	33.7	0.0645	1.36804
420.0	293.4	5.048	19110.0	20060.0	278.3	135.5	365.0	168.4	32.4	0.0637	1.35647
421.0	284.3	4.891	19450.0	20440.0	279.2	136.2	385.7	161.6	31.1	0.0628	1.34404
430.0	195.1	3.357	22880.0	24310.0	288.3	139.7	398.7	140.8	21.3	0.0550	1.22694
431.0	188.0	3.235	23210.0	24700.0	289.2	139.7	378.5	141.9	20.8	0.0544	1.21793
432.0	181.7	3.125	23530.0	25060.0	290.1	139.6	359.0	143.4	20.3	0.0539	1.20994
433.0	176.0	3.028	23830.0	25410.0	290.9	139.6	341.1	145.0	19.9	0.0534	1.20284
434.0	170.9	2.940	24110.0	25750.0	291.7	139.5	325.0	146.7	19.5	0.0530	1.19650
435.0	166.3	2.861	24390.0	26060.0	292.4	139.5	310.6	148.5	19.2	0.0525	1.19082
436.0	162.2	2.790	24650.0	26370.0	293.1	139.4	298.0	150.3	18.9	0.0521	1.18571
437.0	158.4	2.725	24900.0	26660.0	293.8	139.3	286.9	152.1	18.6	0.0516	1.18106

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
438.0	154.9	2.666	25140.0	26940.0	294.4	139.3	277.0	153.9	18.4	0.0512	1.17683
439.0	151.8	2.611	25380.0	27220.0	295.0	139.2	268.3	155.6	18.2	0.0509	1.17295
440.0	148.8	2.561	25610.0	27480.0	295.6	139.2	260.6	157.4	18.1	0.0505	1.16937
442.0	143.6	2.471	26040.0	27990.0	296.8	139.2	247.5	160.8	17.8	0.0499	1.16298
444.0	139.0	2.392	26460.0	28470.0	297.9	139.2	237.0	164.0	17.5	0.0493	1.15741
446.0	134.9	2.322	26870.0	28940.0	298.9	139.2	228.4	167.1	17.3	0.0488	1.15251
448.0	131.3	2.259	27260.0	29390.0	299.9	139.2	221.2	170.1	17.1	0.0484	1.14812
450.0	128.0	2.202	27640.0	29820.0	300.9	139.3	215.2	173.0	17.0	0.0480	1.14418
452.0	125.0	2.151	28020.0	30250.0	301.8	139.4	210.0	175.7	16.8	0.0477	1.14059
454.0	122.3	2.104	28380.0	30660.0	302.8	139.5	205.6	178.4	16.7	0.0474	1.13731
456.0	119.7	2.060	28740.0	31070.0	303.7	139.6	201.8	180.9	16.6	0.0472	1.13429
458.0	117.4	2.020	29090.0	31470.0	304.5	139.8	198.5	183.4	16.5	0.0470	1.13150
460.0	115.2	1.982	29440.0	31860.0	305.4	140.0	195.6	185.8	16.4	0.0469	1.12890
462.0	113.2	1.947	29790.0	32250.0	306.2	140.2	193.0	188.1	16.4	0.0468	1.12648
465.0	110.3	1.898	30300.0	32830.0	307.5	140.5	189.7	191.4	16.3	0.0467	1.12312
470.0	106.1	1.825	31130.0	33760.0	309.5	141.0	185.4	196.6	16.2	0.0467	1.11815
475.0	102.4	1.762	31960.0	34680.0	311.4	141.7	182.0	201.4	16.1	0.0467	1.11379
480.0	99.10	1.705	32770.0	35590.0	313.3	142.3	179.5	206.0	16.0	0.0469	1.10993
485.0	96.14	1.654	33580.0	36480.0	315.2	143.1	177.6	210.3	16.0	0.0472	1.10647
490.0	93.45	1.608	34380.0	37360.0	317.0	143.8	176.1	214.3	15.9	0.0476	1.10334
495.0	91.00	1.566	35170.0	38240.0	318.8	144.6	174.9	218.2	15.9	0.0479	1.10048
500.0	88.73	1.527	35970.0	39110.0	320.5	145.4	174.1	221.9	15.9	0.0484	1.09785
505.0	86.64	1.491	36760.0	39980.0	322.2	146.2	173.5	225.5	15.9	0.0489	1.09543
510.0	84.70	1.457	37550.0	40850.0	323.9	147.1	173.0	228.9	16.0	0.0494	1.09318
520.0	81.18	1.397	39140.0	42580.0	327.3	148.8	172.7	235.3	16.0	0.0505	1.08912
530.0	78.07	1.343	40730.0	44300.0	330.6	150.6	172.7	241.3	16.1	0.0517	1.08554
540.0	75.29	1.295	42330.0	46030.0	333.8	152.4	173.1	247.0	16.2	0.0529	1.08235
550.0	72.77	1.252	43930.0	47770.0	337.0	154.2	173.8	252.3	16.3	0.0542	1.07947
560.0	70.48	1.213	45550.0	49510.0	340.1	156.1	174.7	257.4	16.4	0.0556	1.07686
570.0	68.38	1.176	47180.0	51260.0	343.2	157.9	175.6	262.2	16.5	0.0570	1.07447
580.0	66.45	1.143	48820.0	53020.0	346.3	159.7	176.8	266.8	16.6	0.0584	1.07226
590.0	64.65	1.112	50480.0	54790.0	349.3	161.5	177.9	271.3	16.8	0.0598	1.07023
600.0	62.98	1.084	52150.0	56580.0	352.3	163.3	179.2	275.6	16.9	0.0613	1.06833
				5.00 MPa isobar							
115.60[a]	741.5	12.76	-23650.0	-23260.0	109.7	73.02	99.20	1793.0	8570.0	0.111	2.10697
200.0	661.5	11.38	-14720.0	-14290.0	167.6	82.21	114.4	1352.0	577.0	0.137	1.94188
250.0	612.1	10.53	-8758.0	-8283.0	194.4	90.05	126.1	1113.0	280.0	0.120	1.85113
300.0	557.8	9.597	-2153.0	-1632.0	218.6	100.1	140.6	864.9	160.0	0.0981	1.75726
320.0	533.6	9.181	704.7	1249.0	227.9	104.7	147.7	763.7	131.0	0.0900	1.71696
340.0	507.1	8.724	3709.0	4282.0	237.1	109.5	155.9	661.3	107.0	0.0826	1.67376
360.0	477.1	8.208	6889.0	7498.0	246.3	114.7	166.1	556.7	87.3	0.0759	1.62601
370.0	460.2	7.917	8558.0	9190.0	250.9	117.4	172.5	503.1	78.4	0.0727	1.59957
380.0	441.4	7.593	10300.0	10950.0	255.6	120.1	180.5	447.8	69.9	0.0695	1.57060
390.0	419.9	7.223	12120.0	12810.0	260.4	123.1	191.2	390.1	61.7	0.0664	1.53799
395.0	407.7	7.014	13070.0	13780.0	262.9	124.6	198.3	359.9	57.6	0.0650	1.51974
400.0	394.1	6.781	14060.0	14800.0	265.5	126.2	207.3	328.5	53.5	0.0638	1.49965
405.0	378.8	6.516	15090.0	15860.0	268.1	128.0	219.5	295.6	49.3	0.0648	1.47708
410.0	360.7	6.206	16190.0	17000.0	270.9	129.8	237.2	260.9	45.0	0.0687	1.45089
412.0	352.4	6.063	16660.0	17480.0	272.1	130.7	246.7	246.5	43.1	0.0671	1.43901
414.0	343.3	5.907	17140.0	17990.0	273.3	131.5	258.4	231.8	41.2	0.0664	1.42607
416.0	333.3	5.734	17650.0	18520.0	274.6	132.5	272.9	217.0	39.2	0.0660	1.41182
418.0	322.0	5.540	18180.0	19080.0	275.9	133.4	291.1	202.1	37.2	0.0654	1.39597
420.0	309.2	5.320	18750.0	19690.0	277.4	134.5	313.5	187.6	35.0	0.0645	1.37818
422.0	294.7	5.070	19350.0	20340.0	278.9	135.6	340.2	174.1	32.7	0.0633	1.35814
423.0	286.7	4.932	19670.0	20690.0	279.7	136.2	354.6	167.9	31.5	0.0625	1.34724
430.0	223.9	3.853	22130.0	23430.0	286.2	139.5	404.0	144.6	24.0	0.0568	1.26380
431.0	215.6	3.709	22480.0	23830.0	287.1	139.7	396.5	144.1	23.2	0.0562	1.25303
432.0	207.8	3.575	22820.0	24220.0	288.0	139.8	385.9	144.1	22.5	0.0556	1.24302
433.0	200.6	3.452	23150.0	24600.0	288.9	139.9	373.0	144.6	21.9	0.0551	1.23384
434.0	194.0	3.338	23470.0	24960.0	289.7	140.0	359.1	145.4	21.4	0.0546	1.22547
435.0	188.0	3.235	23770.0	25320.0	290.5	140.0	345.0	146.5	20.9	0.0542	1.21787

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
436.0	182.5	3.140	24060.0	25650.0	291.3	140.0	331.3	147.8	20.5	0.0538	1.21099
437.0	177.6	3.055	24340.0	25980.0	292.1	140.0	318.4	149.2	20.1	0.0534	1.20475
438.0	173.0	2.977	24610.0	26290.0	292.8	140.0	306.5	150.7	19.8	0.0530	1.19909
439.0	168.8	2.905	24870.0	26590.0	293.5	139.9	295.7	152.3	19.5	0.0526	1.19392
440.0	165.0	2.839	25120.0	26880.0	294.1	139.9	285.9	153.9	19.2	0.0523	1.18919
441.0	161.5	2.779	25370.0	27170.0	294.8	139.9	277.0	155.5	19.0	0.0519	1.18485
442.0	158.3	2.723	25600.0	27440.0	295.4	139.9	269.0	157.2	18.8	0.0516	1.18084
444.0	152.4	2.622	26060.0	27960.0	296.6	139.8	255.3	160.4	18.4	0.0510	1.17369
446.0	147.3	2.535	26490.0	28460.0	297.7	139.8	244.1	163.5	18.1	0.0505	1.16747
448.0	142.8	2.457	26910.0	28940.0	298.7	139.9	234.8	166.6	17.9	0.0500	1.16200
450.0	138.8	2.388	27310.0	29400.0	299.8	139.9	227.0	169.5	17.6	0.0496	1.15713
452.0	135.2	2.326	27700.0	29850.0	300.8	140.0	220.5	172.4	17.5	0.0492	1.15276
454.0	131.9	2.269	28080.0	30280.0	301.7	140.1	214.9	175.1	17.3	0.0489	1.14880
456.0	128.9	2.218	28450.0	30710.0	302.7	140.2	210.1	177.8	17.2	0.0486	1.14518
458.0	126.1	2.170	28820.0	31120.0	303.6	140.3	206.0	180.3	17.0	0.0483	1.14186
460.0	123.6	2.126	29180.0	31530.0	304.5	140.5	202.4	182.8	16.9	0.0482	1.13880
462.0	121.2	2.085	29540.0	31930.0	305.3	140.6	199.2	185.2	16.8	0.0480	1.13595
464.0	119.0	2.047	29890.0	32330.0	306.2	140.8	196.4	187.5	16.8	0.0479	1.13331
466.0	116.9	2.011	30230.0	32720.0	307.0	141.0	193.9	189.8	16.7	0.0478	1.13083
470.0	113.1	1.945	30920.0	33490.0	308.7	141.4	189.8	194.0	16.6	0.0477	1.12631
475.0	108.9	1.873	31760.0	34430.0	310.6	142.0	185.8	199.1	16.4	0.0477	1.12135
480.0	105.2	1.809	32580.0	35350.0	312.6	142.7	182.7	203.8	16.3	0.0478	1.11698
485.0	101.8	1.752	33400.0	36250.0	314.5	143.4	180.3	208.2	16.3	0.0480	1.11310
490.0	98.86	1.701	34210.0	37150.0	316.3	144.1	178.5	212.5	16.2	0.0482	1.10960
495.0	96.14	1.654	35020.0	38040.0	318.1	144.9	177.0	216.5	16.2	0.0486	1.10642
500.0	93.66	1.611	35820.0	38920.0	319.9	145.7	176.0	220.3	16.2	0.0490	1.10352
505.0	91.36	1.572	36620.0	39800.0	321.6	146.5	175.2	223.9	16.2	0.0494	1.10085
510.0	89.24	1.535	37420.0	40670.0	323.3	147.3	174.6	227.4	16.2	0.0499	1.09839
520.0	85.41	1.469	39010.0	42420.0	326.7	149.0	173.9	234.0	16.2	0.0509	1.09395
530.0	82.04	1.411	40610.0	44150.0	330.0	150.8	173.8	240.2	16.3	0.0521	1.09006
540.0	79.03	1.360	42220.0	45890.0	333.3	152.5	174.1	245.9	16.4	0.0533	1.08661
550.0	76.33	1.313	43830.0	47640.0	336.5	154.3	174.6	251.4	16.4	0.0545	1.08350
560.0	73.88	1.271	45450.0	49390.0	339.6	156.2	175.4	256.5	16.6	0.0559	1.08069
570.0	71.63	1.232	47090.0	51140.0	342.8	158.0	176.3	261.5	16.7	0.0572	1.07813
580.0	69.57	1.197	48730.0	52910.0	345.8	159.8	177.3	266.2	16.8	0.0586	1.07577
590.0	67.65	1.164	50390.0	54690.0	348.9	161.6	178.5	270.7	16.9	0.0600	1.07360
600.0	65.88	1.133	52070.0	56480.0	351.9	163.4	179.7	275.0	17.1	0.0615	1.07158
					5.50 MPa isobar						
115.80[a]	741.6	12.76	-23640.0	-23210.0	109.8	72.94	99.22	1799.0	8530.0	0.111	2.10689
200.0	661.9	11.39	-14740.0	-14250.0	167.6	82.22	114.4	1355.0	580.0	0.137	1.94251
250.0	612.7	10.54	-8777.0	-8255.0	194.3	90.07	126.0	1117.0	281.0	0.120	1.85204
300.0	558.7	9.613	-2184.0	-1612.0	218.5	100.1	140.4	871.2	162.0	0.0984	1.75875
320.0	534.8	9.201	665.2	1263.0	227.8	104.7	147.3	771.2	132.0	0.0904	1.71885
340.0	508.7	8.752	3658.0	4286.0	236.9	109.5	155.3	670.5	108.0	0.0831	1.67625
360.0	479.4	8.247	6819.0	7486.0	246.1	114.6	165.0	568.3	88.6	0.0764	1.62952
370.0	463.0	7.965	8474.0	9165.0	250.7	117.2	171.0	516.2	79.8	0.0733	1.60386
380.0	445.0	7.655	10190.0	10910.0	255.3	120.0	178.2	463.1	71.5	0.0702	1.57603
390.0	424.7	7.307	11980.0	12740.0	260.1	122.8	187.4	408.3	63.5	0.0673	1.54518
400.0	401.1	6.901	13870.0	14670.0	265.0	125.8	200.1	351.2	55.7	0.0646	1.50990
405.0	387.6	6.668	14860.0	15690.0	267.5	127.4	208.8	321.4	51.8	0.0646	1.48985
410.0	372.3	6.405	15900.0	16760.0	270.1	129.1	220.0	290.7	47.8	0.0667	1.46752
412.0	365.5	6.289	16330.0	17210.0	271.2	129.8	225.6	278.2	46.2	0.0657	1.45778
414.0	358.4	6.166	16770.0	17660.0	272.3	130.5	231.9	265.6	44.6	0.0653	1.44747
416.0	350.8	6.035	17220.0	18130.0	273.4	131.3	239.0	252.8	42.9	0.0651	1.43653
418.0	342.6	5.894	17690.0	18620.0	274.6	132.1	247.3	240.1	41.2	0.0650	1.42485
420.0	333.7	5.742	18170.0	19120.0	275.8	132.9	256.8	227.5	39.5	0.0648	1.41234
422.0	324.2	5.577	18660.0	19650.0	277.1	133.8	267.6	215.1	37.7	0.0645	1.39889
424.0	313.8	5.398	19180.0	20200.0	278.3	134.7	279.8	203.1	35.9	0.0640	1.38440
426.0	302.5	5.205	19710.0	20770.0	279.7	135.6	293.1	191.9	34.1	0.0632	1.36882
428.0	290.4	4.996	20270.0	21370.0	281.1	136.5	306.8	181.8	32.2	0.0622	1.35219

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
440.0	212.5	3.656	23820.0	25320.0	290.2	140.5	325.5	154.9	23.2	0.0558	1.24890
442.0	201.8	3.473	24380.0	25960.0	291.7	140.7	313.2	155.4	22.3	0.0551	1.23528
444.0	192.4	3.310	24920.0	26580.0	293.1	140.9	299.3	156.8	21.5	0.0545	1.22329
446.0	184.1	3.167	25420.0	27160.0	294.4	141.0	285.5	158.7	20.9	0.0540	1.21281
448.0	176.8	3.041	25910.0	27720.0	295.6	141.1	272.6	161.0	20.3	0.0535	1.20365
450.0	170.3	2.930	26380.0	28250.0	296.8	141.1	261.1	163.4	19.9	0.0530	1.19561
452.0	164.6	2.832	26820.0	28760.0	297.9	141.2	251.0	166.0	19.5	0.0526	1.18852
454.0	159.5	2.744	27250.0	29260.0	299.0	141.3	242.2	168.6	19.2	0.0522	1.18221
456.0	154.9	2.664	27670.0	29730.0	300.1	141.4	234.6	171.3	18.9	0.0519	1.17656
458.0	150.7	2.593	28080.0	30200.0	301.1	141.5	228.0	173.9	18.6	0.0515	1.17146
460.0	146.9	2.528	28470.0	30650.0	302.1	141.6	222.2	176.4	18.4	0.0513	1.16684
462.0	143.4	2.468	28860.0	31090.0	303.0	141.7	217.2	178.9	18.3	0.0510	1.16262
464.0	140.2	2.413	29240.0	31520.0	303.9	141.9	212.8	181.4	18.1	0.0508	1.15874
466.0	137.3	2.362	29610.0	31940.0	304.9	142.0	208.9	183.7	17.9	0.0506	1.15516
468.0	134.5	2.315	29980.0	32350.0	305.7	142.2	205.5	186.1	17.8	0.0504	1.15185
470.0	132.0	2.271	30340.0	32760.0	306.6	142.4	202.5	188.3	17.7	0.0503	1.14876
472.0	129.6	2.229	30700.0	33160.0	307.5	142.6	199.8	190.5	17.6	0.0502	1.14588
475.0	126.2	2.172	31220.0	33760.0	308.7	142.9	196.2	193.7	17.5	0.0501	1.14188
480.0	121.3	2.087	32090.0	34720.0	310.7	143.5	191.5	198.8	17.3	0.0500	1.13597
485.0	117.0	2.012	32940.0	35670.0	312.7	144.1	187.8	203.6	17.1	0.0500	1.13080
490.0	113.1	1.946	33780.0	36600.0	314.6	144.8	185.0	208.1	17.0	0.0501	1.12622
495.0	109.6	1.886	34610.0	37520.0	316.5	145.5	182.8	212.4	17.0	0.0503	1.12212
500.0	106.5	1.832	35430.0	38430.0	318.3	146.2	181.0	216.5	16.9	0.0506	1.11842
505.0	103.6	1.783	36250.0	39340.0	320.1	147.0	179.7	220.3	16.8	0.0509	1.11505
510.0	101.0	1.737	37070.0	40230.0	321.9	147.8	178.7	224.1	16.8	0.0513	1.11196
515.0	98.55	1.696	37880.0	41120.0	323.6	148.6	177.9	227.6	16.8	0.0517	1.10912
520.0	96.29	1.657	38690.0	42010.0	325.3	149.4	177.3	231.1	16.8	0.0521	1.10648
530.0	92.21	1.586	40310.0	43780.0	328.7	151.1	176.6	237.5	16.8	0.0531	1.10173
540.0	88.62	1.525	41940.0	45540.0	332.0	152.9	176.5	243.6	16.8	0.0542	1.09755
550.0	85.40	1.469	43570.0	47310.0	335.2	154.6	176.7	249.3	16.9	0.0554	1.09384
560.0	82.51	1.420	45210.0	49080.0	338.4	156.4	177.2	254.7	17.0	0.0567	1.09049
570.0	79.88	1.374	46850.0	50850.0	341.6	158.2	177.9	259.9	17.1	0.0580	1.08746
580.0	77.47	1.333	48510.0	52640.0	344.7	160.0	178.8	264.7	17.2	0.0593	1.08470
590.0	75.25	1.295	50180.0	54430.0	347.7	161.8	179.8	269.4	17.3	0.0607	1.08216
600.0	73.20	1.259	51870.0	56230.0	350.8	163.6	180.8	273.9	17.4	0.0621	1.07981
					6.00 MPa isobar						
116.00[a]	741.6	12.76	-23620.0	-23150.0	110.0	72.86	99.24	1805.0	8480.0	0.111	2.10682
200.0	662.2	11.39	-14750.0	-14220.0	167.5	82.23	114.3	1358.0	583.0	0.137	1.94313
250.0	613.2	10.55	-8796.0	-8227.0	194.2	90.08	125.9	1121.0	283.0	0.120	1.85295
300.0	559.7	9.629	-2215.0	-1592.0	218.4	100.1	140.1	877.3	163.0	0.0987	1.76021
320.0	536.0	9.221	626.4	1277.0	227.6	104.6	146.9	778.6	133.0	0.0908	1.72070
340.0	510.2	8.778	3608.0	4291.0	236.8	109.5	154.7	679.4	110.0	0.0835	1.67868
360.0	481.5	8.285	6752.0	7476.0	245.9	114.5	164.0	579.4	89.9	0.0769	1.63287
380.0	448.3	7.713	10090.0	10870.0	255.0	119.8	176.2	477.5	72.9	0.0709	1.58107
390.0	429.0	7.382	11860.0	12670.0	259.7	122.6	184.3	425.1	65.2	0.0680	1.55168
400.0	407.1	7.005	13710.0	14570.0	264.5	125.5	194.8	371.4	57.6	0.0654	1.51876
410.0	381.3	6.560	15670.0	16580.0	269.5	128.6	209.6	315.8	50.2	0.0658	1.48062
415.0	366.3	6.302	16700.0	17650.0	272.1	130.2	219.7	287.5	46.5	0.0646	1.45874
420.0	349.3	6.009	17790.0	18780.0	274.8	131.9	232.5	259.2	42.7	0.0644	1.43430
422.0	341.8	5.881	18230.0	19260.0	275.9	132.7	238.5	248.0	41.2	0.0644	1.42367
424.0	333.9	5.745	18690.0	19740.0	277.1	133.4	245.1	237.1	39.6	0.0643	1.41249
426.0	325.5	5.601	19160.0	20240.0	278.2	134.2	252.2	226.4	38.1	0.0641	1.40072
428.0	316.7	5.448	19650.0	20750.0	279.4	135.0	259.7	216.3	36.5	0.0638	1.38834
430.0	307.3	5.288	20140.0	21280.0	280.7	135.7	267.6	206.7	35.0	0.0633	1.37536
432.0	297.5	5.119	20650.0	21820.0	281.9	136.5	275.4	197.8	33.5	0.0626	1.36182
434.0	287.3	4.942	21160.0	22380.0	283.2	137.3	282.9	189.9	32.0	0.0618	1.34780
440.0	255.1	4.389	22760.0	24130.0	287.2	139.4	298.3	172.8	27.8	0.0592	1.30452
442.0	244.5	4.206	23300.0	24730.0	288.6	140.0	299.6	169.4	26.6	0.0583	1.29040
444.0	234.1	4.028	23830.0	25320.0	289.9	140.5	298.5	167.1	25.5	0.0576	1.27684
446.0	224.3	3.859	24360.0	25920.0	291.3	140.9	295.0	165.7	24.5	0.0569	1.26403
448.0	215.1	3.700	24880.0	26500.0	292.6	141.3	289.4	165.2	23.7	0.0563	1.25211

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
450.0	206.5	3.553	25390.0	27070.0	293.8	141.5	282.3	165.5	22.9	0.0558	1.24115
452.0	198.7	3.419	25880.0	27630.0	295.1	141.8	274.4	166.3	22.3	0.0553	1.23117
454.0	191.6	3.296	26350.0	28170.0	296.3	142.0	266.2	167.6	21.7	0.0549	1.22214
456.0	185.1	3.185	26810.0	28700.0	297.4	142.1	258.1	169.3	21.2	0.0546	1.21398
458.0	179.2	3.084	27260.0	29200.0	298.5	142.3	250.5	171.1	20.8	0.0542	1.20661
460.0	173.9	2.992	27690.0	29700.0	299.6	142.4	243.4	173.1	20.4	0.0540	1.19994
462.0	169.0	2.908	28110.0	30180.0	300.6	142.6	236.9	175.3	20.1	0.0537	1.19388
464.0	164.6	2.831	28530.0	30650.0	301.7	142.7	231.1	177.5	19.8	0.0534	1.18835
466.0	160.5	2.761	28930.0	31100.0	302.6	142.9	225.8	179.7	19.5	0.0532	1.18330
468.0	156.7	2.696	29320.0	31550.0	303.6	143.1	221.1	181.9	19.3	0.0530	1.17866
470.0	153.2	2.635	29710.0	31990.0	304.5	143.2	216.9	184.1	19.1	0.0529	1.17437
472.0	149.9	2.580	30090.0	32420.0	305.4	143.4	213.2	186.3	18.9	0.0527	1.17041
474.0	146.9	2.528	30470.0	32840.0	306.3	143.6	209.8	188.5	18.8	0.0526	1.16672
476.0	144.1	2.479	30840.0	33260.0	307.2	143.8	206.7	190.6	18.6	0.0524	1.16328
478.0	141.4	2.433	31200.0	33670.0	308.1	144.0	204.0	192.7	18.5	0.0523	1.16007
480.0	139.0	2.391	31560.0	34070.0	308.9	144.2	201.5	194.8	18.4	0.0523	1.15705
485.0	133.3	2.294	32450.0	35070.0	311.0	144.8	196.4	199.7	18.1	0.0521	1.15025
490.0	128.4	2.209	33320.0	36040.0	313.0	145.4	192.3	204.4	18.0	0.0521	1.14432
495.0	124.0	2.133	34180.0	36990.0	314.9	146.1	189.2	208.9	17.8	0.0522	1.13908
500.0	120.1	2.066	35030.0	37930.0	316.8	146.8	186.7	213.2	17.7	0.0523	1.13441
505.0	116.5	2.005	35870.0	38860.0	318.6	147.5	184.7	217.3	17.6	0.0525	1.13019
510.0	113.3	1.950	36700.0	39780.0	320.5	148.3	183.1	221.2	17.5	0.0528	1.12637
515.0	110.4	1.899	37530.0	40690.0	322.2	149.0	181.9	224.9	17.5	0.0531	1.12287
520.0	107.6	1.852	38360.0	41600.0	324.0	149.8	180.9	228.5	17.4	0.0535	1.11965
525.0	105.1	1.808	39180.0	42500.0	325.7	150.7	180.2	232.0	17.4	0.0539	1.11668
530.0	102.7	1.768	40010.0	43400.0	327.4	151.5	179.6	235.3	17.4	0.0543	1.11391
540.0	98.48	1.694	41650.0	45190.0	330.8	153.2	179.0	241.7	17.4	0.0553	1.10892
550.0	94.71	1.629	43300.0	46980.0	334.1	154.9	178.9	247.6	17.4	0.0564	1.10452
560.0	91.33	1.571	44950.0	48770.0	337.3	156.6	179.1	253.2	17.4	0.0575	1.10059
570.0	88.28	1.519	46620.0	50570.0	340.5	158.4	179.6	258.6	17.5	0.0588	1.09706
580.0	85.50	1.471	48290.0	52370.0	343.6	160.2	180.3	263.6	17.6	0.0600	1.09384
590.0	82.96	1.427	49970.0	54170.0	346.7	161.9	181.1	268.5	17.7	0.0614	1.09091
600.0	80.61	1.387	51660.0	55990.0	349.7	163.7	182.1	273.1	17.8	0.0627	1.08820
					6.50 MPa isobar						
116.20[a]	741.6	12.76	-23610.0	-23100.0	110.1	72.79	99.26	1811.0	8440.0	0.111	2.10675
200.0	662.6	11.40	-14760.0	-14190.0	167.4	82.24	114.3	1361.0	586.0	0.137	1.94375
250.0	613.8	10.56	-8815.0	-8200.0	194.1	90.09	125.8	1125.0	285.0	0.120	1.85385
300.0	560.6	9.644	-2246.0	-1572.0	218.3	100.1	139.9	883.4	164.0	0.0991	1.76165
320.0	537.1	9.241	588.3	1292.0	227.5	104.6	146.6	785.8	135.0	0.0911	1.72251
340.0	511.7	8.804	3559.0	4298.0	236.6	109.4	154.2	688.1	111.0	0.0839	1.68104
360.0	483.6	8.321	6687.0	7468.0	245.7	114.4	163.1	590.0	91.2	0.0774	1.63609
380.0	451.4	7.766	10000.0	10840.0	254.8	119.7	174.5	491.0	74.4	0.0715	1.58579
390.0	433.0	7.450	11750.0	12620.0	259.4	122.4	181.7	440.8	66.7	0.0687	1.55764
400.0	412.5	7.096	13560.0	14480.0	264.1	125.2	190.7	389.7	59.4	0.0661	1.52660
410.0	388.8	6.690	15470.0	16440.0	269.0	128.1	202.5	337.8	52.3	0.0655	1.49153
415.0	375.5	6.460	16470.0	17470.0	271.5	129.7	209.9	311.8	48.8	0.0645	1.47198
420.0	360.8	6.207	17500.0	18540.0	274.0	131.3	218.7	285.8	45.3	0.0642	1.45073
425.0	344.5	5.928	18570.0	19660.0	276.7	132.9	229.2	260.5	41.8	0.0642	1.42745
430.0	326.5	5.617	19680.0	20840.0	279.4	134.7	241.1	236.7	38.4	0.0640	1.40189
435.0	306.5	5.273	20840.0	22070.0	282.3	136.4	253.8	215.4	35.0	0.0632	1.37403
440.0	284.8	4.900	22050.0	23370.0	285.3	138.1	265.4	198.1	31.8	0.0618	1.34435
450.0	240.5	4.137	24520.0	26090.0	291.4	141.0	274.2	178.2	26.4	0.0584	1.28500
452.0	232.1	3.994	25010.0	26640.0	292.6	141.4	272.5	176.6	25.5	0.0579	1.27410
454.0	224.2	3.857	25500.0	27180.0	293.8	141.8	269.6	175.6	24.8	0.0574	1.26375
456.0	216.6	3.727	25970.0	27720.0	295.0	142.1	265.8	175.2	24.1	0.0569	1.25401
458.0	209.6	3.606	26440.0	28240.0	296.1	142.4	261.2	175.3	23.4	0.0566	1.24491
460.0	203.0	3.492	26900.0	28760.0	297.2	142.7	256.2	175.9	22.9	0.0562	1.23647
462.0	196.8	3.386	27350.0	29270.0	298.3	143.0	250.9	176.8	22.4	0.0559	1.22866
464.0	191.1	3.288	27790.0	29770.0	299.4	143.2	245.5	178.0	21.9	0.0557	1.22145
466.0	185.9	3.198	28220.0	30250.0	300.5	143.4	240.3	179.5	21.5	0.0554	1.21481
468.0	181.0	3.114	28640.0	30730.0	301.5	143.6	235.4	181.1	21.2	0.0552	1.20868

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	176.5	3.036	29050.0	31190.0	302.5	143.8	230.7	182.8	20.9	0.0550	1.20302
472.0	172.3	2.963	29460.0	31650.0	303.4	144.0	226.3	184.6	20.6	0.0549	1.19778
474.0	168.3	2.896	29850.0	32100.0	304.4	144.2	222.3	186.5	20.3	0.0547	1.19292
476.0	164.7	2.833	30250.0	32540.0	305.3	144.4	218.6	188.4	20.1	0.0546	1.18841
478.0	161.3	2.775	30630.0	32970.0	306.2	144.6	215.2	190.3	19.9	0.0545	1.18421
480.0	158.1	2.720	31010.0	33400.0	307.1	144.8	212.1	192.3	19.7	0.0544	1.18028
482.0	155.1	2.668	31390.0	33820.0	308.0	145.0	209.3	194.2	19.5	0.0543	1.17660
485.0	150.9	2.597	31940.0	34440.0	309.3	145.4	205.5	197.1	19.3	0.0542	1.17150
490.0	144.7	2.490	32850.0	35460.0	311.4	146.0	200.2	201.8	19.0	0.0541	1.16394
495.0	139.3	2.396	33740.0	36450.0	313.4	146.6	196.0	206.3	18.8	0.0541	1.15733
500.0	134.5	2.313	34610.0	37420.0	315.3	147.3	192.7	210.7	18.6	0.0541	1.15150
505.0	130.1	2.239	35470.0	38380.0	317.2	148.0	190.0	214.9	18.4	0.0543	1.14630
510.0	126.2	2.171	36330.0	39320.0	319.1	148.7	187.8	218.9	18.3	0.0544	1.14161
515.0	122.7	2.110	37170.0	40250.0	320.9	149.5	186.1	222.8	18.2	0.0547	1.13736
520.0	119.4	2.054	38020.0	41180.0	322.7	150.2	184.7	226.5	18.1	0.0550	1.13348
525.0	116.4	2.003	38860.0	42100.0	324.5	151.0	183.7	230.1	18.0	0.0553	1.12991
530.0	113.6	1.955	39690.0	43020.0	326.2	151.8	182.8	233.6	18.0	0.0557	1.12662
540.0	108.6	1.869	41360.0	44840.0	329.6	153.5	181.7	240.1	17.9	0.0565	1.12072
550.0	104.2	1.793	43030.0	46650.0	332.9	155.2	181.2	246.3	17.9	0.0575	1.11555
560.0	100.3	1.726	44700.0	48470.0	336.2	156.9	181.1	252.1	17.9	0.0585	1.11098
570.0	96.83	1.666	46380.0	50280.0	339.4	158.6	181.3	257.6	17.9	0.0597	1.10689
580.0	93.66	1.611	48060.0	52090.0	342.6	160.4	181.8	262.8	18.0	0.0609	1.10319
590.0	90.76	1.562	49750.0	53910.0	345.7	162.1	182.5	267.8	18.1	0.0621	1.09983
600.0	88.10	1.516	51450.0	55740.0	348.7	163.9	183.3	272.5	18.1	0.0634	1.09675
				7.00 MPa isobar							
116.40[a]	741.6	12.76	-23600.0	-23050.0	110.2	72.71	99.27	1817.0	8390.0	0.112	2.10669
200.0	663.0	11.41	-14770.0	-14160.0	167.4	82.24	114.2	1364.0	589.0	0.137	1.94437
250.0	614.3	10.57	-8834.0	-8172.0	194.1	90.11	125.7	1129.0	286.0	0.121	1.85475
300.0	561.5	9.660	-2276.0	-1551.0	218.2	100.1	139.7	889.3	165.0	0.0994	1.76307
320.0	538.2	9.260	551.0	1307.0	227.4	104.6	146.3	792.8	136.0	0.0915	1.72428
340.0	513.2	8.830	3512.0	4305.0	236.5	109.4	153.7	696.5	112.0	0.0843	1.68333
360.0	485.6	8.355	6624.0	7462.0	245.5	114.4	162.3	600.3	92.4	0.0779	1.63918
380.0	454.4	7.817	9915.0	10810.0	254.5	119.5	173.0	503.9	75.7	0.0721	1.59023
390.0	436.7	7.513	11640.0	12570.0	259.1	122.2	179.5	455.4	68.2	0.0694	1.56315
400.0	417.2	7.178	13430.0	14410.0	263.8	124.9	187.4	406.6	61.1	0.0669	1.53365
410.0	395.3	6.801	15300.0	16330.0	268.5	127.8	197.2	357.6	54.2	0.0656	1.50096
415.0	383.1	6.592	16260.0	17330.0	270.9	129.3	203.0	333.2	50.9	0.0646	1.48308
420.0	370.0	6.366	17260.0	18360.0	273.4	130.8	209.7	309.0	47.6	0.0642	1.46398
425.0	355.8	6.122	18280.0	19430.0	275.9	132.3	217.3	285.5	44.3	0.0642	1.44347
430.0	340.4	5.856	19340.0	20530.0	278.5	133.9	225.6	262.9	41.1	0.0642	1.42142
435.0	323.6	5.568	20430.0	21680.0	281.2	135.5	234.6	242.1	38.0	0.0640	1.39780
440.0	305.6	5.258	21550.0	22880.0	283.9	137.1	243.3	223.8	35.0	0.0633	1.37275
450.0	267.4	4.600	23860.0	25380.0	289.5	140.1	256.0	197.4	29.7	0.0608	1.32064
455.0	248.4	4.274	25030.0	26670.0	292.4	141.4	257.4	189.9	27.4	0.0595	1.29540
460.0	230.6	3.968	26190.0	27950.0	295.2	142.4	254.5	185.9	25.6	0.0584	1.27203
462.0	224.0	3.854	26640.0	28460.0	296.3	142.8	252.2	185.1	24.9	0.0580	1.26339
464.0	217.7	3.745	27090.0	28960.0	297.4	143.1	249.4	184.8	24.4	0.0577	1.25519
466.0	211.6	3.641	27530.0	29450.0	298.4	143.4	246.2	184.9	23.8	0.0574	1.24746
468.0	206.0	3.544	27970.0	29940.0	299.5	143.7	242.7	185.3	23.3	0.0572	1.24019
470.0	200.6	3.452	28400.0	30420.0	300.5	144.0	239.1	186.0	22.9	0.0570	1.23336
472.0	195.6	3.365	28820.0	30900.0	301.5	144.2	235.4	187.0	22.5	0.0568	1.22698
474.0	190.9	3.284	29230.0	31370.0	302.5	144.5	231.7	188.1	22.2	0.0566	1.22101
476.0	186.4	3.208	29640.0	31830.0	303.5	144.7	228.1	189.4	21.8	0.0565	1.21542
478.0	182.3	3.136	30050.0	32280.0	304.4	145.0	224.7	190.8	21.5	0.0563	1.21020
480.0	178.4	3.069	30440.0	32720.0	305.3	145.2	221.4	192.3	21.3	0.0562	1.20531
482.0	174.7	3.006	30840.0	33160.0	306.3	145.5	218.4	193.9	21.0	0.0561	1.20072
484.0	171.2	2.946	31220.0	33600.0	307.2	145.7	215.5	195.5	20.8	0.0560	1.19642
486.0	168.0	2.890	31600.0	34030.0	308.0	145.9	212.8	197.2	20.6	0.0560	1.19238
490.0	162.0	2.787	32360.0	34870.0	309.8	146.4	208.0	200.6	20.2	0.0559	1.18497
495.0	155.4	2.673	33280.0	35900.0	311.8	147.0	203.0	204.9	19.9	0.0558	1.17682

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
500.0	149.5	2.573	34180.0	36900.0	313.9	147.7	198.9	209.1	19.6	0.0558	1.16967
505.0	144.3	2.483	35070.0	37890.0	315.8	148.4	195.5	213.3	19.3	0.0559	1.16334
510.0	139.7	2.403	35940.0	38860.0	317.7	149.1	192.8	217.3	19.1	0.0560	1.15768
515.0	135.4	2.330	36810.0	39810.0	319.6	149.8	190.5	221.3	19.0	0.0562	1.15257
520.0	131.6	2.264	37670.0	40760.0	321.4	150.6	188.7	225.0	18.9	0.0564	1.14794
525.0	128.1	2.203	38520.0	41700.0	323.2	151.3	187.3	228.7	18.7	0.0567	1.14371
530.0	124.8	2.147	39370.0	42630.0	325.0	152.1	186.1	232.2	18.7	0.0570	1.13983
535.0	121.8	2.096	40220.0	43560.0	326.8	152.9	185.2	235.7	18.6	0.0574	1.13624
540.0	119.0	2.048	41070.0	44490.0	328.5	153.8	184.5	239.0	18.5	0.0578	1.13291
550.0	114.0	1.961	42760.0	46330.0	331.8	155.4	183.5	245.3	18.5	0.0586	1.12691
560.0	109.5	1.884	44440.0	48160.0	335.2	157.1	183.1	251.2	18.4	0.0596	1.12164
570.0	105.5	1.815	46130.0	49990.0	338.4	158.8	183.1	256.9	18.4	0.0606	1.11695
580.0	101.9	1.753	47830.0	51820.0	341.6	160.5	183.4	262.2	18.4	0.0618	1.11273
590.0	98.65	1.697	49530.0	53660.0	344.7	162.3	183.9	267.3	18.5	0.0630	1.10891
600.0	95.67	1.646	51250.0	55500.0	347.8	164.0	184.5	272.2	18.5	0.0642	1.10543
					7.50 MPa isobar						
116.60[a]	741.7	12.76	-23580.0	-23000.0	110.3	72.65	99.29	1823.0	8350.0	0.112	2.10662
200.0	663.4	11.41	-14790.0	-14130.0	167.3	82.25	114.2	1367.0	593.0	0.137	1.94499
250.0	614.9	10.58	-8853.0	-8144.0	194.0	90.12	125.6	1133.0	288.0	0.121	1.85564
300.0	562.3	9.675	-2306.0	-1530.0	218.1	100.1	139.5	895.1	167.0	0.0997	1.76447
320.0	539.3	9.279	514.3	1323.0	227.3	104.6	146.0	799.7	137.0	0.0919	1.72603
340.0	514.6	8.854	3466.0	4313.0	236.3	109.4	153.2	704.7	113.0	0.0847	1.68556
360.0	487.6	8.389	6564.0	7458.0	245.3	114.3	161.6	610.3	93.6	0.0783	1.64216
380.0	457.1	7.865	9833.0	10790.0	254.3	119.4	171.6	516.2	77.1	0.0727	1.59443
390.0	440.1	7.572	11540.0	12530.0	258.8	122.1	177.6	469.2	69.6	0.0700	1.56829
400.0	421.6	7.253	13310.0	14340.0	263.4	124.7	184.7	422.3	62.6	0.0676	1.54009
410.0	401.0	6.898	15140.0	16230.0	268.1	127.5	193.1	375.6	55.9	0.0660	1.50928
415.0	389.7	6.705	16090.0	17210.0	270.5	128.9	197.9	352.5	52.7	0.0650	1.49268
420.0	377.8	6.499	17060.0	18210.0	272.9	130.4	203.2	329.8	49.6	0.0645	1.47515
425.0	365.0	6.280	18050.0	19240.0	275.3	131.8	209.1	307.5	46.5	0.0643	1.45659
430.0	351.3	6.044	19060.0	20300.0	277.8	133.3	215.5	286.2	43.5	0.0643	1.43692
435.0	336.7	5.793	20100.0	21400.0	280.3	134.8	222.1	266.1	40.5	0.0643	1.41611
440.0	321.2	5.525	21170.0	22520.0	282.9	136.3	228.9	247.8	37.7	0.0641	1.39424
445.0	304.8	5.244	22250.0	23680.0	285.5	137.8	235.1	231.8	35.0	0.0636	1.37154
450.0	288.0	4.954	23360.0	24870.0	288.2	139.3	240.3	218.6	32.5	0.0626	1.34839
460.0	254.3	4.375	25590.0	27310.0	293.5	141.9	245.1	200.9	28.3	0.0605	1.30304
465.0	238.4	4.102	26700.0	28530.0	296.2	142.9	243.7	196.4	26.6	0.0595	1.28210
470.0	223.8	3.850	27790.0	29740.0	298.8	143.8	239.7	194.3	25.1	0.0588	1.26301
472.0	218.3	3.756	28220.0	30220.0	299.8	144.2	237.6	194.1	24.6	0.0586	1.25596
474.0	213.1	3.667	28640.0	30690.0	300.8	144.5	235.2	194.2	24.2	0.0584	1.24925
476.0	208.2	3.581	29060.0	31160.0	301.8	144.8	232.7	194.5	23.8	0.0582	1.24289
478.0	203.5	3.500	29480.0	31620.0	302.7	145.1	230.0	195.1	23.4	0.0580	1.23686
480.0	199.0	3.423	29890.0	32080.0	303.7	145.4	227.3	195.8	23.0	0.0579	1.23116
482.0	194.7	3.350	30290.0	32530.0	304.6	145.6	224.7	196.7	22.7	0.0578	1.22578
484.0	190.7	3.281	30690.0	32980.0	305.5	145.9	222.0	197.8	22.4	0.0577	1.22070
486.0	186.9	3.216	31090.0	33420.0	306.4	146.2	219.5	199.0	22.1	0.0576	1.21590
490.0	179.9	3.095	31860.0	34290.0	308.2	146.7	214.7	201.6	21.6	0.0575	1.20707
495.0	172.1	2.960	32810.0	35350.0	310.4	147.4	209.3	205.2	21.1	0.0574	1.19732
500.0	165.2	2.841	33740.0	36380.0	312.5	148.0	204.7	209.0	20.7	0.0574	1.18876
505.0	159.0	2.736	34650.0	37390.0	314.5	148.7	200.9	212.9	20.4	0.0574	1.18121
510.0	153.5	2.642	35550.0	38390.0	316.4	149.4	197.6	216.7	20.1	0.0575	1.17448
515.0	148.6	2.557	36440.0	39370.0	318.4	150.1	195.0	220.5	19.9	0.0577	1.16845
520.0	144.1	2.480	37320.0	40340.0	320.2	150.9	192.8	224.3	19.7	0.0579	1.16299
525.0	140.0	2.409	38190.0	41300.0	322.1	151.6	190.9	227.9	19.5	0.0581	1.15803
530.0	136.3	2.345	39050.0	42250.0	323.9	152.4	189.5	231.5	19.4	0.0584	1.15350
535.0	132.8	2.285	39910.0	43190.0	325.6	153.2	188.3	234.9	19.3	0.0587	1.14933
540.0	129.6	2.230	40770.0	44130.0	327.4	154.0	187.3	238.3	19.2	0.0590	1.14548
545.0	126.6	2.179	41630.0	45070.0	329.1	154.8	186.5	241.5	19.1	0.0594	1.14191
550.0	123.9	2.131	42480.0	46000.0	330.8	155.6	185.9	244.7	19.1	0.0598	1.13858
560.0	118.8	2.044	44180.0	47850.0	334.2	157.3	185.2	250.8	19.0	0.0607	1.13255

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
570.0	114.3	1.966	45890.0	49700.0	337.4	159.0	184.9	256.5	18.9	0.0617	1.12721
580.0	110.3	1.897	47600.0	51550.0	340.6	160.7	185.0	262.0	18.9	0.0627	1.12245
590.0	106.6	1.834	49320.0	53400.0	343.8	162.4	185.3	267.2	18.9	0.0639	1.11815
600.0	103.3	1.777	51040.0	55260.0	346.9	164.1	185.8	272.1	18.9	0.0650	1.11424
					8.00 MPa isobar						
116.80[a]	741.7	12.76	-23570.0	-22940.0	110.4	72.58	99.31	1828.0	8310.0	0.112	2.10656
200.0	663.7	11.42	-14800.0	-14100.0	167.3	82.26	114.2	1370.0	596.0	0.137	1.94560
250.0	615.4	10.59	-8871.0	-8116.0	193.9	90.14	125.5	1137.0	290.0	0.121	1.85652
300.0	563.2	9.689	2335.0	1509.0	218.0	100.1	139.2	900.8	168.0	0.100	1.76585
320.0	540.4	9.298	478.3	1339.0	227.2	104.6	145.7	806.4	138.0	0.0922	1.72774
340.0	516.0	8.878	3421.0	4322.0	236.2	109.3	152.8	712.7	114.0	0.0851	1.68774
360.0	489.4	8.421	6506.0	7456.0	245.1	114.2	160.8	619.9	94.8	0.0788	1.64504
380.0	459.8	7.910	9754.0	10770.0	254.1	119.3	170.4	527.9	78.4	0.0732	1.59842
400.0	425.5	7.321	13190.0	14290.0	263.1	124.6	182.4	437.1	64.1	0.0682	1.54602
410.0	406.1	6.986	15000.0	16150.0	267.7	127.3	189.7	392.3	57.6	0.0664	1.51677
420.0	384.5	6.615	16880.0	18090.0	272.4	130.0	198.3	348.6	51.4	0.0648	1.48486
425.0	372.8	6.413	17840.0	19090.0	274.8	131.4	203.1	327.5	48.4	0.0645	1.46774
430.0	360.4	6.200	18830.0	20120.0	277.2	132.9	208.2	307.1	45.5	0.0644	1.44980
435.0	347.2	5.974	19830.0	21170.0	279.6	134.3	213.5	287.7	42.7	0.0645	1.43100
440.0	333.4	5.737	20860.0	22250.0	282.1	135.7	218.8	269.8	40.0	0.0645	1.41140
445.0	319.0	5.488	21900.0	23360.0	284.6	137.2	224.0	253.6	37.5	0.0643	1.39112
460.0	273.6	4.708	25110.0	26810.0	292.2	141.2	234.8	218.3	30.8	0.0622	1.32883
465.0	258.7	4.451	26190.0	27990.0	294.8	142.4	235.8	211.3	29.0	0.0614	1.30884
470.0	244.4	4.205	27270.0	29170.0	297.3	143.5	235.0	206.6	27.4	0.0606	1.28991
475.0	231.1	3.975	28330.0	30340.0	299.7	144.4	232.6	203.9	26.0	0.0599	1.27238
480.0	218.8	3.764	29370.0	31490.0	302.2	145.3	228.7	203.1	24.9	0.0595	1.25645
485.0	207.7	3.573	30380.0	32620.0	304.5	146.1	224.0	203.7	23.9	0.0591	1.24218
490.0	197.8	3.403	31380.0	33730.0	306.8	146.8	219.0	205.3	23.2	0.0589	1.22953
495.0	188.9	3.251	32350.0	34810.0	309.0	147.5	214.1	207.7	22.5	0.0588	1.21835
500.0	181.1	3.115	33300.0	35870.0	311.1	148.3	209.6	210.7	22.0	0.0588	1.20846
505.0	174.0	2.994	34240.0	36910.0	313.2	149.0	205.6	213.9	21.5	0.0588	1.19969
510.0	167.8	2.886	35160.0	37930.0	315.2	149.7	202.1	217.4	21.2	0.0589	1.19187
515.0	162.1	2.789	36060.0	38930.0	317.1	150.4	199.2	220.9	20.8	0.0590	1.18486
520.0	156.9	2.700	36960.0	39920.0	319.1	151.1	196.7	224.4	20.6	0.0592	1.17854
525.0	152.3	2.620	37850.0	40900.0	320.9	151.9	194.5	227.9	20.4	0.0594	1.17281
530.0	148.0	2.546	38730.0	41870.0	322.8	152.7	192.8	231.4	20.2	0.0597	1.16759
535.0	144.1	2.478	39600.0	42830.0	324.6	153.5	191.3	234.8	20.0	0.0599	1.16280
540.0	140.4	2.416	40470.0	43780.0	326.3	154.2	190.1	238.1	19.9	0.0603	1.15839
545.0	137.0	2.358	41340.0	44730.0	328.1	155.0	189.1	241.4	19.8	0.0606	1.15431
550.0	133.9	2.304	42200.0	45670.0	329.8	155.9	188.4	244.5	19.7	0.0610	1.15052
560.0	128.2	2.206	43920.0	47550.0	333.2	157.5	187.3	250.6	19.5	0.0618	1.14369
570.0	123.2	2.119	45650.0	49420.0	336.5	159.2	186.7	256.4	19.5	0.0627	1.13767
580.0	118.7	2.042	47370.0	51290.0	339.7	160.9	186.6	262.0	19.4	0.0637	1.13232
590.0	114.6	1.972	49100.0	53150.0	342.9	162.6	186.7	267.3	19.4	0.0648	1.12751
600.0	110.9	1.909	50830.0	55020.0	346.1	164.3	187.1	272.3	19.4	0.0659	1.12316
					9.00 MPa isobar						
117.20[a]	741.8	12.76	-23550.0	-22840.0	110.6	72.46	99.34	1839.0	8230.0	0.112	2.10644
200.0	664.5	11.43	-14820.0	-14040.0	167.1	82.29	114.1	1376.0	602.0	0.138	1.94681
250.0	616.5	10.61	-8908.0	-8059.0	193.8	90.17	125.3	1145.0	293.0	0.122	1.85826
300.0	564.9	9.719	-2392.0	-1466.0	217.8	100.1	138.9	911.9	170.0	0.101	1.76855
320.0	542.5	9.334	408.1	1372.0	226.9	104.6	145.1	819.5	140.0	0.0929	1.73106
340.0	518.7	8.924	3333.0	4342.0	235.9	109.3	151.9	728.2	117.0	0.0859	1.69194
360.0	493.0	8.482	6394.0	7455.0	244.8	114.2	159.6	638.2	97.1	0.0797	1.65051
380.0	464.6	7.994	9606.0	10730.0	253.7	119.2	168.3	550.1	80.8	0.0742	1.60586
400.0	432.7	7.444	12990.0	14200.0	262.6	124.3	178.7	464.1	66.8	0.0695	1.55668
410.0	414.9	7.139	14750.0	16010.0	267.0	126.9	184.7	422.4	60.5	0.0675	1.52986
420.0	395.7	6.808	16570.0	17890.0	271.6	129.5	191.3	382.0	54.6	0.0658	1.50123
430.0	374.8	6.449	18450.0	19840.0	276.2	132.2	198.5	343.7	49.1	0.0649	1.47058
440.0	352.2	6.059	20380.0	21860.0	280.8	134.9	205.9	308.6	43.9	0.0649	1.43788

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
450.0	327.9	5.642	22360.0	23960.0	285.5	137.6	213.0	278.3	39.2	0.0651	1.40346
460.0	302.6	5.207	24390.0	26120.0	290.3	140.2	218.8	254.1	35.1	0.0646	1.36822
470.0	277.3	4.770	26440.0	28330.0	295.0	142.6	222.3	236.6	31.5	0.0636	1.33356
475.0	264.9	4.558	27470.0	29440.0	297.4	143.7	222.9	230.4	30.0	0.0630	1.31696
480.0	253.1	4.354	28490.0	30560.0	299.7	144.7	222.7	225.7	28.7	0.0625	1.30111
485.0	241.7	4.159	29500.0	31670.0	302.0	145.7	221.6	222.6	27.5	0.0620	1.28616
490.0	231.1	3.976	30510.0	32770.0	304.3	146.6	219.7	220.8	26.4	0.0617	1.27223
495.0	221.2	3.806	31500.0	33860.0	306.5	147.5	217.3	220.2	25.5	0.0615	1.25939
500.0	212.1	3.650	32480.0	34940.0	308.7	148.3	214.4	220.5	24.7	0.0613	1.24765
505.0	203.8	3.506	33440.0	36010.0	310.8	149.1	211.5	221.7	24.1	0.0613	1.23697
510.0	196.2	3.375	34390.0	37060.0	312.8	149.9	208.5	223.4	23.5	0.0613	1.22727
515.0	189.2	3.255	35330.0	38090.0	314.9	150.7	205.7	225.7	23.0	0.0614	1.21848
520.0	182.9	3.146	36250.0	39110.0	316.8	151.5	203.1	228.2	22.6	0.0615	1.21050
525.0	177.1	3.046	37170.0	40120.0	318.8	152.2	200.8	230.9	22.2	0.0617	1.20324
530.0	171.7	2.955	38080.0	41120.0	320.7	153.0	198.7	233.8	21.9	0.0619	1.19662
535.0	166.8	2.871	38980.0	42110.0	322.5	153.8	197.0	236.8	21.7	0.0622	1.19055
540.0	162.3	2.793	39870.0	43090.0	324.3	154.6	195.4	239.8	21.4	0.0625	1.18497
545.0	158.2	2.721	40760.0	44070.0	326.1	155.4	194.1	242.8	21.2	0.0628	1.17982
550.0	154.3	2.654	41640.0	45030.0	327.9	156.2	193.0	245.8	21.1	0.0631	1.17506
555.0	150.7	2.592	42520.0	46000.0	329.7	157.0	192.1	248.8	20.9	0.0635	1.17064
560.0	147.3	2.534	43400.0	46960.0	331.4	157.8	191.4	251.7	20.8	0.0639	1.16652
570.0	141.1	2.428	45160.0	48860.0	334.7	159.5	190.4	257.4	20.6	0.0647	1.15905
580.0	135.7	2.334	46910.0	50760.0	338.1	161.1	189.8	263.0	20.5	0.0656	1.15245
590.0	130.8	2.250	48660.0	52660.0	341.3	162.8	189.6	268.3	20.4	0.0666	1.14657
600.0	126.3	2.174	50420.0	54560.0	344.5	164.5	189.6	273.4	20.3	0.0677	1.14127
				10.00 MPa isobar							
117.50[a]	741.8	12.76	-23520.0	-22740.0	110.8	72.36	99.38	1849.0	8150.0	0.112	2.10634
200.0	665.2	11.44	-14850.0	-13970.0	167.0	82.31	114.0	1382.0	609.0	0.138	1.94802
250.0	617.5	10.62	-8944.0	-8003.0	193.6	90.21	125.1	1152.0	296.0	0.122	1.85997
300.0	566.5	9.747	-2448.0	-1422.0	217.6	100.1	138.5	922.7	173.0	0.101	1.77118
320.0	544.6	9.369	340.2	1408.0	226.7	104.6	144.6	832.1	143.0	0.0936	1.73428
340.0	521.3	8.969	3249.0	4364.0	235.7	109.3	151.2	742.9	119.0	0.0867	1.69596
360.0	496.3	8.539	6289.0	7460.0	244.5	114.1	158.5	655.6	99.4	0.0805	1.65566
380.0	469.1	8.071	9469.0	10710.0	253.3	119.0	166.6	570.6	83.1	0.0752	1.61268
400.0	439.0	7.552	12810.0	14130.0	262.1	124.1	175.8	488.6	69.4	0.0706	1.56609
420.0	405.0	6.968	16310.0	17750.0	270.9	129.2	186.4	411.3	57.5	0.0669	1.51482
430.0	386.3	6.646	18140.0	19640.0	275.3	131.7	192.1	375.3	52.1	0.0657	1.48714
440.0	366.4	6.303	20010.0	21590.0	279.8	134.3	197.9	342.1	47.2	0.0653	1.45809
450.0	345.3	5.941	21920.0	23600.0	284.3	136.9	203.5	312.6	42.7	0.0656	1.42789
460.0	323.5	5.566	23860.0	25660.0	288.9	139.4	208.3	287.6	38.7	0.0658	1.39703
480.0	279.6	4.810	27820.0	29890.0	297.9	144.1	214.2	253.0	32.1	0.0649	1.33649
490.0	258.9	4.454	29800.0	32040.0	302.3	146.1	214.6	243.2	29.6	0.0642	1.30862
495.0	249.1	4.285	30780.0	33110.0	304.5	147.1	214.0	240.0	28.6	0.0639	1.29564
500.0	239.8	4.125	31760.0	34180.0	306.6	148.1	213.1	237.9	27.6	0.0637	1.28338
505.0	231.0	3.974	32730.0	35240.0	308.7	149.0	211.7	236.7	26.8	0.0636	1.27189
510.0	222.8	3.833	33690.0	36300.0	310.8	149.9	210.1	236.3	26.0	0.0635	1.26119
515.0	215.1	3.701	34640.0	37340.0	312.9	150.7	208.3	236.6	25.4	0.0635	1.25126
520.0	207.9	3.578	35580.0	38380.0	314.9	151.5	206.4	237.4	24.8	0.0636	1.24208
525.0	201.3	3.463	36520.0	39410.0	316.8	152.4	204.6	238.8	24.3	0.0637	1.23361
530.0	195.2	3.357	37450.0	40430.0	318.8	153.2	202.8	240.5	23.9	0.0639	1.22580
535.0	189.4	3.259	38370.0	41440.0	320.6	154.0	201.1	242.6	23.5	0.0642	1.21858
540.0	184.2	3.168	39280.0	42440.0	322.5	154.8	199.6	244.8	23.2	0.0644	1.21192
545.0	179.2	3.084	40190.0	43430.0	324.3	155.6	198.2	247.2	22.9	0.0647	1.20576
550.0	174.6	3.005	41090.0	44420.0	326.2	156.4	197.0	249.7	22.6	0.0650	1.20004
555.0	170.4	2.931	41990.0	45400.0	327.9	157.3	196.0	252.3	22.4	0.0654	1.19473
560.0	166.4	2.862	42890.0	46380.0	329.7	158.1	195.1	254.9	22.2	0.0657	1.18977
570.0	159.1	2.737	44670.0	48320.0	333.1	159.7	193.7	260.2	21.9	0.0665	1.18082
580.0	152.7	2.627	46450.0	50260.0	336.5	161.4	192.8	265.4	21.6	0.0674	1.17293
590.0	146.9	2.528	48230.0	52180.0	339.8	163.0	192.3	270.5	21.4	0.0684	1.16591
600.0	141.8	2.439	50000.0	54100.0	343.0	164.7	192.1	275.6	21.3	0.0694	1.15963

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					11.00 MPa isobar						
117.90[a]	741.9	12.76	-23500.0	-22640.0	111.1	72.26	99.41	1859.0	8080.0	0.113	2.10623
200.0	665.9	11.46	-14870.0	-13910.0	166.9	82.34	113.9	1388.0	615.0	0.138	1.94921
250.0	618.6	10.64	-8979.0	-7946.0	193.5	90.25	125.0	1159.0	300.0	0.122	1.86166
300.0	568.1	9.774	-2503.0	-1377.0	217.4	100.2	138.1	933.1	175.0	0.102	1.77374
320.0	546.5	9.403	274.4	1444.0	226.5	104.6	144.1	844.2	145.0	0.0943	1.73739
340.0	523.7	9.011	3169.0	4390.0	235.4	109.2	150.5	757.0	121.0	0.0874	1.69981
360.0	499.5	8.593	6188.0	7468.0	244.2	114.0	157.5	672.0	102.0	0.0814	1.66053
380.0	473.3	8.142	9342.0	10690.0	252.9	118.9	165.1	589.8	85.4	0.0761	1.61900
400.0	444.6	7.649	12640.0	14080.0	261.6	123.9	173.5	511.1	71.7	0.0717	1.57456
420.0	412.9	7.104	16090.0	17640.0	270.3	128.9	182.7	437.5	60.1	0.0680	1.52651
430.0	395.8	6.809	17870.0	19490.0	274.6	131.4	187.6	403.4	54.9	0.0667	1.50100
440.0	377.8	6.500	19700.0	21390.0	279.0	133.9	192.4	371.7	50.1	0.0660	1.47452
450.0	359.0	6.176	21560.0	23340.0	283.4	136.4	197.0	343.1	45.7	0.0660	1.44725
460.0	339.6	5.842	23450.0	25330.0	287.8	138.8	201.2	318.2	41.8	0.0664	1.41949
480.0	300.2	5.165	27290.0	29420.0	296.5	143.5	207.2	280.6	35.2	0.0666	1.36449
490.0	281.1	4.837	29230.0	31500.0	300.8	145.6	208.7	268.1	32.6	0.0663	1.33838
500.0	263.0	4.524	31160.0	33590.0	305.0	147.7	209.1	259.3	30.4	0.0659	1.31394
510.0	246.1	4.235	33080.0	35680.0	309.1	149.6	208.3	254.0	28.6	0.0656	1.29156
515.0	238.3	4.100	34030.0	36720.0	311.1	150.5	207.6	252.5	27.8	0.0656	1.28123
520.0	230.8	3.972	34980.0	37750.0	313.1	151.4	206.7	251.7	27.1	0.0656	1.27149
525.0	223.8	3.850	35930.0	38780.0	315.1	152.3	205.6	251.5	26.5	0.0656	1.26234
530.0	217.2	3.736	36870.0	39810.0	317.1	153.2	204.4	251.8	25.9	0.0658	1.25377
535.0	211.0	3.629	37800.0	40830.0	319.0	154.0	203.2	252.5	25.4	0.0659	1.24575
540.0	205.1	3.529	38720.0	41840.0	320.9	154.9	202.1	253.6	25.0	0.0662	1.23827
545.0	199.6	3.434	39650.0	42850.0	322.7	155.7	200.9	255.1	24.6	0.0664	1.23128
550.0	194.5	3.346	40560.0	43850.0	324.5	156.6	199.9	256.7	24.3	0.0667	1.22476
555.0	189.7	3.263	41480.0	44850.0	326.3	157.4	198.9	258.6	24.0	0.0670	1.21866
560.0	185.1	3.185	42390.0	45840.0	328.1	158.2	198.0	260.6	23.7	0.0674	1.21296
570.0	176.9	3.043	44200.0	47810.0	331.6	159.9	196.5	265.0	23.2	0.0682	1.20261
580.0	169.5	2.916	46000.0	49770.0	335.0	161.6	195.5	269.6	22.9	0.0690	1.19347
590.0	162.9	2.803	47800.0	51720.0	338.4	163.2	194.8	274.3	22.6	0.0699	1.18534
600.0	157.0	2.701	49600.0	53670.0	341.6	164.9	194.4	279.0	22.4	0.0709	1.17807
					12.00 MPa isobar						
118.20[a]	741.9	12.76	-23470.0	-22530.0	111.3	72.17	99.44	1869.0	8010.0	0.113	2.10614
200.0	666.6	11.47	-14890.0	-13850.0	166.8	82.37	113.8	1394.0	621.0	0.138	1.95039
250.0	619.6	10.66	-9014.0	-7888.0	193.3	90.29	124.8	1166.0	303.0	0.123	1.86333
300.0	569.7	9.801	-2556.0	-1332.0	217.2	100.2	137.8	943.1	177.0	0.103	1.77624
350.0	514.5	8.851	4577.0	5932.0	239.6	111.6	153.2	728.7	113.0	0.0850	1.68454
360.0	502.4	8.644	6093.0	7481.0	243.9	114.0	156.6	687.6	104.0	0.0822	1.66515
380.0	477.1	8.208	9222.0	10680.0	252.6	118.9	163.8	607.8	87.5	0.0770	1.62490
400.0	449.7	7.737	12490.0	14040.0	261.2	123.8	171.6	532.0	74.0	0.0727	1.58227
420.0	419.9	7.224	15890.0	17550.0	269.7	128.7	179.9	461.4	62.5	0.0691	1.53681
430.0	404.0	6.950	17640.0	19370.0	274.0	131.1	184.1	428.7	57.4	0.0677	1.51297
440.0	387.4	6.665	19430.0	21230.0	278.3	133.6	188.4	398.3	52.7	0.0668	1.48842
460.0	352.6	6.066	23100.0	25080.0	286.9	138.4	196.1	345.9	44.5	0.0668	1.43785
480.0	316.8	5.450	26860.0	29060.0	295.3	143.0	201.8	307.1	38.0	0.0677	1.38724
490.0	299.2	5.147	28760.0	31090.0	299.5	145.2	203.7	292.9	35.3	0.0678	1.36287
500.0	282.2	4.855	30660.0	33130.0	303.6	147.3	204.9	282.0	33.0	0.0676	1.33963
510.0	266.0	4.577	32560.0	35190.0	307.7	149.3	205.3	274.2	31.0	0.0675	1.31785
520.0	251.0	4.318	34460.0	37240.0	311.7	151.2	205.0	269.1	29.4	0.0674	1.29776
530.0	237.1	4.079	36340.0	39280.0	315.6	153.1	204.1	266.5	28.0	0.0675	1.27950
540.0	224.5	3.863	38210.0	41320.0	319.4	154.8	202.7	265.9	26.9	0.0678	1.26310
550.0	213.2	3.668	40070.0	43340.0	323.1	156.6	201.3	266.9	26.0	0.0683	1.24848
560.0	203.1	3.494	41910.0	45340.0	326.7	158.3	199.8	269.1	25.3	0.0689	1.23551
570.0	194.0	3.338	43740.0	47340.0	330.2	160.0	198.6	272.1	24.7	0.0696	1.22400
580.0	185.9	3.198	45560.0	49320.0	333.7	161.7	197.6	275.7	24.2	0.0704	1.21375
590.0	178.6	3.073	47380.0	51290.0	337.0	163.3	196.9	279.7	23.8	0.0713	1.20460
600.0	172.0	2.959	49200.0	53250.0	340.4	165.0	196.4	283.8	23.5	0.0723	1.19639

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					14.00 MPa isobar						
118.90[a]	742.1	12.77	-23430.0	-22330.0	111.6	72.02	99.50	1888.0	7880.0	0.113	2.10598
200.0	668.0	11.49	-14940.0	-13720.0	166.5	82.44	113.7	1404.0	634.0	0.139	1.95272
250.0	621.6	10.69	-9082.0	-7773.0	193.0	90.39	124.5	1180.0	310.0	0.124	1.86660
300.0	572.7	9.853	-2659.0	-1238.0	216.8	100.3	137.2	962.4	182.0	0.104	1.78108
350.0	519.4	8.936	4415.0	5981.0	239.1	111.6	151.9	755.9	117.0	0.0865	1.69228
360.0	508.0	8.740	5914.0	7516.0	243.4	114.0	155.1	716.8	108.0	0.0837	1.67376
380.0	484.1	8.329	9002.0	10680.0	251.9	118.8	161.7	641.1	91.6	0.0787	1.63567
400.0	458.8	7.893	12210.0	13990.0	260.4	123.6	168.6	569.8	78.1	0.0745	1.59596
420.0	431.8	7.428	15540.0	17430.0	268.8	128.4	175.7	503.9	66.8	0.0711	1.55445
440.0	403.0	6.934	18990.0	21010.0	277.1	133.2	182.7	445.0	57.3	0.0686	1.51123
460.0	372.9	6.415	22550.0	24730.0	285.4	137.8	189.1	394.9	49.3	0.0678	1.46687
480.0	342.1	5.886	26190.0	28570.0	293.6	142.4	194.3	355.3	42.8	0.0687	1.42261
500.0	311.9	5.366	29890.0	32490.0	301.6	146.7	198.1	326.5	37.6	0.0699	1.38013
510.0	297.4	5.116	31750.0	34480.0	305.5	148.8	199.4	315.8	35.5	0.0702	1.36007
520.0	283.5	4.877	33610.0	36480.0	309.4	150.8	200.3	307.4	33.6	0.0704	1.34103
530.0	270.2	4.649	35480.0	38490.0	313.2	152.7	200.8	301.1	32.0	0.0706	1.32312
540.0	257.8	4.435	37340.0	40500.0	317.0	154.6	201.0	296.7	30.7	0.0709	1.30644
550.0	246.1	4.235	39200.0	42510.0	320.7	156.5	200.9	294.0	29.5	0.0712	1.29104
560.0	235.4	4.050	41060.0	44510.0	324.3	158.3	200.6	292.8	28.5	0.0717	1.27689
570.0	225.5	3.879	42910.0	46520.0	327.8	160.0	200.2	292.8	27.7	0.0723	1.26398
580.0	216.4	3.723	44760.0	48520.0	331.3	161.8	199.8	293.8	27.0	0.0730	1.25222
590.0	208.1	3.580	46600.0	50520.0	334.7	163.5	199.4	295.6	26.4	0.0738	1.24154
600.0	200.4	3.448	48450.0	52510.0	338.1	165.2	199.2	298.0	25.9	0.0747	1.23182
					16.00 MPa isobar						
119.60[a]	742.2	12.77	-23380.0	-22130.0	112.0	71.91	99.56	1905.0	7760.0	0.114	2.10585
200.0	669.4	11.52	-14980.0	-13590.0	166.3	82.51	113.5	1415.0	647.0	0.139	1.95500
300.0	575.6	9.903	-2757.0	-1141.0	216.5	100.3	136.7	980.5	187.0	0.105	1.78571
350.0	524.0	9.015	4264.0	6039.0	238.6	111.6	150.8	781.1	121.0	0.0879	1.69946
360.0	513.1	8.827	5750.0	7562.0	242.9	114.0	153.8	743.6	112.0	0.0851	1.68167
380.0	490.4	8.437	8804.0	10700.0	251.4	118.7	160.0	671.3	95.4	0.0802	1.64534
400.0	466.7	8.029	11970.0	13960.0	259.7	123.5	166.3	603.6	82.0	0.0761	1.60790
420.0	441.7	7.599	15250.0	17350.0	268.0	128.2	172.7	541.2	70.7	0.0729	1.56931
440.0	415.6	7.150	18630.0	20870.0	276.2	132.9	178.9	485.3	61.3	0.0704	1.52969
500.0	334.1	5.749	29290.0	32070.0	300.0	146.3	193.3	367.4	41.6	0.0709	1.41095
520.0	308.2	5.303	32950.0	35970.0	307.7	150.4	196.2	345.3	37.4	0.0723	1.37471
530.0	295.9	5.091	34800.0	37940.0	311.4	152.4	197.3	337.0	35.7	0.0728	1.35774
540.0	284.1	4.889	36640.0	39920.0	315.1	154.4	198.2	330.3	34.1	0.0733	1.34163
550.0	272.9	4.695	38490.0	41900.0	318.7	156.3	198.8	325.2	32.8	0.0737	1.32644
560.0	262.3	4.513	40350.0	43890.0	322.3	158.1	199.3	321.4	31.6	0.0742	1.31218
570.0	252.3	4.341	42200.0	45890.0	325.9	159.9	199.7	318.9	30.6	0.0748	1.29888
580.0	242.9	4.180	44060.0	47890.0	329.3	161.7	199.9	317.6	29.7	0.0754	1.28650
590.0	234.2	4.029	45910.0	49890.0	332.8	163.5	200.1	317.1	29.0	0.0761	1.27504
600.0	226.1	3.889	47770.0	51890.0	336.1	165.2	200.2	317.5	28.3	0.0769	1.26443
					18.00 MPa isobar						
120.30[a]	742.4	12.77	-23340.0	-21930.0	112.4	71.83	99.62	1921.0	7650.0	0.114	2.10575
200.0	670.8	11.54	-15030.0	-13470.0	166.1	82.60	113.4	1425.0	660.0	0.140	1.95725
300.0	578.4	9.951	-2851.0	-1042.0	216.1	100.4	136.2	997.7	191.0	0.106	1.79016
350.0	528.3	9.089	4124.0	6104.0	238.1	111.7	149.9	804.6	125.0	0.0892	1.70617
400.0	473.7	8.149	11750.0	13960.0	259.1	123.4	164.5	634.2	85.6	0.0777	1.61855
450.0	413.8	7.119	20020.0	22550.0	279.3	135.1	178.8	496.9	60.9	0.0712	1.52672
500.0	351.7	6.051	28810.0	31790.0	298.8	146.1	189.9	404.6	45.2	0.0715	1.43569
520.0	327.9	5.641	32430.0	35620.0	306.3	150.2	193.0	380.8	40.8	0.0733	1.40186
540.0	305.4	5.254	36080.0	39500.0	313.6	154.2	195.5	363.4	37.4	0.0749	1.37046
560.0	284.5	4.895	39760.0	43430.0	320.8	158.0	197.5	351.4	34.6	0.0762	1.34186

Thermophysical properties of iso-butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
570.0	274.8	4.728	41610.0	45410.0	324.3	159.9	198.3	347.1	33.5	0.0768	1.32867
580.0	265.6	4.569	43460.0	47400.0	327.7	161.7	199.0	344.0	32.5	0.0775	1.31623
590.0	256.8	4.418	45320.0	49390.0	331.1	163.5	199.6	341.8	31.6	0.0782	1.30453
600.0	248.5	4.276	47180.0	51390.0	334.5	165.2	200.1	340.4	30.8	0.0790	1.29355
					20.00 MPa isobar						
120.90[a]	742.5	12.78	-23300.0	-21730.0	112.7	71.77	99.67	1937.0	7550.0	0.114	2.10567
200.0	672.1	11.56	-15070.0	-13340.0	165.8	82.69	113.3	1435.0	673.0	0.140	1.95946
300.0	581.1	9.997	-2942.0	-941.1	215.8	100.5	135.8	1014.0	196.0	0.107	1.79444
350.0	532.3	9.158	3991.0	6175.0	237.7	111.7	149.1	826.5	128.0	0.0905	1.71248
400.0	480.0	8.258	11550.0	13980.0	258.5	123.4	163.1	662.2	89.0	0.0791	1.62819
450.0	423.8	7.291	19730.0	22470.0	278.5	135.0	176.5	530.0	64.2	0.0728	1.54145
500.0	366.3	6.301	28410.0	31580.0	297.7	145.9	187.3	438.7	48.4	0.0722	1.45633
520.0	344.1	5.920	31980.0	35360.0	305.1	150.0	190.6	413.8	44.0	0.0739	1.42449
540.0	323.0	5.556	35600.0	39200.0	312.4	154.0	193.4	394.8	40.3	0.0759	1.39463
560.0	303.1	5.215	39260.0	43090.0	319.4	157.9	195.7	380.8	37.4	0.0777	1.36705
580.0	284.8	4.900	42950.0	47030.0	326.3	161.6	197.7	371.0	35.0	0.0792	1.34191
600.0	268.0	4.611	46660.0	51000.0	333.1	165.2	199.5	364.8	33.2	0.0808	1.31923
					25.00 MPa isobar						
122.40[a]	743.0	12.78	-23200.0	-21250.0	113.5	71.74	99.79	1972.0	7330.0	0.115	2.10559
200.0	675.4	11.62	-15170.0	-13020.0	165.3	82.94	112.9	1458.0	706.0	0.141	1.96484
300.0	587.4	10.11	-3153.0	-679.5	215.0	100.8	134.8	1051.0	207.0	0.110	1.80453
350.0	541.5	9.315	3690.0	6374.0	236.7	112.0	147.4	875.9	137.0	0.0935	1.72684
400.0	493.6	8.492	11130.0	14070.0	257.3	123.6	160.4	723.9	97.0	0.0824	1.64906
500.0	394.3	6.784	27610.0	31300.0	295.6	145.8	182.9	512.7	55.5	0.0747	1.49670
520.0	375.1	6.454	31120.0	34990.0	302.9	149.9	186.4	486.7	50.8	0.0755	1.46852
540.0	356.6	6.136	34670.0	38750.0	309.9	153.9	189.5	465.6	46.9	0.0772	1.44174
560.0	339.0	5.832	38280.0	42570.0	316.9	157.8	192.4	448.7	43.6	0.0794	1.41653
580.0	322.3	5.545	41930.0	46440.0	323.7	161.6	195.0	435.4	40.9	0.0817	1.39302
600.0	306.7	5.276	45630.0	50370.0	330.3	165.3	197.4	425.3	38.6	0.0839	1.37124
					30.00 MPa isobar						
123.90[a]	743.5	12.79	-23110.0	-20770.0	114.2	71.83	99.90	2003.0	7150.0	0.116	2.10564
200.0	678.5	11.67	-15270.0	-12700.0	164.7	83.23	112.7	1480.0	740.0	0.143	1.97002
300.0	593.2	10.21	-3347.0	-407.8	214.3	101.2	134.0	1085.0	218.0	0.112	1.81388
400.0	505.0	8.689	10760.0	14210.0	256.2	123.8	158.5	776.6	104.0	0.0854	1.66669
500.0	415.4	7.146	27000.0	31200.0	294.0	145.9	180.2	575.3	61.7	0.0775	1.52739
520.0	398.2	6.850	30460.0	34840.0	301.1	150.0	183.8	549.0	56.8	0.0778	1.50171
540.0	381.5	6.563	33980.0	38550.0	308.1	154.0	187.0	526.8	52.6	0.0787	1.47714
560.0	365.5	6.288	37550.0	42320.0	315.0	157.9	190.1	508.5	49.0	0.0805	1.45382
580.0	350.2	6.024	41170.0	46150.0	321.7	161.7	193.0	493.4	46.1	0.0827	1.43181
600.0	335.6	5.774	44840.0	50030.0	328.3	165.4	195.6	481.2	43.5	0.0853	1.41115
					35.00 MPa isobar						
125.20[a]	744.1	12.80	-23030.0	-20300.0	114.8	72.02	100.00	2031.0	7000.0	0.117	2.10581
200.0	681.6	11.73	-15360.0	-12380.0	164.2	83.56	112.4	1501.0	774.0	0.144	1.97501
400.0	515.0	8.860	10450.0	14400.0	255.2	124.1	157.1	822.6	111.0	0.0883	1.68208
500.0	432.3	7.437	26500.0	31210.0	292.6	146.1	178.3	629.7	67.3	0.0802	1.55231
520.0	416.5	7.166	29930.0	34810.0	299.7	150.2	181.9	603.4	62.1	0.0803	1.52846
540.0	401.2	6.902	33410.0	38480.0	306.6	154.2	185.3	580.9	57.7	0.0809	1.50557
560.0	386.4	6.648	36960.0	42220.0	313.4	158.1	188.5	561.7	54.0	0.0821	1.48372
580.0	372.2	6.403	40560.0	46020.0	320.1	161.9	191.5	545.5	50.8	0.0838	1.46296
600.0	358.6	6.170	44210.0	49880.0	326.6	165.6	194.4	532.1	48.0	0.0861	1.44332

[a]At melting line
[b]At liquid-vapor boundary

Appendix I: Thermophysical Properties of Normal Butane

Thermophysical properties of coexisting gaseous and liquid normal butane

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
134.860[a]	0.00000	735.3	12.65	-22600.0	-22600.0	133.8	82.01	109.0	1665.0	2280.0	0.208	2.03883
134.860[a]	0.00000	0.0000	0.00000	5033.0	7798.0	346.9	56.15	64.47	148.8	3.67	0.00429	1.00000
135.0	0.00000	735.1	12.65	-22590.0	-22590.0	133.9	82.14	109.1	1664.0	2270.0	0.208	2.03860
135.0	0.00000	0.0000	0.00000	5039.0	7783.0	346.8	56.18	64.49	148.9	3.67	0.00429	1.00000
140.0	0.00000	730.4	12.57	-22030.0	-22030.0	137.9	85.59	113.1	1638.0	1900.0	0.202	2.03044
140.0	0.00000	0.0001	0.00000	5322.0	7162.0	341.6	57.20	65.51	151.4	3.78	0.00455	1.00000
145.0	0.00000	725.7	12.49	-21460.0	-21460.0	141.9	87.23	115.2	1617.0	1610.0	0.196	2.02229
145.0	0.00001	0.0002	0.00000	5610.0	7118.0	336.9	58.15	66.47	154.0	3.89	0.00481	1.00000
150.0	0.00001	721.1	12.41	-20880.0	-20880.0	145.8	87.78	116.3	1597.0	1380.0	0.191	2.01416
150.0	0.00001	0.0004	0.00001	5903.0	7294.0	332.7	59.07	67.38	156.4	4.00	0.00507	1.00000
155.0	0.00002	716.4	12.32	-20300.0	-20300.0	149.7	87.72	116.7	1579.0	1200.0	0.186	2.00603
155.0	0.00002	0.0008	0.00001	6201.0	7562.0	329.0	59.96	68.27	158.9	4.11	0.00533	1.00000
160.0	0.00004	711.7	12.24	-19720.0	-19720.0	153.4	87.36	116.9	1561.0	1060.0	0.182	1.99792
160.0	0.00004	0.0015	0.00003	6503.0	7871.0	325.6	60.83	69.15	161.3	4.22	0.00560	1.00000
165.0	0.00007	707.0	12.16	-19130.0	-19130.0	157.0	86.88	116.9	1543.0	939.0	0.177	1.98981
165.0	0.00007	0.0028	0.00005	6809.0	8202.0	322.5	61.70	70.02	163.6	4.33	0.00587	1.00000
170.0	0.00012	702.3	12.08	-18550.0	-18550.0	160.5	86.39	116.8	1525.0	840.0	0.173	1.98171
170.0	0.00012	0.0048	0.00008	7119.0	8544.0	319.8	62.57	70.89	166.0	4.44	0.00615	1.00001
175.0	0.00020	697.6	12.00	-17960.0	-17960.0	163.8	85.97	116.8	1506.0	757.0	0.169	1.97361
175.0	0.00020	0.0081	0.00014	7433.0	8895.0	317.3	63.45	71.78	168.2	4.55	0.00643	1.00001
180.0	0.00034	692.8	11.92	-17380.0	-17380.0	167.1	85.64	117.0	1486.0	686.0	0.165	1.96552
180.0	0.00034	0.0131	0.00023	7752.0	9252.0	315.1	64.34	72.68	170.4	4.67	0.00672	1.00001
185.0	0.00055	688.1	11.84	-16790.0	-16790.0	170.4	85.44	117.2	1466.0	625.0	0.162	1.95741
185.0	0.00055	0.0206	0.00036	8075.0	9614.0	313.1	65.25	73.60	172.6	4.78	0.00702	1.00002
190.0	0.00085	683.4	11.76	-16210.0	-16210.0	173.5	85.36	117.5	1445.0	573.0	0.159	1.94931
190.0	0.00086	0.0315	0.00054	8402.0	9981.0	311.3	66.18	74.54	174.8	4.89	0.00732	1.00003
195.0	0.00131	678.6	11.68	-15620.0	-15620.0	176.5	85.39	118.0	1423.0	527.0	0.155	1.94119
195.0	0.00131	0.0469	0.00081	8732.0	10350.0	309.7	67.13	75.51	176.8	5.00	0.00763	1.00005
200.0	0.00195	673.9	11.59	-15030.0	-15030.0	179.5	85.55	118.5	1400.0	487.0	0.152	1.93306
200.0	0.00195	0.0682	0.00117	9067.0	10730.0	308.3	68.10	76.51	178.9	5.12	0.00795	1.00007
205.0	0.00284	669.1	11.51	-14430.0	-14430.0	182.5	85.80	119.2	1378.0	452.0	0.149	1.92492
205.0	0.00284	0.0970	0.00167	9406.0	11110.0	307.0	69.10	77.54	180.9	5.23	0.00828	1.00010
210.0	0.00405	664.3	11.43	-13830.0	-13830.0	185.4	86.16	119.9	1354.0	420.0	0.146	1.91676
210.0	0.00405	0.1354	0.00233	9749.0	11490.0	305.9	70.13	78.61	182.8	5.35	0.00862	1.00014
215.0	0.00567	659.4	11.35	-13230.0	-13230.0	188.2	86.60	120.8	1330.0	392.0	0.144	1.90857
215.0	0.00567	0.1855	0.00319	10100.0	11870.0	305.0	71.18	79.71	184.6	5.47	0.00896	1.00020
220.0	0.00781	654.6	11.26	-12630.0	-12630.0	191.0	87.11	121.7	1306.0	367.0	0.141	1.90036
220.0	0.00781	0.2499	0.00430	10450.0	12260.0	304.1	72.26	80.85	186.4	5.58	0.00932	1.00027
225.0	0.01057	649.7	11.18	-12020.0	-12010.0	193.7	87.70	122.6	1281.0	344.0	0.138	1.89212
225.0	0.01057	0.3314	0.00570	10800.0	12660.0	303.4	73.37	82.03	188.1	5.70	0.00968	1.00035
230.0	0.01410	644.8	11.09	-11400.0	-11400.0	196.4	88.35	123.7	1256.0	324.0	0.136	1.88385
230.0	0.01410	0.4333	0.00746	11160.0	13050.0	302.7	74.51	83.25	189.8	5.82	0.0101	1.00046
235.0	0.01855	639.8	11.01	-10780.0	-10780.0	199.1	89.06	124.8	1231.0	305.0	0.134	1.87553
235.0	0.01855	0.5589	0.00962	11520.0	13450.0	302.2	75.68	84.52	191.4	5.94	0.0104	1.00059

Thermophysical properties of coexisting gaseous and liquid normal butane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
240.0	0.02408	634.8	10.92	-10150.0	-10150.0	201.7	89.81	125.9	1205.0	287.0	0.131	1.86718
240.0	0.02408	0.7122	0.01225	11890.0	13850.0	301.8	76.87	85.82	192.8	6.06	0.0108	1.00076
245.0	0.03088	629.8	10.84	-9520.0	-9517.0	204.3	90.61	127.1	1180.0	272.0	0.129	1.85877
245.0	0.03088	0.8972	0.01544	12260.0	14260.0	301.4	78.09	87.17	194.2	6.19	0.0112	1.00095
250.0	0.03915	624.7	10.75	-8882.0	-8878.0	206.9	91.44	128.3	1154.0	257.0	0.127	1.85031
250.0	0.03915	1.118	0.01924	12630.0	14660.0	301.1	79.34	88.57	195.5	6.31	0.0117	1.00119
255.0	0.04911	619.6	10.66	-8237.0	-8233.0	209.5	92.31	129.6	1127.0	244.0	0.124	1.84179
255.0	0.04911	1.380	0.02375	13000.0	15070.0	300.9	80.62	90.01	196.7	6.44	0.0121	1.00147
260.0	0.06099	614.4	10.57	-7587.0	-7581.0	212.0	93.22	130.9	1101.0	231.0	0.122	1.83321
260.0	0.06099	1.688	0.02905	13380.0	15480.0	300.7	81.92	91.50	197.8	6.57	0.0125	1.00180
265.0	0.07505	609.2	10.48	-6929.0	-6922.0	214.5	94.15	132.3	1075.0	220.0	0.120	1.82455
265.0	0.07505	2.048	0.03523	13760.0	15890.0	300.6	83.25	93.04	198.8	6.70	0.0130	1.00218
270.0	0.09155	603.9	10.39	-6265.0	-6256.0	217.0	95.10	133.7	1048.0	209.0	0.118	1.81582
270.0	0.09155	2.464	0.04239	14140.0	16300.0	300.5	84.60	94.63	199.7	6.83	0.0135	1.00262
275.0	0.1108	598.5	10.30	-5594.0	-5583.0	219.4	96.09	135.1	1021.0	199.0	0.116	1.80700
275.0	0.1108	2.943	0.05064	14530.0	16720.0	300.5	85.97	96.28	200.4	6.96	0.0140	1.00313
280.0	0.1330	593.1	10.20	-4916.0	-4903.0	221.9	97.09	136.6	994.4	189.0	0.114	1.79809
280.0	0.1330	3.492	0.06008	14920.0	17130.0	300.6	87.37	97.98	201.0	7.10	0.0145	1.00372
285.0	0.1585	587.6	10.11	-4231.0	-4215.0	224.3	98.11	138.1	967.5	180.0	0.112	1.78908
285.0	0.1585	4.117	0.07083	15310.0	17550.0	300.7	88.80	99.73	201.5	7.24	0.0150	1.00438
290.0	0.1877	582.0	10.01	-3538.0	-3519.0	226.7	99.16	139.7	940.4	172.0	0.110	1.77996
290.0	0.1877	4.825	0.08302	15700.0	17960.0	300.8	90.24	101.6	201.9	7.38	0.0155	1.00514
295.0	0.2208	576.3	9.915	-2838.0	-2816.0	229.1	100.2	141.3	913.2	164.0	0.108	1.77073
295.0	0.2208	5.625	0.09678	16100.0	18380.0	301.0	91.71	103.4	202.1	7.52	0.0160	1.00599
300.0	0.2582	570.5	9.815	-2130.0	-2103.0	231.5	101.3	143.0	886.0	157.0	0.106	1.76136
300.0	0.2582	6.524	0.1123	16490.0	18790.0	301.2	93.19	105.4	202.1	7.67	0.0166	1.00696
305.0	0.3002	564.6	9.714	-1414.0	-1383.0	233.9	102.4	144.7	858.6	149.0	0.104	1.75185
305.0	0.3002	7.532	0.1296	16890.0	19210.0	301.4	94.70	107.4	202.0	7.82	0.0172	1.00803
310.0	0.3472	558.6	9.610	-689.2	-653.1	236.2	103.5	146.5	831.2	143.0	0.102	1.74220
310.0	0.3472	8.658	0.1490	17290.0	19620.0	301.6	96.23	109.5	201.7	7.97	0.0178	1.00924
315.0	0.3995	552.5	9.505	43.6	85.6	238.6	104.7	148.3	803.7	136.0	0.100	1.73238
315.0	0.3995	9.913	0.1705	17690.0	20030.0	301.9	97.77	111.7	201.3	8.13	0.0184	1.01058
320.0	0.4575	546.2	9.397	785.0	833.7	240.9	105.8	150.3	776.1	130.0	0.0986	1.72237
320.0	0.4575	11.31	0.1945	18090.0	20440.0	302.2	99.34	114.0	200.6	8.29	0.0190	1.01208
325.0	0.5215	539.8	9.286	1535.0	1592.0	243.2	107.0	152.3	748.5	124.0	0.0967	1.71218
325.0	0.5215	12.85	0.2212	18490.0	20840.0	302.5	100.9	116.4	199.8	8.46	0.0197	1.01374
330.0	0.5920	533.2	9.173	2295.0	2360.0	245.6	108.2	154.4	720.7	118.0	0.0949	1.70177
330.0	0.5920	14.57	0.2506	18890.0	21250.0	302.8	102.5	119.0	198.8	8.63	0.0204	1.01559
335.0	0.6693	526.4	9.057	3064.0	3138.0	247.9	109.4	156.6	692.9	113.0	0.0931	1.69112
335.0	0.6693	16.46	0.2833	19280.0	21650.0	303.1	104.2	121.6	197.6	8.80	0.0211	1.01763
340.0	0.7537	519.5	8.938	3844.0	3928.0	250.2	110.6	159.0	664.9	108.0	0.0912	1.68022
340.0	0.7537	18.56	0.3193	19680.0	22040.0	303.5	105.8	124.5	196.1	8.99	0.0218	1.01989
345.0	0.8458	512.3	8.815	4633.0	4729.0	252.5	111.8	161.5	636.9	103.0	0.0894	1.66904
345.0	0.8458	20.87	0.3591	20080.0	22430.0	303.8	107.5	127.5	194.4	9.18	0.0226	1.02239
350.0	0.9459	505.0	8.687	5434.0	5543.0	254.8	113.1	164.2	608.8	97.7	0.0876	1.65754
350.0	0.9459	23.43	0.4031	20470.0	22820.0	304.2	109.1	130.8	192.5	9.37	0.0234	1.02516

Thermophysical properties of coexisting gaseous and liquid normal butane - Continued

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
355.0	1.054	497.3	8.556	6246.0	6369.0	257.1	114.4	167.1	580.5	93.0	0.0858	1.64570
355.0	1.054	26.26	0.4518	20860.0	23190.0	304.5	110.8	134.4	190.3	9.58	0.0242	1.02823
360.0	1.172	489.4	8.419	7070.0	7209.0	259.4	115.7	170.3	552.2	88.4	0.0841	1.63347
360.0	1.172	29.38	0.5055	21240.0	23560.0	304.9	112.6	138.3	187.8	9.79	0.0251	1.03164
365.0	1.298	481.1	8.277	7907.0	8064.0	261.7	117.0	173.8	523.6	83.9	0.0823	1.62080
365.0	1.298	32.85	0.5651	21620.0	23920.0	305.2	114.3	142.6	185.1	10.0	0.0259	1.03542
370.0	1.435	472.5	8.128	8759.0	8935.0	264.1	118.4	177.7	494.9	79.5	0.0806	1.60763
370.0	1.435	36.69	0.6313	22000.0	24270.0	305.5	116.1	147.5	182.0	10.3	0.0269	1.03963
375.0	1.582	463.4	7.972	9625.0	9824.0	266.4	119.8	182.1	466.0	75.2	0.0789	1.59388
375.0	1.582	40.98	0.7050	22360.0	24600.0	305.8	117.9	153.1	178.6	10.5	0.0279	1.04433
380.0	1.739	453.8	7.808	10510.0	10730.0	268.8	121.2	187.3	436.7	71.0	0.0772	1.57947
380.0	1.739	45.77	0.7875	22710.0	24920.0	306.1	119.8	159.6	174.8	10.8	0.0289	1.04962
385.0	1.908	443.6	7.633	11410.0	11660.0	271.1	122.6	193.4	407.1	66.8	0.0755	1.56426
385.0	1.908	51.17	0.8804	23050.0	25220.0	306.3	121.7	167.4	170.6	11.1	0.0300	1.05560
390.0	2.089	432.8	7.445	12340.0	12620.0	273.5	124.2	200.9	377.0	62.7	0.0738	1.54809
390.0	2.089	57.30	0.9859	23370.0	25490.0	306.5	123.6	177.0	166.0	11.4	0.0312	1.06242
395.0	2.282	421.0	7.243	13290.0	13600.0	276.0	125.7	210.5	346.3	58.6	0.0721	1.53072
395.0	2.282	64.34	1.107	23660.0	25730.0	306.7	125.6	189.3	160.9	11.8	0.0326	1.07029
400.0	2.490	408.0	7.020	14270.0	14620.0	278.5	127.4	223.4	314.7	54.5	0.0704	1.51181
400.0	2.490	72.55	1.248	23930.0	25920.0	306.7	127.7	205.9	155.2	12.2	0.0343	1.07952
405.0	2.711	393.5	6.770	15290.0	15690.0	281.0	129.1	242.0	281.9	50.2	0.0688	1.49081
405.0	2.711	82.33	1.416	24150.0	26060.0	306.7	129.9	229.9	148.9	12.7	0.0365	1.09060
410.0	2.949	376.7	6.481	16370.0	16830.0	283.7	131.0	272.4	247.4	45.8	0.0677	1.46675
410.0	2.949	94.40	1.624	24300.0	26110.0	306.4	132.2	268.7	141.8	13.3	0.0400	1.10440
415.0	3.205	356.1	6.127	17540.0	18060.0	286.6	133.1	332.3	210.6	41.0	0.0685	1.43770
415.0	3.205	110.2	1.896	24340.0	26030.0	305.8	134.8	343.8	133.8	14.1	0.0466	1.12265
420.0	3.483	328.1	5.644	18890.0	19510.0	290.0	135.7	508.4	170.4	35.4	0.0752	1.39872
420.0	3.483	133.5	2.297	24150.0	25670.0	304.7	137.6	558.1	124.6	15.3	0.0617	1.15004
425.16[b]	3.796	227.8	3.920	22010.0	22980.0	298.0						1.26602

[a]Triple point
[b]Critical point

Thermophysical properties of normal butane on the melting line

T	Pres.	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	MPa	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
134.90[a]	0.00000	735.3	12.65	-22600.0	-22600.0	133.8	82.01	109.0	1665.0	2280.0	0.208	2.03883
135.0	0.8345	735.5	12.65	-22600.0	-22530.0	133.8	82.14	109.1	1667.0	2290.0	0.208	2.03924
135.2	2.028	735.9	12.66	-22600.0	-22430.0	133.8	82.32	109.3	1672.0	2300.0	0.208	2.03983
135.4	3.224	736.3	12.67	-22590.0	-22330.0	133.9	82.50	109.4	1676.0	2310.0	0.208	2.04042
135.6	4.422	736.7	12.67	-22580.0	-22230.0	133.9	82.67	109.6	1680.0	2330.0	0.208	2.04100
135.8	5.622	737.1	12.68	-22580.0	-22130.0	134.0	82.83	109.7	1685.0	2340.0	0.208	2.04158
136.0	6.824	737.4	12.69	-22570.0	-22030.0	134.0	82.99	109.9	1689.0	2350.0	0.208	2.04216
136.2	8.028	737.8	12.69	-22570.0	-21930.0	134.0	83.14	110.0	1694.0	2360.0	0.208	2.04273
136.4	9.235	738.2	12.70	-22560.0	-21830.0	134.1	83.29	110.2	1698.0	2370.0	0.209	2.04330
136.6	10.44	738.5	12.71	-22550.0	-21730.0	134.1	83.43	110.3	1703.0	2380.0	0.209	2.04386
136.8	11.65	738.9	12.71	-22550.0	-21630.0	134.2	83.57	110.5	1708.0	2400.0	0.209	2.04443
137.0	12.87	739.3	12.72	-22540.0	-21530.0	134.2	83.70	110.6	1713.0	2410.0	0.209	2.04499
137.2	14.08	739.6	12.73	-22530.0	-21430.0	134.3	83.83	110.8	1718.0	2420.0	0.209	2.04554
137.4	15.30	740.0	12.73	-22530.0	-21330.0	134.3	83.96	110.9	1723.0	2430.0	0.209	2.04609
137.6	16.52	740.4	12.74	-22520.0	-21220.0	134.3	84.08	111.0	1728.0	2440.0	0.209	2.04664
137.8	17.74	740.7	12.74	-22510.0	-21120.0	134.4	84.19	111.1	1733.0	2450.0	0.209	2.04719
138.0	18.96	741.1	12.75	-22510.0	-21020.0	134.4	84.31	111.2	1738.0	2460.0	0.209	2.04773
138.2	20.19	741.4	12.76	-22500.0	-20920.0	134.5	84.42	111.4	1743.0	2470.0	0.209	2.04827
138.4	21.42	741.8	12.76	-22490.0	-20810.0	134.5	84.52	111.5	1749.0	2480.0	0.209	2.04881
138.6	22.65	742.1	12.77	-22490.0	-20710.0	134.6	84.62	111.6	1754.0	2500.0	0.209	2.04934
138.8	23.88	742.5	12.77	-22480.0	-20610.0	134.6	84.72	111.7	1759.0	2510.0	0.209	2.04987
139.0	25.11	742.8	12.78	-22470.0	-20510.0	134.7	84.81	111.8	1765.0	2520.0	0.209	2.05039
139.2	26.35	743.2	12.79	-22460.0	-20400.0	134.7	84.90	111.9	1770.0	2530.0	0.209	2.05091
139.4	27.59	743.5	12.79	-22460.0	-20300.0	134.8	84.99	112.0	1776.0	2540.0	0.209	2.05143
139.6	28.83	743.9	12.80	-22450.0	-20200.0	134.8	85.08	112.1	1781.0	2550.0	0.209	2.05195
139.8	30.07	744.2	12.80	-22440.0	-20090.0	134.8	85.16	112.2	1787.0	2560.0	0.209	2.05246
140.0	31.32	744.5	12.81	-22430.0	-19990.0	134.9	85.24	112.3	1792.0	2570.0	0.209	2.05297
140.2	32.56	744.9	12.82	-22430.0	-19890.0	134.9	85.31	112.4	1798.0	2580.0	0.209	2.05347
140.4	33.81	745.2	12.82	-22420.0	-19780.0	135.0	85.39	112.5	1804.0	2590.0	0.209	2.05397
140.6	35.07	745.5	12.83	-22410.0	-19680.0	135.0	85.46	112.5	1809.0	2600.0	0.209	2.05447
140.8	36.32	745.9	12.83	-22400.0	-19570.0	135.1	85.53	112.6	1815.0	2610.0	0.210	2.05496
141.0	37.58	746.2	12.84	-22390.0	-19470.0	135.1	85.59	112.7	1821.0	2620.0	0.210	2.05545
141.2	38.83	746.5	12.84	-22390.0	-19360.0	135.2	85.65	112.8	1827.0	2630.0	0.210	2.05594
141.4	40.09	746.8	12.85	-22380.0	-19260.0	135.2	85.72	112.8	1832.0	2630.0	0.210	2.05642
141.6	41.36	747.2	12.85	-22370.0	-19150.0	135.3	85.78	112.9	1838.0	2640.0	0.210	2.05690
141.8	42.62	747.5	12.86	-22360.0	-19050.0	135.3	85.83	113.0	1844.0	2650.0	0.210	2.05738
142.0	43.89	747.8	12.87	-22350.0	-18940.0	135.4	85.89	113.0	1850.0	2660.0	0.210	2.05785
142.2	45.16	748.1	12.87	-22350.0	-18840.0	135.4	85.94	113.1	1856.0	2670.0	0.210	2.05832
142.4	46.43	748.4	12.88	-22340.0	-18730.0	135.5	85.99	113.2	1862.0	2680.0	0.210	2.05879
142.6	47.70	748.8	12.88	-22330.0	-18630.0	135.5	86.04	113.2	1867.0	2690.0	0.210	2.05925
142.8	48.98	749.1	12.89	-22320.0	-18520.0	135.6	86.09	113.3	1873.0	2700.0	0.210	2.05971
143.0	50.25	749.4	12.89	-22310.0	-18410.0	135.6	86.14	113.3	1879.0	2710.0	0.210	2.06017
143.2	51.53	749.7	12.90	-22300.0	-18310.0	135.7	86.18	113.4	1885.0	2710.0	0.210	2.06062
143.4	52.81	750.0	12.90	-22290.0	-18200.0	135.7	86.22	113.5	1891.0	2720.0	0.210	2.06108
143.6	54.10	750.3	12.91	-22290.0	-18090.0	135.8	86.26	113.5	1897.0	2730.0	0.210	2.06152
143.8	55.38	750.6	12.91	-22280.0	-17990.0	135.8	86.30	113.6	1903.0	2740.0	0.210	2.06197
144.0	56.67	750.9	12.92	-22270.0	-17880.0	135.9	86.34	113.6	1909.0	2750.0	0.210	2.06241
144.2	57.96	751.2	12.92	-22260.0	-17770.0	135.9	86.38	113.6	1915.0	2750.0	0.210	2.06285
144.4	59.26	751.5	12.93	-22250.0	-17670.0	136.0	86.42	113.7	1921.0	2760.0	0.210	2.06328
144.6	60.55	751.8	12.93	-22240.0	-17560.0	136.0	86.45	113.7	1927.0	2770.0	0.210	2.06371
144.8	61.85	752.1	12.94	-22230.0	-17450.0	136.1	86.48	113.8	1933.0	2780.0	0.210	2.06414
145.0	63.15	752.4	12.94	-22220.0	-17340.0	136.1	86.52	113.8	1939.0	2780.0	0.210	2.06457
145.2	64.45	752.7	12.95	-22210.0	-17240.0	136.2	86.55	113.8	1945.0	2790.0	0.210	2.06499
145.4	65.75	753.0	12.96	-22200.0	-17130.0	136.2	86.58	113.9	1951.0	2800.0	0.210	2.06541
145.6	67.06	753.3	12.96	-22190.0	-17020.0	136.3	86.61	113.9	1957.0	2810.0	0.210	2.06583
145.8	68.37	753.6	12.97	-22190.0	-16910.0	136.3	86.64	113.9	1963.0	2810.0	0.210	2.06624
146.0	69.68	753.9	12.97	-22180.0	-16800.0	136.4	86.66	114.0	1969.0	2820.0	0.210	2.06665

[a]Triple point

Thermophysical properties of normal butane

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.01 MPa isobar						
134.90[a]	735.3	12.65	-22600.0	-22600.0	133.8	82.01	109.0	1665.0	2280.0	0.208	2.03883
140.0	730.4	12.57	-22030.0	-22030.0	137.9	85.59	113.1	1638.0	1890.0	0.202	2.03042
150.0	721.0	12.40	-20880.0	-20880.0	145.9	87.78	116.3	1597.0	1380.0	0.191	2.01410
160.0	711.6	12.24	-19720.0	-19710.0	153.4	87.36	116.9	1561.0	1060.0	0.182	1.99784
170.0	702.2	12.08	-18550.0	-18550.0	160.5	86.39	116.8	1524.0	840.0	0.173	1.98164
180.0	692.8	11.92	-17380.0	-17380.0	167.1	85.64	117.0	1486.0	686.0	0.165	1.96545
190.0	683.4	11.76	-16210.0	-16210.0	173.5	85.35	117.5	1444.0	573.0	0.159	1.94926
200.0	673.9	11.59	-15030.0	-15030.0	179.5	85.54	118.5	1400.0	487.0	0.152	1.93304
210.0	664.3	11.43	-13830.0	-13830.0	185.4	86.16	119.9	1354.0	420.0	0.146	1.91676
220.0	654.6	11.26	-12630.0	-12630.0	191.0	87.11	121.7	1306.0	367.0	0.141	1.90037
224.063[b]	650.6	11.19	-12130.0	-12130.0	193.2	87.59	122.5	1286.0	348.0	0.139	1.89367
224.063[b]	0.3147	0.005415	10730.0	12580.0	303.5	73.16	81.81	187.8	5.68	0.00961	1.00034
225.0	0.3131	0.005388	10800.0	12660.0	303.9	73.36	82.00	188.2	5.70	0.00968	1.00033
230.0	0.3061	0.005268	11170.0	13070.0	305.7	74.40	83.02	190.2	5.82	0.0101	1.00033
240.0	0.2931	0.005043	11930.0	13910.0	309.2	76.56	85.13	194.2	6.05	0.0108	1.00031
260.0	0.2701	0.004648	13510.0	15660.0	316.2	81.10	89.61	201.8	6.53	0.0125	1.00029
280.0	0.2506	0.004312	15180.0	17500.0	323.0	85.87	94.33	209.0	7.01	0.0143	1.00027
300.0	0.2337	0.004022	16950.0	19430.0	329.7	90.82	99.25	215.9	7.49	0.0163	1.00025
320.0	0.2190	0.003768	18820.0	21470.0	336.3	95.87	104.3	222.6	7.97	0.0185	1.00023
340.0	0.2060	0.003545	20780.0	23610.0	342.8	101.0	109.4	229.1	8.46	0.0207	1.00022
360.0	0.1945	0.003347	22860.0	25840.0	349.2	106.1	114.5	235.3	8.95	0.0231	1.00021
380.0	0.1842	0.003170	25030.0	28190.0	355.5	111.2	119.6	241.4	9.43	0.0257	1.00020
400.0	0.1750	0.003011	27310.0	30630.0	361.7	116.3	124.6	247.4	9.92	0.0283	1.00019
420.0	0.1666	0.002867	29680.0	33170.0	367.9	121.2	129.6	253.2	10.4	0.0310	1.00018
440.0	0.1590	0.002737	32150.0	35810.0	374.1	126.1	134.4	258.8	10.9	0.0339	1.00017
460.0	0.1521	0.002617	34720.0	38550.0	380.2	130.9	139.2	264.4	11.4	0.0368	1.00016
480.0	0.1457	0.002508	37390.0	41380.0	386.2	135.5	143.9	269.8	11.8	0.0398	1.00016
500.0	0.1399	0.002408	40140.0	44300.0	392.2	140.1	148.4	275.1	12.3	0.0429	1.00015
520.0	0.1345	0.002315	42990.0	47310.0	398.1	144.5	152.8	280.4	12.8	0.0460	1.00014
540.0	0.1295	0.002229	45920.0	50410.0	403.9	148.8	157.1	285.5	13.2	0.0492	1.00014
560.0	0.1249	0.002149	48940.0	53600.0	409.7	153.0	161.3	290.5	13.7	0.0524	1.00013
580.0	0.1206	0.002075	52040.0	56860.0	415.4	157.0	165.3	295.5	14.1	0.0557	1.00013
600.0	0.1165	0.002006	55220.0	60210.0	421.1	161.0	169.3	300.4	14.6	0.0590	1.00013
					0.05 MPa isobar						
134.90[a]	735.3	12.65	-22600.0	-22600.0	133.8	82.02	109.0	1665.0	2280.0	0.208	2.03885
160.0	711.6	12.24	-19720.0	-19710.0	153.4	87.36	116.9	1561.0	1060.0	0.182	1.99788
200.0	673.9	11.59	-15030.0	-15020.0	179.5	85.55	118.5	1401.0	487.0	0.152	1.93309
255.407[b]	619.2	10.65	-8185.0	-8180.0	209.7	92.38	129.7	1125.0	243.0	0.124	1.84110
255.407[b]	1.404	0.02415	13030.0	15100.0	300.8	80.72	90.13	196.8	6.45	0.0121	1.00149
260.0	1.377	0.02369	13410.0	15520.0	302.5	81.74	91.07	198.7	6.56	0.0125	1.00147
280.0	1.272	0.02188	15100.0	17380.0	309.4	86.34	95.42	206.5	7.03	0.0144	1.00135
300.0	1.182	0.02034	16880.0	19340.0	316.1	91.17	100.1	213.9	7.52	0.0164	1.00126
320.0	1.105	0.01901	18760.0	21390.0	322.7	96.14	104.9	220.9	8.00	0.0185	1.00118
340.0	1.038	0.01786	20730.0	23530.0	329.2	101.2	109.9	227.6	8.48	0.0208	1.00111
360.0	0.9785	0.01684	22810.0	25780.0	335.7	106.3	114.9	234.1	8.97	0.0232	1.00104
380.0	0.9258	0.01593	24990.0	28130.0	342.0	111.3	119.9	240.4	9.45	0.0257	1.00099
400.0	0.8787	0.01512	27270.0	30580.0	348.3	116.4	124.9	246.5	9.94	0.0283	1.00094
420.0	0.8361	0.01439	29650.0	33130.0	354.5	121.3	129.8	252.4	10.4	0.0311	1.00089
440.0	0.7976	0.01372	32130.0	35770.0	360.6	126.2	134.6	258.1	10.9	0.0339	1.00085
460.0	0.7625	0.01312	34700.0	38510.0	366.7	130.9	139.4	263.8	11.4	0.0369	1.00081
480.0	0.7304	0.01257	37370.0	41340.0	372.8	135.6	144.0	269.3	11.8	0.0399	1.00078
500.0	0.7009	0.01206	40120.0	44270.0	378.7	140.1	148.5	274.7	12.3	0.0429	1.00075
520.0	0.6737	0.01159	42970.0	47290.0	384.6	144.5	152.9	279.9	12.8	0.0460	1.00072
540.0	0.6486	0.01116	45910.0	50390.0	390.5	148.8	157.2	285.1	13.2	0.0492	1.00069
560.0	0.6252	0.01076	48920.0	53570.0	396.3	153.0	161.4	290.2	13.7	0.0525	1.00067
580.0	0.6036	0.01038	52030.0	56840.0	402.0	157.0	165.4	295.2	14.1	0.0557	1.00064
600.0	0.5833	0.01004	55210.0	60190.0	407.7	161.0	169.3	300.1	14.6	0.0591	1.00062

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					0.10 MPa isobar						
134.90[a]	735.3	12.65	-22600.0	-22600.0	133.8	82.03	109.0	1665.0	2280.0	0.208	2.03888
160.0	711.7	12.24	-19720.0	-19710.0	153.4	87.36	116.9	1561.0	1060.0	0.182	1.99792
200.0	673.9	11.59	-15030.0	-15020.0	179.5	85.55	118.5	1401.0	487.0	0.152	1.93314
250.0	624.8	10.75	-8885.0	-8875.0	206.9	91.45	128.3	1154.0	257.0	0.127	1.85044
272.290[b]	601.4	10.35	-5959.0	-5949.0	218.1	95.55	134.4	1036.0	204.0	0.117	1.81180
272.290[b]	2.675	0.04602	14320.0	16490.0	300.5	85.23	95.38	200.0	6.89	0.0137	1.00285
275.0	2.647	0.04555	14550.0	16750.0	301.5	85.83	95.91	201.2	6.95	0.0139	1.00282
300.0	2.400	0.04130	16790.0	19210.0	310.0	91.62	101.2	211.2	7.55	0.0164	1.00256
320.0	2.237	0.03849	18680.0	21280.0	316.7	96.49	105.8	218.7	8.03	0.0186	1.00238
340.0	2.096	0.03606	20670.0	23440.0	323.3	101.5	110.5	225.8	8.51	0.0208	1.00223
360.0	1.973	0.03394	22760.0	25700.0	329.7	106.5	115.4	232.5	9.00	0.0232	1.00210
380.0	1.864	0.03207	24940.0	28060.0	336.1	111.5	120.3	239.0	9.48	0.0258	1.00199
400.0	1.767	0.03040	27230.0	30520.0	342.4	116.5	125.2	245.3	9.96	0.0284	1.00188
420.0	1.680	0.02891	29610.0	33070.0	348.6	121.4	130.1	251.4	10.4	0.0312	1.00179
440.0	1.602	0.02755	32090.0	35720.0	354.8	126.3	134.9	257.2	10.9	0.0340	1.00171
460.0	1.530	0.02633	34670.0	38470.0	360.9	131.0	139.6	263.0	11.4	0.0369	1.00163
480.0	1.465	0.02521	37340.0	41300.0	366.9	135.6	144.2	268.6	11.9	0.0399	1.00156
500.0	1.405	0.02418	40100.0	44230.0	372.9	140.2	148.7	274.0	12.3	0.0430	1.00150
520.0	1.350	0.02323	42950.0	47250.0	378.8	144.6	153.1	279.4	12.8	0.0461	1.00144
540.0	1.300	0.02236	45880.0	50360.0	384.7	148.9	157.3	284.6	13.2	0.0493	1.00139
560.0	1.253	0.02155	48900.0	53540.0	390.5	153.0	161.5	289.8	13.7	0.0525	1.00134
580.0	1.209	0.02080	52010.0	56810.0	396.2	157.1	165.5	294.8	14.2	0.0558	1.00129
600.0	1.168	0.02010	55190.0	60160.0	401.9	161.0	169.4	299.8	14.6	0.0591	1.00125
					0.101325 MPa isobar						
134.90[a]	735.3	12.65	-22600.0	-22600.0	133.8	82.03	109.0	1665.0	2280.0	0.208	2.03888
160.0	711.7	12.24	-19720.0	-19710.0	153.4	87.36	116.9	1561.0	1060.0	0.182	1.99792
200.0	673.9	11.59	-15030.0	-15020.0	179.5	85.55	118.5	1401.0	487.0	0.152	1.93315
250.0	624.8	10.75	-8885.0	-8875.0	206.9	91.45	128.3	1154.0	257.0	0.127	1.85045
272.635[b]	601.1	10.34	-5912.0	-5903.0	218.3	95.62	134.5	1034.0	203.0	0.117	1.81119
272.635[b]	2.708	0.04659	14350.0	16520.0	300.5	85.32	95.49	200.1	6.90	0.0137	1.00288
275.0	2.684	0.04618	14550.0	16750.0	301.4	85.85	95.96	201.1	6.95	0.0139	1.00286
300.0	2.433	0.04186	16790.0	19210.0	309.9	91.64	101.2	211.2	7.55	0.0164	1.00259
320.0	2.267	0.03901	18680.0	21280.0	316.6	96.50	105.8	218.7	8.03	0.0186	1.00241
340.0	2.124	0.03655	20670.0	23440.0	323.2	101.5	110.6	225.7	8.51	0.0208	1.00226
360.0	1.999	0.03440	22760.0	25700.0	329.6	106.5	115.4	232.5	9.00	0.0232	1.00213
380.0	1.889	0.03250	24940.0	28060.0	336.0	111.5	120.4	239.0	9.48	0.0258	1.00201
400.0	1.791	0.03081	27230.0	30520.0	342.3	116.5	125.3	245.3	9.96	0.0284	1.00191
420.0	1.703	0.02929	29610.0	33070.0	348.5	121.4	130.1	251.3	10.4	0.0312	1.00181
440.0	1.623	0.02792	32090.0	35720.0	354.7	126.3	134.9	257.2	10.9	0.0340	1.00173
460.0	1.551	0.02668	34670.0	38470.0	360.8	131.0	139.6	263.0	11.4	0.0369	1.00165
480.0	1.485	0.02554	37340.0	41300.0	366.8	135.6	144.2	268.6	11.9	0.0399	1.00158
500.0	1.424	0.02450	40100.0	44230.0	372.8	140.2	148.7	274.0	12.3	0.0430	1.00152
520.0	1.368	0.02354	42950.0	47250.0	378.7	144.6	153.1	279.4	12.8	0.0461	1.00146
540.0	1.317	0.02266	45880.0	50350.0	384.6	148.9	157.3	284.6	13.2	0.0493	1.00140
560.0	1.269	0.02184	48900.0	53540.0	390.4	153.0	161.5	289.8	13.7	0.0525	1.00135
580.0	1.225	0.02108	52010.0	56810.0	396.1	157.1	165.5	294.8	14.2	0.0558	1.00131
600.0	1.184	0.02037	55190.0	60160.0	401.8	161.0	169.4	299.7	14.6	0.0591	1.00126
					0.20 MPa isobar						
134.90[a]	735.3	12.65	-22600.0	-22590.0	133.8	82.04	109.0	1665.0	2280.0	0.208	2.03893
160.0	711.7	12.24	-19720.0	-19700.0	153.4	87.36	116.9	1562.0	1060.0	0.182	1.99801
200.0	674.0	11.60	-15030.0	-15010.0	179.5	85.55	118.5	1401.0	488.0	0.152	1.93326
250.0	624.9	10.75	-8888.0	-8870.0	206.9	91.45	128.3	1155.0	258.0	0.127	1.85061
260.0	614.6	10.57	-7593.0	-7574.0	212.0	93.22	130.9	1102.0	232.0	0.122	1.83349
291.932[b]	579.8	9.975	-3268.0	-3248.0	227.7	99.57	140.3	929.9	169.0	0.109	1.77641
291.932[b]	5.123	0.08814	15850.0	18120.0	300.9	90.81	102.3	201.9	7.43	0.0157	1.00546
295.0	5.064	0.08713	16140.0	18430.0	301.9	91.48	102.8	203.3	7.50	0.0160	1.00540
320.0	4.589	0.07895	18530.0	21060.0	310.5	97.21	107.6	214.1	8.10	0.0187	1.00489

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
340.0	4.278	0.07360	20540.0	23260.0	317.1	102.0	112.0	222.0	8.58	0.0210	1.00456
360.0	4.011	0.06901	22640.0	25540.0	323.7	106.9	116.6	229.3	9.05	0.0234	1.00427
380.0	3.779	0.06502	24840.0	27920.0	330.1	111.8	121.3	236.3	9.53	0.0259	1.00403
400.0	3.574	0.06150	27140.0	30390.0	336.4	116.8	126.0	242.9	10.0	0.0285	1.00381
420.0	3.392	0.05837	29530.0	32960.0	342.7	121.6	130.7	249.3	10.5	0.0313	1.00362
440.0	3.229	0.05556	32020.0	35620.0	348.9	126.4	135.4	255.5	11.0	0.0341	1.00344
460.0	3.082	0.05302	34600.0	38380.0	355.0	131.2	140.0	261.4	11.4	0.0370	1.00329
480.0	2.948	0.05071	37280.0	41220.0	361.1	135.8	144.6	267.2	11.9	0.0400	1.00314
500.0	2.825	0.04861	40040.0	44160.0	367.0	140.3	149.0	272.8	12.4	0.0431	1.00301
520.0	2.713	0.04668	42900.0	47180.0	373.0	144.7	153.4	278.3	12.8	0.0462	1.00289
540.0	2.610	0.04490	45840.0	50290.0	378.8	148.9	157.6	283.7	13.3	0.0494	1.00278
560.0	2.514	0.04325	48860.0	53490.0	384.6	153.1	161.7	288.9	13.7	0.0526	1.00268
580.0	2.425	0.04172	51970.0	56760.0	390.4	157.1	165.7	294.0	14.2	0.0559	1.00259
600.0	2.343	0.04030	55150.0	60110.0	396.1	161.0	169.6	299.1	14.6	0.0592	1.00250
					0.30 MPa isobar						
134.90[a]	735.4	12.65	-22600.0	-22580.0	133.8	82.06	109.0	1666.0	2280.0	0.208	2.03898
160.0	711.8	12.25	-19720.0	-19700.0	153.4	87.36	116.9	1562.0	1060.0	0.182	1.99810
200.0	674.1	11.60	-15030.0	-15010.0	179.5	85.56	118.5	1402.0	488.0	0.152	1.93337
250.0	625.0	10.75	-8892.0	-8864.0	206.9	91.46	128.3	1156.0	258.0	0.127	1.85078
260.0	614.7	10.58	-7597.0	-7569.0	212.0	93.23	130.9	1103.0	232.0	0.122	1.83368
280.0	593.3	10.21	-4925.0	-4895.0	221.9	97.10	136.6	996.1	190.0	0.114	1.79848
304.977[b]	564.6	9.714	-1417.0	-1386.0	233.9	102.4	144.7	858.8	149.0	0.104	1.75190
304.977[b]	7.527	0.1295	16890.0	19200.0	301.4	94.69	107.4	202.0	7.82	0.0172	1.00803
305.0	7.540	0.1297	16890.0	19200.0	301.4	94.70	107.4	202.0	7.82	0.0172	1.00804
320.0	7.075	0.1217	18370.0	20830.0	306.6	97.99	109.8	209.2	8.17	0.0188	1.00755
340.0	6.556	0.1128	20400.0	23060.0	313.3	102.6	113.6	217.9	8.64	0.0211	1.00699
360.0	6.121	0.1053	22530.0	25380.0	320.0	107.4	117.8	226.0	9.11	0.0235	1.00653
380.0	5.749	0.09891	24740.0	27780.0	326.4	112.2	122.2	233.4	9.59	0.0260	1.00613
400.0	5.425	0.09333	27050.0	30270.0	332.8	117.0	126.8	240.5	10.1	0.0287	1.00579
420.0	5.139	0.08841	29450.0	32850.0	339.1	121.9	131.4	247.2	10.5	0.0314	1.00548
440.0	4.884	0.08403	31950.0	35520.0	345.3	126.6	135.9	253.6	11.0	0.0342	1.00521
460.0	4.655	0.08010	34540.0	38290.0	351.5	131.3	140.5	259.8	11.5	0.0372	1.00497
480.0	4.449	0.07654	37220.0	41140.0	357.6	135.9	145.0	265.8	11.9	0.0402	1.00475
500.0	4.260	0.07330	39990.0	44080.0	363.6	140.4	149.3	271.6	12.4	0.0432	1.00454
520.0	4.088	0.07033	42850.0	47110.0	369.5	144.7	153.6	277.2	12.9	0.0463	1.00436
540.0	3.930	0.06761	45790.0	50230.0	375.4	149.0	157.8	282.7	13.3	0.0495	1.00419
560.0	3.784	0.06510	48820.0	53430.0	381.2	153.1	161.9	288.0	13.8	0.0527	1.00404
580.0	3.649	0.06278	51930.0	56710.0	387.0	157.2	165.9	293.3	14.2	0.0560	1.00389
600.0	3.523	0.06062	55110.0	60060.0	392.6	161.1	169.8	298.4	14.7	0.0593	1.00376
					0.40 MPa isobar						
134.90[a]	735.4	12.65	-22600.0	-22570.0	133.8	82.07	109.0	1666.0	2280.0	0.208	2.03903
160.0	711.8	12.25	-19720.0	-19690.0	153.3	87.36	116.9	1563.0	1060.0	0.182	1.99819
200.0	674.1	11.60	-15040.0	-15000.0	179.5	85.56	118.5	1402.0	489.0	0.152	1.93349
250.0	625.1	10.76	-8896.0	-8859.0	206.9	91.46	128.3	1156.0	258.0	0.127	1.85095
260.0	614.8	10.58	-7601.0	-7563.0	211.9	93.23	130.9	1104.0	232.0	0.122	1.83387
280.0	593.5	10.21	-4930.0	-4891.0	221.8	97.10	136.5	997.1	190.0	0.114	1.79871
300.0	570.7	9.819	-2138.0	-2098.0	231.5	101.3	142.9	887.6	157.0	0.106	1.76175
315.047[b]	552.4	9.504	50.5	92.6	238.6	104.7	148.4	803.5	136.0	0.100	1.73228
315.047[b]	9.925	0.1708	17690.0	20030.0	301.9	97.79	111.7	201.3	8.13	0.0184	1.01060
320.0	9.720	0.1672	18190.0	20580.0	303.6	98.83	112.4	203.9	8.24	0.0190	1.01038
330.0	9.311	0.1602	19220.0	21710.0	307.1	101.0	113.8	208.9	8.48	0.0201	1.00994
340.0	8.945	0.1539	20260.0	22860.0	310.5	103.2	115.4	213.7	8.71	0.0212	1.00955
360.0	8.312	0.1430	22410.0	25200.0	317.2	107.8	119.2	222.4	9.18	0.0237	1.00887
380.0	7.779	0.1338	24640.0	27630.0	323.8	112.6	123.3	230.5	9.65	0.0262	1.00830
400.0	7.321	0.1260	26960.0	30140.0	330.2	117.3	127.6	238.0	10.1	0.0288	1.00781
420.0	6.921	0.1191	29370.0	32730.0	336.5	122.1	132.0	245.1	10.6	0.0315	1.00739
440.0	6.568	0.1130	31880.0	35420.0	342.8	126.8	136.5	251.8	11.1	0.0344	1.00701
460.0	6.252	0.1076	34470.0	38190.0	348.9	131.5	141.0	258.2	11.5	0.0373	1.00667

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
480.0	5.968	0.1027	37160.0	41060.0	355.0	136.0	145.4	264.4	12.0	0.0403	1.00637
500.0	5.711	0.09825	39940.0	44010.0	361.1	140.5	149.7	270.3	12.4	0.0433	1.00610
520.0	5.476	0.09421	42800.0	47040.0	367.0	144.8	153.9	276.1	12.9	0.0464	1.00584
540.0	5.261	0.09051	45740.0	50160.0	372.9	149.1	158.1	281.7	13.4	0.0496	1.00562
560.0	5.063	0.08710	48770.0	53370.0	378.7	153.2	162.2	287.2	13.8	0.0528	1.00540
580.0	4.880	0.08395	51890.0	56650.0	384.5	157.2	166.1	292.5	14.3	0.0561	1.00521
600.0	4.710	0.08104	55080.0	60010.0	390.2	161.1	170.0	297.7	14.7	0.0594	1.00503
					0.50 MPa isobar						
134.90[a]	735.4	12.65	-22600.0	-22560.0	133.8	82.09	109.0	1666.0	2290.0	0.208	2.03908
160.0	711.9	12.25	-19720.0	-19680.0	153.3	87.37	116.8	1563.0	1060.0	0.182	1.99828
200.0	674.2	11.60	-15040.0	-15000.0	179.5	85.56	118.5	1403.0	489.0	0.152	1.93360
250.0	625.2	10.76	-8900.0	-8853.0	206.8	91.47	128.2	1157.0	258.0	0.127	1.85112
260.0	614.9	10.58	-7605.0	-7558.0	211.9	93.24	130.8	1105.0	232.0	0.123	1.83405
280.0	593.6	10.21	-4935.0	-4886.0	221.8	97.11	136.5	998.1	190.0	0.114	1.79894
300.0	570.9	9.822	-2145.0	-2094.0	231.5	101.3	142.9	888.9	157.0	0.106	1.76204
323.374[b]	541.9	9.323	1290.0	1344.0	242.5	106.6	151.6	757.5	126.0	0.0974	1.71551
323.374[b]	12.33	0.2122	18360.0	20710.0	302.4	100.4	115.6	200.1	8.40	0.0195	1.01318
325.0	12.26	0.2109	18520.0	20900.0	302.9	100.7	115.8	201.0	8.44	0.0197	1.01310
330.0	11.97	0.2060	19050.0	21480.0	304.7	101.8	116.3	203.8	8.55	0.0202	1.01280
340.0	11.46	0.1972	20110.0	22640.0	308.2	103.9	117.5	209.1	8.78	0.0214	1.01225
360.0	10.59	0.1822	22280.0	25020.0	315.0	108.3	120.7	218.8	9.24	0.0238	1.01132
380.0	9.874	0.1699	24530.0	27470.0	321.6	112.9	124.4	227.5	9.71	0.0263	1.01055
400.0	9.266	0.1594	26870.0	30000.0	328.1	117.6	128.5	235.4	10.2	0.0290	1.00990
420.0	8.741	0.1504	29290.0	32620.0	334.5	122.3	132.8	242.9	10.6	0.0317	1.00934
440.0	8.281	0.1425	31810.0	35310.0	340.8	127.0	137.1	249.9	11.1	0.0345	1.00885
460.0	7.873	0.1354	34410.0	38100.0	346.9	131.6	141.4	256.6	11.6	0.0374	1.00841
480.0	7.507	0.1292	37100.0	40970.0	353.1	136.1	145.8	262.9	12.0	0.0404	1.00802
500.0	7.177	0.1235	39880.0	43930.0	359.1	140.6	150.0	269.1	12.5	0.0434	1.00766
520.0	6.877	0.1183	42750.0	46970.0	365.1	144.9	154.2	275.0	12.9	0.0466	1.00734
540.0	6.602	0.1136	45700.0	50100.0	371.0	149.2	158.4	280.7	13.4	0.0497	1.00705
560.0	6.351	0.1093	48730.0	53310.0	376.8	153.3	162.4	286.3	13.8	0.0529	1.00678
580.0	6.118	0.1053	51850.0	56600.0	382.6	157.3	166.3	291.7	14.3	0.0562	1.00653
600.0	5.903	0.1016	55040.0	59960.0	388.3	161.2	170.2	297.0	14.7	0.0595	1.00630
					0.60 MPa isobar						
135.00[a]	735.5	12.65	-22600.0	-22550.0	133.8	82.10	109.0	1667.0	2290.0	0.208	2.03913
160.0	711.9	12.25	-19730.0	-19680.0	153.3	87.37	116.8	1564.0	1060.0	0.182	1.99837
200.0	674.3	11.60	-15040.0	-14990.0	179.5	85.57	118.5	1403.0	490.0	0.152	1.93372
250.0	625.3	10.76	-8904.0	-8848.0	206.8	91.47	128.2	1158.0	259.0	0.127	1.85129
300.0	571.1	9.825	-2151.0	-2090.0	231.4	101.3	142.8	890.1	157.0	0.106	1.76232
320.0	546.5	9.402	774.1	837.9	240.9	105.8	150.2	778.2	130.0	0.0987	1.72288
330.541[b]	532.5	9.161	2378.0	2443.0	245.8	108.3	154.6	717.7	118.0	0.0947	1.70063
330.541[b]	14.76	0.2540	18930.0	21290.0	302.8	102.7	119.2	198.7	8.65	0.0205	1.01580
335.0	14.46	0.2488	19410.0	21820.0	304.4	103.6	119.5	201.4	8.75	0.0210	1.01547
340.0	14.12	0.2430	19950.0	22420.0	306.2	104.6	119.9	204.3	8.86	0.0216	1.01511
350.0	13.51	0.2325	21040.0	23620.0	309.7	106.7	121.0	209.8	9.08	0.0227	1.01445
360.0	12.97	0.2231	22150.0	24840.0	313.1	108.9	122.3	214.9	9.31	0.0240	1.01387
380.0	12.04	0.2071	24420.0	27320.0	319.8	113.3	125.7	224.3	9.77	0.0265	1.01287
400.0	11.26	0.1938	26770.0	29870.0	326.3	117.9	129.5	232.8	10.2	0.0291	1.01204
420.0	10.60	0.1824	29210.0	32500.0	332.8	122.6	133.5	240.6	10.7	0.0318	1.01133
440.0	10.03	0.1725	31730.0	35210.0	339.1	127.2	137.7	248.0	11.2	0.0346	1.01072
450.0	9.764	0.1680	33030.0	36600.0	342.2	129.5	139.8	251.5	11.4	0.0361	1.01044
460.0	9.518	0.1638	34340.0	38010.0	345.3	131.8	142.0	254.9	11.6	0.0375	1.01017
480.0	9.066	0.1560	37040.0	40890.0	351.4	136.3	146.2	261.5	12.1	0.0405	1.00969
500.0	8.659	0.1490	39830.0	43850.0	357.5	140.7	150.4	267.8	12.5	0.0436	1.00925
520.0	8.291	0.1426	42700.0	46900.0	363.5	145.0	154.6	273.9	13.0	0.0467	1.00886

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	7.955	0.1369	45650.0	50040.0	369.4	149.2	158.6	279.8	13.4	0.0498	1.00850
560.0	7.648	0.1316	48690.0	53250.0	375.2	153.3	162.6	285.4	13.9	0.0531	1.00817
580.0	7.365	0.1267	51800.0	56540.0	381.0	157.3	166.5	291.0	14.3	0.0563	1.00787
600.0	7.103	0.1222	55000.0	59910.0	386.7	161.2	170.3	296.3	14.8	0.0596	1.00759
					0.80 MPa isobar						
135.00[a]	735.5	12.65	-22600.0	-22540.0	133.8	82.13	109.1	1667.0	2290.0	0.208	2.03923
160.0	712.1	12.25	-19730.0	-19660.0	153.3	87.37	116.8	1564.0	1070.0	0.182	1.99854
200.0	674.4	11.60	-15050.0	14980.0	179.4	85.58	118.5	1404.0	491.0	0.152	1.93395
250.0	625.5	10.76	-8911.0	-8837.0	206.8	91.48	128.2	1159.0	259.0	0.127	1.85163
300.0	571.5	9.832	-2163.0	-2082.0	231.4	101.3	142.7	892.5	158.0	0.107	1.76288
320.0	547.0	9.410	758.1	843.2	240.8	105.8	150.0	781.2	131.0	0.0989	1.72361
340.0	519.6	8.940	3839.0	3929.0	250.2	110.6	158.9	665.8	108.0	0.0913	1.68044
342.565[b]	515.9	8.875	4247.0	4338.0	251.4	111.2	160.2	650.6	105.0	0.0903	1.67452
342.565[b]	19.72	0.3392	19880.0	22240.0	303.6	106.6	126.0	195.3	9.08	0.0222	1.02114
345.0	19.48	0.3351	20160.0	22550.0	304.5	107.1	126.0	197.0	9.13	0.0225	1.02088
350.0	18.98	0.3265	20730.0	23180.0	306.3	108.0	125.9	200.3	9.24	0.0231	1.02034
360.0	18.08	0.3111	21870.0	24440.0	309.9	110.0	126.4	206.6	9.46	0.0243	1.01938
370.0	17.30	0.2977	23020.0	25710.0	313.4	112.1	127.3	212.3	9.68	0.0255	1.01854
380.0	16.61	0.2858	24190.0	26980.0	316.8	114.2	128.5	217.6	9.90	0.0268	1.01780
400.0	15.43	0.2655	26570.0	29580.0	323.4	118.6	131.6	227.3	10.4	0.0294	1.01653
420.0	14.45	0.2487	29030.0	32250.0	329.9	123.1	135.2	236.0	10.8	0.0321	1.01547
440.0	13.61	0.2342	31580.0	34990.0	336.3	127.6	139.0	244.0	11.3	0.0349	1.01457
450.0	13.24	0.2278	32880.0	36390.0	339.5	129.9	141.0	247.8	11.5	0.0364	1.01417
460.0	12.89	0.2217	34210.0	37810.0	342.6	132.1	143.0	251.5	11.7	0.0378	1.01379
470.0	12.56	0.2160	35550.0	39250.0	345.7	134.3	145.1	255.1	11.9	0.0393	1.01344
480.0	12.25	0.2107	36920.0	40710.0	348.8	136.5	147.1	258.5	12.2	0.0408	1.01310
500.0	11.67	0.2008	39710.0	43700.0	354.9	140.9	151.2	265.2	12.6	0.0438	1.01249
520.0	11.16	0.1920	42590.0	46760.0	360.9	145.2	155.2	271.6	13.1	0.0469	1.01194
540.0	10.69	0.1840	45560.0	49900.0	366.8	149.4	159.2	277.8	13.5	0.0501	1.01144
560.0	10.27	0.1767	48600.0	53130.0	372.7	153.5	163.1	283.7	14.0	0.0533	1.01098
580.0	9.880	0.1700	51720.0	56430.0	378.4	157.5	167.0	289.4	14.4	0.0565	1.01057
600.0	9.522	0.1638	54920.0	59810.0	384.2	161.3	170.7	295.0	14.8	0.0598	1.01018
					1.00 MPa isobar						
135.00[a]	735.6	12.66	-22600.0	-22520.0	133.8	82.17	109.1	1668.0	2290.0	0.208	2.03933
160.0	712.2	12.25	-19730.0	-19650.0	153.3	87.37	116.8	1565.0	1070.0	0.182	1.99872
200.0	674.6	11.61	-15050.0	-14960.0	179.4	85.58	118.4	1405.0	492.0	0.153	1.93417
250.0	625.8	10.77	-8919.0	-8826.0	206.8	91.49	128.1	1161.0	260.0	0.127	1.85197
300.0	571.8	9.838	-2176.0	-2074.0	231.4	101.3	142.6	894.9	158.0	0.107	1.76345
320.0	547.4	9.418	742.3	848.5	240.8	105.8	149.8	784.2	131.0	0.0991	1.72434
340.0	520.3	8.951	3818.0	3930.0	250.1	110.6	158.6	669.6	108.0	0.0915	1.68144
352.543[b]	501.1	8.621	5845.0	5961.0	256.0	113.7	165.6	594.4	95.3	0.0867	1.65157
352.543[b]	24.83	0.4272	20670.0	23010.0	304.3	110.0	132.6	191.4	9.48	0.0238	1.02669
355.0	24.48	0.4212	20960.0	23330.0	305.3	110.4	132.3	193.4	9.53	0.0241	1.02631
360.0	23.80	0.4095	21550.0	23990.0	307.1	111.3	131.8	197.1	9.63	0.0247	1.02557
370.0	22.61	0.3889	22740.0	25310.0	310.7	113.1	131.6	204.1	9.84	0.0259	1.02427
380.0	21.57	0.3712	23930.0	26630.0	314.2	115.1	132.0	210.3	10.0	0.0271	1.02316
390.0	20.67	0.3557	25140.0	27950.0	317.7	117.2	132.9	216.1	10.3	0.0284	1.02218
400.0	19.87	0.3419	26360.0	29290.0	321.0	119.3	134.1	221.4	10.5	0.0297	1.02132
420.0	18.50	0.3182	28850.0	32000.0	327.6	123.6	137.0	231.2	10.9	0.0324	1.01983
440.0	17.35	0.2985	31420.0	34770.0	334.1	128.0	140.5	239.9	11.4	0.0352	1.01860
450.0	16.84	0.2897	32730.0	36180.0	337.3	130.2	142.3	244.1	11.6	0.0366	1.01805
460.0	16.37	0.2816	34060.0	37620.0	340.4	132.4	144.2	248.0	11.8	0.0381	1.01754
470.0	15.93	0.2740	35420.0	39070.0	343.5	134.6	146.1	251.8	12.0	0.0396	1.01707
480.0	15.51	0.2669	36790.0	40540.0	346.6	136.8	148.0	255.6	12.3	0.0410	1.01662
500.0	14.76	0.2539	39600.0	43540.0	352.8	141.1	151.9	262.6	12.7	0.0441	1.01581
520.0	14.09	0.2423	42490.0	46620.0	358.8	145.4	155.9	269.4	13.2	0.0472	1.01509

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	13.48	0.2319	45460.0	49770.0	364.8	149.5	159.8	275.8	13.6	0.0503	1.01443
560.0	12.93	0.2225	48510.0	53010.0	370.6	153.6	163.6	281.9	14.0	0.0535	1.01384
580.0	12.43	0.2138	51640.0	56320.0	376.4	157.6	167.4	287.9	14.5	0.0567	1.01331
600.0	11.97	0.2059	54840.0	59700.0	382.2	161.4	171.1	293.6	14.9	0.0600	1.01281
				1.20 MPa isobar							
135.10[a]	735.7	12.66	-22600.0	-22500.0	133.8	82.20	109.1	1669.0	2290.0	0.208	2.03942
160.0	712.3	12.25	-19740.0	-19640.0	153.3	87.38	116.8	1566.0	1070.0	0.182	1.99890
200.0	674.7	11.61	-15060.0	-14950.0	179.4	85.59	118.4	1406.0	492.0	0.153	1.93440
250.0	626.0	10.77	-8926.0	-8815.0	206.7	91.51	128.1	1162.0	260.0	0.127	1.85230
300.0	572.2	9.844	-2188.0	-2066.0	231.3	101.3	142.5	897.2	159.0	0.107	1.76400
320.0	547.9	9.426	726.6	853.9	240.7	105.8	149.7	787.1	132.0	0.0992	1.72507
340.0	520.9	8.962	3797.0	3931.0	250.1	110.6	158.4	673.4	109.0	0.0917	1.68243
350.0	505.9	8.704	5402.0	5540.0	254.7	113.1	163.7	614.3	98.4	0.0879	1.65906
361.148[b]	487.5	8.387	7261.0	7404.0	260.0	116.0	171.0	545.6	87.3	0.0837	1.63060
361.148[b]	30.15	0.5187	21330.0	23650.0	304.9	113.0	139.3	187.2	9.85	0.0253	1.03247
365.0	29.41	0.5060	21810.0	24180.0	306.4	113.6	138.2	190.6	9.92	0.0257	1.03167
370.0	28.54	0.4910	22420.0	24870.0	308.3	114.4	137.3	194.8	10.0	0.0263	1.03072
380.0	27.03	0.4650	23660.0	26240.0	311.9	116.1	136.5	202.3	10.2	0.0275	1.02907
390.0	25.74	0.4428	24890.0	27600.0	315.5	118.0	136.5	209.0	10.4	0.0288	1.02768
400.0	24.62	0.4236	26130.0	28970.0	318.9	120.0	137.0	215.2	10.6	0.0301	1.02647
420.0	22.76	0.3916	28660.0	31730.0	325.7	124.2	139.1	226.1	11.0	0.0327	1.02445
440.0	21.24	0.3655	31250.0	34540.0	332.2	128.5	142.1	235.7	11.5	0.0355	1.02281
450.0	20.58	0.3541	32580.0	35970.0	335.4	130.6	143.7	240.2	11.7	0.0369	1.02209
460.0	19.97	0.3436	33920.0	37410.0	338.6	132.8	145.4	244.5	11.9	0.0384	1.02143
470.0	19.40	0.3338	35280.0	38880.0	341.7	134.9	147.2	248.5	12.1	0.0398	1.02082
480.0	18.87	0.3247	36660.0	40360.0	344.9	137.1	149.0	252.5	12.4	0.0413	1.02025
490.0	18.38	0.3162	38060.0	41860.0	347.9	139.2	150.9	256.3	12.6	0.0428	1.01972
500.0	17.92	0.3083	39480.0	43370.0	351.0	141.4	152.8	260.0	12.8	0.0443	1.01922
520.0	17.07	0.2937	42380.0	46470.0	357.1	145.6	156.6	267.1	13.2	0.0474	1.01831
540.0	16.31	0.2807	45360.0	49640.0	363.1	149.7	160.4	273.8	13.7	0.0505	1.01749
560.0	15.63	0.2689	48420.0	52880.0	369.0	153.7	164.1	280.2	14.1	0.0537	1.01675
580.0	15.01	0.2582	51550.0	56200.0	374.8	157.7	167.8	286.3	14.5	0.0570	1.01608
600.0	14.44	0.2484	54770.0	59600.0	380.5	161.5	171.5	292.3	15.0	0.0602	1.01547
				1.40 MPa isobar							
135.10[a]	735.7	12.66	-22600.0	-22490.0	133.8	82.23	109.2	1669.0	2290.0	0.208	2.03952
160.0	712.4	12.26	-19740.0	-19620.0	153.2	87.38	116.8	1567.0	1070.0	0.182	1.99907
200.0	674.8	11.61	-15060.0	-14940.0	179.4	85.60	118.4	1408.0	493.0	0.153	1.93463
250.0	626.2	10.77	-8934.0	-8804.0	206.7	91.52	128.1	1164.0	261.0	0.127	1.85264
300.0	572.5	9.850	-2200.0	-2058.0	231.3	101.4	142.4	899.6	159.0	0.107	1.76456
320.0	548.3	9.434	711.0	859.4	240.7	105.8	149.5	790.0	132.0	0.0994	1.72578
340.0	521.5	8.973	3776.0	3932.0	250.0	110.6	158.1	677.1	109.0	0.0919	1.68341
360.0	490.5	8.438	7036.0	7202.0	259.3	115.6	169.6	557.9	89.0	0.0844	1.63514
368.758[b]	474.6	8.166	8546.0	8717.0	263.5	118.0	176.7	502.1	80.6	0.0811	1.61095
368.758[b]	35.70	0.6142	21900.0	24180.0	305.4	115.7	146.2	182.8	10.2	0.0266	1.03854
370.0	35.38	0.6086	22060.0	24360.0	305.9	115.8	145.6	184.1	10.2	0.0268	1.03818
380.0	33.12	0.5699	23350.0	25800.0	309.8	117.3	142.4	193.3	10.4	0.0280	1.03572
390.0	31.29	0.5384	24620.0	27220.0	313.4	119.0	141.0	201.3	10.6	0.0292	1.03373
400.0	29.76	0.5120	25890.0	28630.0	317.0	120.8	140.6	208.4	10.8	0.0305	1.03205
410.0	28.44	0.4892	27170.0	30030.0	320.5	122.8	140.8	214.8	11.0	0.0318	1.03062
420.0	27.28	0.4693	28460.0	31440.0	323.9	124.8	141.6	220.7	11.2	0.0331	1.02935
440.0	25.32	0.4356	31080.0	34300.0	330.5	128.9	143.8	231.3	11.6	0.0358	1.02723
450.0	24.47	0.4211	32420.0	35740.0	333.8	131.0	145.3	236.2	11.8	0.0372	1.02631
460.0	23.70	0.4078	33770.0	37200.0	337.0	133.1	146.8	240.8	12.0	0.0387	1.02548
470.0	22.99	0.3956	35140.0	38680.0	340.1	135.3	148.4	245.2	12.2	0.0401	1.02471
480.0	22.34	0.3843	36530.0	40170.0	343.3	137.4	150.1	249.4	12.5	0.0416	1.02400
490.0	21.73	0.3738	37940.0	41680.0	346.4	139.5	151.9	253.4	12.7	0.0431	1.02334
500.0	21.16	0.3640	39360.0	43210.0	349.5	141.6	153.7	257.3	12.9	0.0446	1.02272
510.0	20.62	0.3548	40810.0	44760.0	352.5	143.7	155.5	261.1	13.1	0.0461	1.02214
520.0	20.12	0.3461	42270.0	46320.0	355.6	145.8	157.3	264.8	13.3	0.0477	1.02160

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
540.0	19.20	0.3303	45260.0	49500.0	361.6	149.9	161.0	271.8	13.8	0.0508	1.02060
560.0	18.37	0.3160	48330.0	52760.0	367.5	153.9	164.7	278.4	14.2	0.0540	1.01971
580.0	17.62	0.3032	51470.0	56090.0	373.4	157.8	168.3	284.8	14.6	0.0572	1.01890
600.0	16.94	0.2914	54690.0	59490.0	379.1	161.6	171.9	290.9	15.1	0.0605	1.01817
					1.60 MPa isobar						
135.10[a]	735.8	12.66	-22600.0	-22470.0	133.8	82.26	109.2	1670.0	2300.0	0.208	2.03962
160.0	712.5	12.26	-19740.0	-19610.0	153.2	87.38	116.8	1568.0	1070.0	0.182	1.99925
200.0	675.0	11.61	-15060.0	-14930.0	179.3	85.61	118.4	1409.0	494.0	0.153	1.93485
250.0	626.4	10.78	-8941.0	-8792.0	206.7	91.53	128.0	1165.0	261.0	0.127	1.85297
300.0	572.8	9.856	-2213.0	-2050.0	231.2	101.4	142.3	902.0	160.0	0.107	1.76511
320.0	548.8	9.442	695.5	865.0	240.6	105.8	149.4	792.9	133.0	0.0995	1.72649
340.0	522.2	8.984	3756.0	3934.0	249.9	110.6	157.8	680.8	110.0	0.0921	1.68438
360.0	491.4	8.454	7007.0	7196.0	259.3	115.6	169.1	562.9	89.6	0.0846	1.63657
370.0	473.5	8.146	8728.0	8925.0	264.0	118.3	177.0	499.9	80.0	0.0809	1.60916
375.605[b]	462.2	7.953	9731.0	9932.0	266.7	119.9	182.7	462.4	74.7	0.0787	1.59217
375.605[b]	41.53	0.7145	22400.0	24640.0	305.9	118.2	153.8	178.1	10.5	0.0280	1.04494
380.0	40.13	0.6904	22990.0	25310.0	307.6	118.7	150.9	183.0	10.6	0.0285	1.04340
390.0	37.49	0.6450	24320.0	26800.0	311.5	120.1	146.9	192.8	10.8	0.0296	1.04051
400.0	35.37	0.6086	25630.0	28260.0	315.2	121.7	145.0	201.1	10.9	0.0309	1.03819
410.0	33.60	0.5781	26940.0	29700.0	318.8	123.5	144.4	208.5	11.1	0.0322	1.03626
420.0	32.09	0.5521	28250.0	31150.0	322.2	125.4	144.4	215.1	11.3	0.0335	1.03460
430.0	30.76	0.5293	29570.0	32590.0	325.6	127.4	145.0	221.2	11.5	0.0348	1.03316
440.0	29.59	0.5091	30900.0	34050.0	329.0	129.4	145.8	226.8	11.7	0.0362	1.03188
450.0	28.54	0.4909	32250.0	35510.0	332.3	131.5	147.0	232.1	11.9	0.0376	1.03073
460.0	27.58	0.4745	33610.0	36990.0	335.5	133.5	148.3	237.0	12.1	0.0390	1.02969
470.0	26.71	0.4595	34990.0	38480.0	338.7	135.6	149.8	241.7	12.4	0.0404	1.02874
480.0	25.91	0.4457	36390.0	39980.0	341.9	137.7	151.3	246.2	12.6	0.0419	1.02787
490.0	25.16	0.4329	37810.0	41500.0	345.0	139.8	152.9	250.5	12.8	0.0434	1.02707
500.0	24.47	0.4211	39240.0	43040.0	348.1	141.8	154.6	254.6	13.0	0.0449	1.02632
510.0	23.83	0.4100	40690.0	44600.0	351.2	143.9	156.3	258.6	13.2	0.0464	1.02562
520.0	23.23	0.3997	42160.0	46170.0	354.3	146.0	158.1	262.4	13.4	0.0479	1.02497
540.0	22.13	0.3808	45160.0	49360.0	360.3	150.0	161.6	269.8	13.8	0.0510	1.02378
560.0	21.15	0.3639	48240.0	52630.0	366.2	154.0	165.2	276.7	14.3	0.0542	1.02272
580.0	20.27	0.3487	51380.0	55970.0	372.1	157.9	168.8	283.3	14.7	0.0574	1.02177
600.0	19.47	0.3349	54610.0	59380.0	377.9	161.7	172.3	289.6	15.1	0.0607	1.02090
					1.80 MPa isobar						
135.20[a]	735.8	12.66	-22600.0	-22450.0	133.8	82.29	109.2	1671.0	2300.0	0.208	2.03972
160.0	712.6	12.26	-19750.0	-19600.0	153.2	87.38	116.8	1569.0	1080.0	0.182	1.99943
200.0	675.1	11.61	-15070.0	-14910.0	179.3	85.61	118.4	1410.0	495.0	0.153	1.93508
250.0	626.6	10.78	-8948.0	-8781.0	206.7	91.54	128.0	1167.0	262.0	0.127	1.85330
300.0	573.2	9.861	-2225.0	-2042.0	231.2	101.4	142.2	904.3	160.0	0.107	1.76566
320.0	549.2	9.449	680.2	870.7	240.6	105.8	149.2	795.8	133.0	0.0997	1.72720
340.0	522.8	8.994	3736.0	3936.0	249.9	110.6	157.6	684.4	110.0	0.0923	1.68533
360.0	492.3	8.470	6978.0	7191.0	259.2	115.6	168.6	567.7	90.1	0.0849	1.63797
370.0	474.6	8.166	8692.0	8913.0	263.9	118.3	176.2	505.7	80.7	0.0812	1.61095
380.0	454.3	7.816	10490.0	10720.0	268.7	121.2	186.8	439.0	71.2	0.0773	1.58023
381.846[b]	450.1	7.744	10840.0	11070.0	269.6	121.7	189.4	425.8	69.5	0.0766	1.57395
381.846[b]	47.69	0.8205	22840.0	25030.0	306.2	120.5	162.3	173.3	10.9	0.0293	1.05174
385.0	46.38	0.7980	23280.0	25540.0	307.5	120.8	159.1	177.3	10.9	0.0296	1.05029
390.0	44.57	0.7667	23980.0	26320.0	309.5	121.4	155.3	183.1	11.0	0.0302	1.04829
400.0	41.60	0.7157	25340.0	27850.0	313.4	122.7	150.9	193.1	11.1	0.0314	1.04502
410.0	39.23	0.6749	26680.0	29350.0	317.1	124.4	148.7	201.6	11.3	0.0326	1.04242
420.0	37.25	0.6409	28020.0	30830.0	320.7	126.1	147.8	209.1	11.5	0.0339	1.04025
430.0	35.56	0.6118	29360.0	32310.0	324.2	128.0	147.7	215.9	11.7	0.0352	1.03840
440.0	34.09	0.5865	30720.0	33780.0	327.6	129.9	148.1	222.1	11.9	0.0365	1.03679
450.0	32.79	0.5641	32080.0	35270.0	330.9	131.9	148.9	227.8	12.1	0.0379	1.03537
460.0	31.62	0.5439	33450.0	36760.0	334.2	133.9	149.9	233.2	12.3	0.0393	1.03409
470.0	30.56	0.5257	34850.0	38270.0	337.4	135.9	151.2	238.2	12.5	0.0407	1.03294
480.0	29.59	0.5091	36250.0	39790.0	340.6	138.0	152.6	243.0	12.7	0.0422	1.03188

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
490.0	28.70	0.4938	37680.0	41320.0	343.8	140.0	154.0	247.5	12.9	0.0437	1.03092
500.0	27.88	0.4797	39120.0	42870.0	346.9	142.1	155.6	251.9	13.1	0.0452	1.03003
510.0	27.12	0.4666	40580.0	44430.0	350.0	144.1	157.2	256.1	13.3	0.0467	1.02920
520.0	26.41	0.4544	42050.0	46010.0	353.1	146.2	158.9	260.1	13.5	0.0482	1.02843
530.0	25.74	0.4429	43550.0	47610.0	356.1	148.2	160.6	264.0	13.7	0.0497	1.02770
540.0	25.12	0.4322	45060.0	49230.0	359.1	150.2	162.3	267.7	13.9	0.0513	1.02703
560.0	23.97	0.4125	48140.0	52510.0	365.1	154.1	165.8	274.9	14.4	0.0544	1.02578
580.0	22.95	0.3948	51300.0	55860.0	371.0	158.0	169.3	281.7	14.8	0.0576	1.02467
600.0	22.02	0.3789	54530.0	59280.0	376.8	161.8	172.7	288.2	15.2	0.0609	1.02367
				2.00 MPa isobar							
135.20[a]	735.9	12.66	-22600.0	-22440.0	133.8	82.32	109.2	1671.0	2300.0	0.208	2.03982
160.0	712.7	12.26	-19750.0	-19590.0	153.2	87.39	116.8	1570.0	1080.0	0.182	1.99960
200.0	675.2	11.62	-15070.0	-14900.0	179.3	85.62	118.4	1411.0	496.0	0.153	1.93531
250.0	626.8	10.78	-8956.0	-8770.0	206.6	91.55	128.0	1168.0	262.0	0.127	1.85364
300.0	573.5	9.867	-2237.0	-2034.0	231.1	101.4	142.1	906.6	160.0	0.107	1.76620
320.0	549.7	9.457	665.0	876.5	240.5	105.8	149.1	798.7	133.0	0.0999	1.72790
340.0	523.4	9.005	3716.0	3938.0	249.8	110.5	157.3	688.0	111.0	0.0925	1.68627
360.0	493.2	8.485	6950.0	7186.0	259.1	115.6	168.1	572.5	90.7	0.0851	1.63934
370.0	475.8	8.186	8657.0	8902.0	263.8	118.2	175.4	511.4	81.3	0.0815	1.61270
380.0	455.9	7.843	10450.0	10700.0	268.6	121.1	185.5	446.0	72.0	0.0777	1.58258
385.0	444.5	7.648	11390.0	11650.0	271.1	122.6	192.5	410.9	67.2	0.0757	1.56558
387.590[b]	438.1	7.537	11890.0	12150.0	272.4	123.4	197.1	391.6	64.7	0.0747	1.55602
387.590[b]	54.25	0.9333	23220.0	25360.0	306.5	122.7	172.1	168.3	11.3	0.0306	1.05901
390.0	52.96	0.9111	23570.0	25770.0	307.5	122.8	168.4	171.8	11.3	0.0309	1.05758
395.0	50.62	0.8710	24300.0	26600.0	309.6	123.3	162.7	178.3	11.3	0.0314	1.05499
400.0	48.65	0.8370	25010.0	27400.0	311.6	123.9	158.8	184.1	11.4	0.0319	1.05280
420.0	42.84	0.7370	27780.0	30490.0	319.2	126.9	151.9	202.8	11.7	0.0343	1.0
430.0	40.69	0.7000	29150.0	32000.0	322.7	128.6	150.9	210.3	11.8	0.0356	1.044
435.0	39.73	0.6836	29830.0	32760.0	324.5	129.5	150.7	213.8	11.9	0.0363	1.04298
440.0	38.85	0.6684	30520.0	33510.0	326.2	130.5	150.7	217.2	12.0	0.0369	1.04201
450.0	37.24	0.6408	31900.0	35020.0	329.6	132.4	151.0	223.4	12.2	0.0383	1.04025
460.0	35.82	0.6163	33290.0	36530.0	332.9	134.3	151.8	229.2	12.4	0.0397	1.03870
470.0	34.55	0.5944	34690.0	38060.0	336.2	136.3	152.7	234.6	12.6	0.0411	1.03730
480.0	33.40	0.5746	36110.0	39590.0	339.4	138.3	153.9	239.7	12.8	0.0425	1.03604
490.0	32.35	0.5565	37540.0	41130.0	342.6	140.3	155.2	244.5	13.0	0.0440	1.03490
500.0	31.38	0.5399	38990.0	42690.0	345.8	142.3	156.7	249.1	13.2	0.0454	1.03384
510.0	30.49	0.5245	40450.0	44270.0	348.9	144.4	158.2	253.5	13.4	0.0469	1.03287
520.0	29.66	0.5103	41940.0	45860.0	352.0	146.4	159.7	257.7	13.6	0.0485	1.03197
530.0	28.89	0.4970	43440.0	47460.0	355.0	148.4	161.4	261.8	13.8	0.0500	1.03112
540.0	28.16	0.4845	44960.0	49080.0	358.1	150.4	163.0	265.7	14.0	0.0515	1.03034
560.0	26.84	0.4618	48050.0	52380.0	364.0	154.3	166.4	273.2	14.4	0.0547	1.02890
580.0	25.67	0.4416	51210.0	55740.0	369.9	158.1	169.8	280.2	14.9	0.0579	1.02762
600.0	24.61	0.4233	54440.0	59170.0	375.8	161.9	173.2	286.9	15.3	0.0611	1.02647
				2.50 MPa isobar							
135.30[a]	736.1	12.66	-22590.0	-22400.0	133.8	82.39	109.3	1673.0	2310.0	0.208	2.04006
160.0	713.0	12.27	-19760.0	-19550.0	153.1	87.39	116.8	1572.0	1080.0	0.182	2.00004
200.0	675.6	11.62	-15090.0	-14870.0	179.2	85.64	118.3	1413.0	498.0	0.153	1.93587
250.0	627.3	10.79	-8974.0	-8742.0	206.5	91.57	127.9	1172.0	264.0	0.128	1.85446
300.0	574.4	9.882	-2267.0	-2014.0	231.0	101.4	141.9	912.3	162.0	0.108	1.76755
320.0	550.8	9.476	627.4	891.3	240.4	105.8	148.7	805.7	135.0	0.100	1.72962
340.0	524.9	9.030	3667.0	3943.0	249.7	110.5	156.7	696.9	112.0	0.0929	1.68858
360.0	495.4	8.523	6882.0	7175.0	258.9	115.5	167.0	584.1	92.0	0.0857	1.64267
370.0	478.5	8.233	8574.0	8877.0	263.6	118.2	173.7	525.0	82.8	0.0822	1.61687
380.0	459.6	7.907	10340.0	10660.0	268.3	120.9	182.6	462.7	73.7	0.0785	1.58811
390.0	437.2	7.522	12210.0	12540.0	273.2	123.9	196.0	394.8	64.5	0.0747	1.55465
395.0	423.9	7.293	13200.0	13550.0	275.8	125.6	206.5	357.3	59.7	0.0727	1.53503
400.0	408.2	7.023	14260.0	14620.0	278.5	127.4	223.0	315.4	54.5	0.0705	1.51210

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
400.244[b]	407.4	7.008	14320.0	14670.0	278.6	127.5	224.1	313.1	54.3	0.0703	1.51084
400.244[b]	72.98	1.256	23940.0	25930.0	306.7	127.8	206.9	154.9	12.2	0.0344	1.08001
405.0	68.48	1.178	24750.0	26870.0	309.1	127.8	189.4	164.0	12.2	0.0346	1.07494
410.0	64.83	1.115	25540.0	27790.0	311.3	128.1	178.9	171.9	12.2	0.0349	1.07084
415.0	61.88	1.065	26310.0	28660.0	313.4	128.5	172.2	178.6	12.2	0.0354	1.06753
420.0	59.39	1.022	27060.0	29510.0	315.5	129.1	167.6	184.7	12.2	0.0360	1.06475
425.0	57.24	0.9848	27800.0	30340.0	317.4	129.7	164.4	190.1	12.3	0.0388	1.06236
430.0	55.35	0.9523	28530.0	31160.0	319.3	130.4	162.1	195.1	12.3	0.0370	1.06026
435.0	53.67	0.9233	29250.0	31960.0	321.2	131.1	160.4	199.7	12.4	0.0375	1.05838
440.0	52.15	0.8971	29970.0	32760.0	323.0	131.9	159.2	204.0	12.5	0.0381	1.05670
445.0	50.76	0.8733	30690.0	33550.0	324.8	132.8	158.3	208.0	12.5	0.0387	1.05516
450.0	49.49	0.8515	31410.0	34340.0	326.6	133.6	157.7	211.8	12.6	0.0393	1.05375
455.0	48.32	0.8313	32120.0	35130.0	328.3	134.5	157.4	215.4	12.7	0.0399	1.05246
460.0	47.23	0.8125	32840.0	35920.0	330.0	135.4	157.2	218.9	12.8	0.0406	1.05125
470.0	45.26	0.7787	34280.0	37490.0	333.4	137.2	157.3	225.4	12.9	0.0420	1.04908
480.0	43.52	0.7488	35730.0	39070.0	336.7	139.1	157.8	231.3	13.1	0.0433	1.04717
490.0	41.97	0.7221	37190.0	40650.0	340.0	141.0	158.6	236.9	13.3	0.0448	1.04545
500.0	40.56	0.6979	38660.0	42240.0	343.2	143.0	159.6	242.2	13.5	0.0462	1.04391
510.0	39.28	0.6759	40140.0	43840.0	346.4	144.9	160.8	247.1	13.7	0.0477	1.04250
520.0	38.11	0.6557	41640.0	45460.0	349.5	146.9	162.1	251.9	13.9	0.0492	1.04122
530.0	37.03	0.6370	43160.0	47080.0	352.6	148.8	163.4	256.4	14.1	0.0507	1.04003
540.0	36.02	0.6197	44690.0	48720.0	355.7	150.8	164.9	260.7	14.3	0.0522	1.03893
550.0	35.09	0.6036	46240.0	50380.0	358.7	152.7	166.4	264.8	14.5	0.0538	1.03790
560.0	34.21	0.5886	47800.0	52050.0	361.8	154.6	167.9	268.9	14.7	0.0553	1.03695
580.0	32.61	0.5611	50990.0	55440.0	367.7	158.4	171.1	276.5	15.1	0.0585	1.03520
600.0	31.19	0.5366	54240.0	58900.0	373.6	162.2	174.3	283.7	15.5	0.0617	1.03365
					3.00 MPa isobar						
135.40[a]	736.2	12.67	-22590.0	-22350.0	133.9	82.46	109.4	1675.0	2310.0	0.208	2.04031
160.0	713.2	12.27	-19770.0	-19520.0	153.1	87.40	116.7	1574.0	1090.0	0.182	2.00048
200.0	675.9	11.63	-15100.0	-14840.0	179.2	85.66	118.3	1416.0	501.0	0.153	1.93643
250.0	627.8	10.80	-8992.0	-8715.0	206.5	91.60	127.8	1176.0	265.0	0.128	1.85528
300.0	575.2	9.896	-2296.0	-1993.0	230.9	101.4	141.7	918.0	163.0	0.108	1.76888
320.0	551.9	9.494	590.6	906.5	240.3	105.9	148.4	812.6	136.0	0.101	1.73132
340.0	526.3	9.055	3619.0	3950.0	249.5	110.5	156.2	705.5	113.0	0.0934	1.69083
360.0	497.4	8.558	6816.0	7167.0	258.7	115.5	165.9	595.2	93.3	0.0863	1.64585
370.0	481.1	8.278	8494.0	8856.0	263.3	118.1	172.2	538.0	84.2	0.0828	1.62082
380.0	463.0	7.965	10240.0	10620.0	268.0	120.8	180.1	478.2	75.3	0.0793	1.59321
390.0	442.0	7.604	12070.0	12470.0	272.8	123.7	191.4	414.4	66.4	0.0757	1.56174
395.0	429.9	7.395	13040.0	13450.0	275.3	125.2	199.4	380.0	61.9	0.0738	1.54379
400.0	416.1	7.159	14050.0	14470.0	277.9	126.9	210.8	342.9	57.2	0.0718	1.52356
405.0	399.7	6.877	15130.0	15560.0	280.6	128.7	228.9	301.5	52.1	0.0697	1.49974
406.0	396.0	6.812	15360.0	15800.0	281.2	129.1	234.1	292.4	51.0	0.0693	1.49433
408.0	387.8	6.672	15830.0	16280.0	282.4	130.0	247.3	273.2	48.7	0.0685	1.48258
410.0	378.4	6.510	16330.0	16790.0	283.6	130.9	266.8	252.0	46.2	0.0679	1.46912
411.0	373.0	6.417	16600.0	17060.0	284.3	131.4	280.9	240.4	44.9	0.0677	1.46147
411.022[b]	372.9	6.415	16600.0	17070.0	284.3	131.4	281.2	240.1	44.9	0.0677	1.46131
411.022[b]	97.25	1.673	24320.0	26110.0	306.3	132.7	279.9	140.3	13.4	0.0410	1.10768
415.0	89.39	1.538	25160.0	27110.0	308.7	132.2	231.4	151.2	13.2	0.0402	1.09866
416.0	87.87	1.512	25360.0	27340.0	309.3	132.2	224.4	153.5	13.2	0.0402	1.09692
418.0	85.17	1.465	25730.0	27780.0	310.3	132.1	213.4	157.7	13.1	0.0402	1.09384
420.0	82.81	1.425	26090.0	28200.0	311.3	132.1	205.1	161.5	13.1	0.0404	1.09116
425.0	77.98	1.342	26950.0	29180.0	313.7	132.3	191.1	169.9	13.0	0.0538	1.08568
430.0	74.15	1.276	27760.0	30120.0	315.9	132.6	182.4	177.1	13.0	0.0399	1.08134
432.0	72.81	1.253	28080.0	30480.0	316.7	132.8	179.8	179.8	13.0	0.0397	1.07983
434.0	71.57	1.231	28400.0	30830.0	317.5	133.0	177.6	182.3	13.0	0.0396	1.07842
440.0	68.26	1.174	29330.0	31880.0	319.9	133.7	172.5	189.2	13.0	0.0398	1.07470
445.0	65.89	1.134	30090.0	32740.0	321.9	134.4	169.6	194.4	13.0	0.0402	1.07205
450.0	63.80	1.098	30850.0	33580.0	323.7	135.1	167.4	199.2	13.1	0.0407	1.06970
455.0	61.91	1.065	31600.0	34410.0	325.6	135.8	165.8	203.7	13.1	0.0412	1.06759
460.0	60.21	1.036	32340.0	35240.0	327.4	136.6	164.6	207.9	13.2	0.0418	1.06569
465.0	58.65	1.009	33090.0	36060.0	329.2	137.4	163.8	211.9	13.3	0.0424	1.06395

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	57.22	0.9844	33830.0	36880.0	330.9	138.3	163.2	215.7	13.3	0.0430	1.06235
475.0	55.89	0.9616	34570.0	37690.0	332.6	139.1	162.8	219.3	13.4	0.0436	1.06087
480.0	54.66	0.9404	35320.0	38510.0	334.3	140.0	162.7	222.7	13.5	0.0443	1.05950
490.0	52.43	0.9020	36810.0	40130.0	337.7	141.8	162.7	229.1	13.6	0.0457	1.05702
500.0	50.45	0.8679	38300.0	41760.0	341.0	143.7	163.1	235.1	13.8	0.0471	1.05483
510.0	48.67	0.8374	39810.0	43400.0	344.2	145.5	163.8	240.7	14.0	0.0485	1.05287
520.0	47.07	0.8098	41330.0	45040.0	347.4	147.4	164.7	246.0	14.2	0.0499	1.05109
530.0	45.61	0.7847	42870.0	46690.0	350.6	149.3	165.8	251.0	14.4	0.0514	1.04948
540.0	44.26	0.7615	44410.0	48350.0	353.7	151.2	167.0	255.7	14.5	0.0529	1.04800
550.0	43.02	0.7402	45980.0	50030.0	356.7	153.1	168.3	260.3	14.7	0.0544	1.04663
560.0	41.87	0.7204	47550.0	51720.0	359.8	155.0	169.6	264.6	14.9	0.0560	1.04536
570.0	40.80	0.7019	49150.0	53420.0	362.8	156.9	171.1	268.8	15.1	0.0575	1.04418
580.0	39.79	0.6846	50760.0	55140.0	365.8	158.7	172.5	272.9	15.3	0.0591	1.04308
600.0	37.96	0.6531	54030.0	58620.0	371.7	162.4	175.5	280.6	15.7	0.0623	1.04107
					3.50 MPa isobar						
135.40[a]	736.4	12.67	-22590.0	-22310.0	133.9	82.54	109.5	1677.0	2320.0	0.208	2.04055
160.0	713.5	12.28	-19770.0	-19490.0	153.0	87.40	116.7	1576.0	1090.0	0.183	2.00091
200.0	676.3	11.64	-15110.0	-14810.0	179.1	85.67	118.2	1418.0	503.0	0.153	1.93699
250.0	628.3	10.81	-9010.0	-8687.0	206.4	91.63	127.7	1179.0	266.0	0.128	1.85609
300.0	576.0	9.910	-2325.0	-1972.0	230.8	101.4	141.5	923.6	164.0	0.108	1.77020
320.0	552.9	9.512	554.4	922.3	240.2	105.9	148.1	819.4	137.0	0.101	1.73298
340.0	527.7	9.079	3572.0	3958.0	249.4	110.5	155.7	713.9	114.0	0.0939	1.69301
360.0	499.4	8.592	6753.0	7160.0	258.5	115.4	165.0	605.9	94.6	0.0869	1.64891
370.0	483.6	8.320	8418.0	8839.0	263.1	118.0	170.8	550.3	85.6	0.0835	1.62455
380.0	466.1	8.019	10150.0	10580.0	267.8	120.7	178.0	492.8	76.9	0.0801	1.59795
390.0	446.2	7.677	11950.0	12410.0	272.5	123.5	187.7	432.2	68.2	0.0766	1.56810
400.0	422.6	7.270	13870.0	14350.0	277.4	126.5	202.8	366.3	59.5	0.0730	1.53305
405.0	408.4	7.025	14900.0	15400.0	280.0	128.2	214.9	329.9	54.8	0.0711	1.51227
410.0	391.4	6.733	15990.0	16510.0	282.8	130.1	234.3	289.4	49.9	0.0692	1.48769
412.0	383.3	6.595	16460.0	16990.0	283.9	130.9	246.4	271.5	47.7	0.0686	1.47619
414.0	374.2	6.438	16960.0	17500.0	285.2	131.8	263.3	252.0	45.4	0.0684	1.46320
416.0	363.5	6.253	17490.0	18050.0	286.5	132.8	289.9	230.4	42.8	0.0688	1.44798
418.0	349.9	6.019	18100.0	18680.0	288.0	134.0	339.5	205.3	39.8	0.0705	1.42892
419.0	341.1	5.869	18440.0	19040.0	288.9	134.7	387.4	190.6	38.0	0.0722	1.41675
420.0	329.7	5.672	18850.0	19470.0	289.9	135.6	485.3	173.1	35.7	0.0750	1.40096
420.2	326.8	5.623	18950.0	19570.0	290.1	135.8	519.7	169.0	35.2	0.0757	1.39704
420.297[b]	326.0	5.608	18980.0	19600.0	290.2	135.9	529.8	168.0	35.1	0.0760	1.39584
420.297[b]	135.3	2.329	24130.0	25630.0	304.6	137.8	584.2	124.0	15.4	0.0632	1.15221
425.0	112.8	1.940	25590.0	27400.0	308.7	136.2	289.4	142.4	14.4	0.131	1.12564
426.0	110.1	1.893	25830.0	27680.0	309.4	136.0	273.2	145.2	14.3	0.0724	1.12251
427.0	107.7	1.852	26060.0	27950.0	310.0	135.9	260.4	147.8	14.2	0.0591	1.11973
428.0	105.5	1.815	26270.0	28200.0	310.6	135.8	250.1	150.2	14.2	0.0538	1.11724
429.0	103.6	1.782	26480.0	28450.0	311.2	135.8	241.6	152.6	14.1	0.0508	1.11498
430.0	101.8	1.751	26690.0	28680.0	311.7	135.7	234.4	154.7	14.1	0.0489	1.11292
432.0	98.59	1.696	27080.0	29140.0	312.8	135.7	222.9	158.8	14.0	0.0465	1.10924
434.0	95.81	1.648	27450.0	29580.0	313.8	135.7	214.2	162.6	13.9	0.0451	1.10603
436.0	93.34	1.606	27820.0	30000.0	314.8	135.7	207.2	166.0	13.9	0.0442	1.10320
438.0	91.12	1.568	28180.0	30410.0	315.7	135.8	201.6	169.3	13.8	0.0437	1.10066
440.0	89.11	1.533	28520.0	30810.0	316.6	135.9	197.0	172.3	13.8	0.0433	1.09835
442.0	87.26	1.501	28860.0	31200.0	317.5	136.0	193.1	175.2	13.8	0.0431	1.09625
444.0	85.56	1.472	29200.0	31580.0	318.4	136.2	189.8	178.0	13.8	0.0429	1.09431
446.0	83.99	1.445	29530.0	31960.0	319.2	136.4	187.0	180.6	13.7	0.0428	1.09251
448.0	82.52	1.420	29860.0	32330.0	320.1	136.5	184.5	183.1	13.7	0.0428	1.09084
450.0	81.14	1.396	30190.0	32690.0	320.9	136.8	182.4	185.5	13.7	0.0429	1.08927
455.0	78.04	1.343	30990.0	33590.0	322.9	137.3	178.1	191.2	13.7	0.0431	1.08575
460.0	75.33	1.296	31780.0	34480.0	324.8	138.0	175.0	196.4	13.7	0.0434	1.08269
465.0	72.93	1.255	32560.0	35350.0	326.7	138.7	172.7	201.2	13.8	0.0439	1.07997
470.0	70.77	1.218	33330.0	36210.0	328.5	139.4	171.0	205.7	13.8	0.0444	1.07754
475.0	68.82	1.184	34100.0	37060.0	330.3	140.2	169.7	209.9	13.9	0.0449	1.07534
480.0	67.03	1.153	34870.0	37900.0	332.1	141.0	168.7	213.9	13.9	0.0455	1.07334
485.0	65.39	1.125	35630.0	38740.0	333.8	141.8	168.1	217.7	14.0	0.0461	1.07150

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
490.0	63.87	1.099	36400.0	39580.0	335.5	142.6	167.6	221.3	14.0	0.0467	1.06979
500.0	61.14	1.052	37930.0	41260.0	338.9	144.4	167.2	228.1	14.2	0.0480	1.06673
510.0	58.73	1.010	39470.0	42930.0	342.2	146.2	167.3	234.4	14.3	0.0494	1.06405
520.0	56.59	0.9736	41010.0	44600.0	345.5	148.0	167.7	240.2	14.5	0.0508	1.06167
530.0	54.67	0.9405	42560.0	46280.0	348.7	149.8	168.4	245.7	14.7	0.0522	1.05952
540.0	52.92	0.9104	44130.0	47970.0	351.8	151.6	169.3	250.9	14.8	0.0537	1.05758
550.0	51.32	0.8829	45710.0	49670.0	355.0	153.5	170.3	255.9	15.0	0.0552	1.05580
560.0	49.84	0.8575	47300.0	51380.0	358.0	155.3	171.5	260.6	15.2	0.0567	1.05417
570.0	48.48	0.8341	48900.0	53100.0	361.1	157.2	172.7	265.1	15.4	0.0582	1.05266
580.0	47.21	0.8123	50520.0	54830.0	364.1	159.0	174.0	269.4	15.5	0.0597	1.05126
590.0	46.03	0.7919	52160.0	56580.0	367.1	160.8	175.4	273.6	15.7	0.0613	1.04995
600.0	44.92	0.7728	53810.0	58340.0	370.0	162.6	176.8	277.6	15.9	0.0629	1.04873
					3.60 MPa isobar						
135.50[a]	736.4	12.67	-22590.0	-22300.0	133.9	82.55	109.5	1677.0	2320.0	0.208	2.04060
160.0	713.6	12.28	-19780.0	-19480.0	153.0	87.40	116.7	1577.0	1090.0	0.183	2.00100
200.0	676.4	11.64	-15110.0	-14800.0	179.1	85.68	118.2	1419.0	503.0	0.153	1.93710
250.0	628.4	10.81	-9014.0	-8681.0	206.4	91.63	127.7	1180.0	267.0	0.128	1.85625
300.0	576.2	9.913	-2331.0	-1968.0	230.8	101.4	141.4	924.7	164.0	0.108	1.77046
320.0	553.1	9.516	547.2	925.5	240.2	105.9	148.0	820.7	137.0	0.101	1.73331
340.0	528.0	9.084	3563.0	3959.0	249.4	110.5	155.6	715.5	114.0	0.0940	1.69344
360.0	499.8	8.599	6741.0	7159.0	258.5	115.4	164.8	608.0	94.9	0.0870	1.64950
370.0	484.1	8.328	8403.0	8836.0	263.1	118.0	170.6	552.7	85.9	0.0836	1.62528
380.0	466.7	8.029	10130.0	10580.0	267.7	120.6	177.7	495.6	77.2	0.0802	1.59886
390.0	447.0	7.691	11930.0	12400.0	272.5	123.5	187.1	435.6	68.6	0.0768	1.56931
400.0	423.7	7.290	13840.0	14330.0	277.4	126.5	201.5	370.7	59.9	0.0732	1.53477
405.0	409.9	7.051	14860.0	15370.0	279.9	128.1	212.8	335.0	55.3	0.0713	1.51446
410.0	393.4	6.769	15940.0	16470.0	282.6	130.0	230.4	295.8	50.5	0.0695	1.49069
412.0	385.8	6.637	16400.0	16940.0	283.8	130.7	240.9	278.5	48.4	0.0689	1.47971
414.0	377.2	6.490	16880.0	17440.0	285.0	131.6	255.2	260.0	46.1	0.0685	1.46747
416.0	367.3	6.319	17400.0	17970.0	286.3	132.5	276.1	239.8	43.7	0.0687	1.45342
418.0	355.3	6.113	17960.0	18550.0	287.7	133.6	311.1	217.0	41.0	0.0700	1.43652
419.0	348.0	5.988	18270.0	18880.0	288.4	134.2	340.0	204.2	39.4	0.0715	1.42635
420.0	339.3	5.838	18620.0	19240.0	289.3	135.0	386.4	189.9	37.6	0.0737	1.41424
421.0	328.1	5.644	19020.0	19660.0	290.3	135.8	476.6	173.2	35.5	0.0773	1.39874
421.5	320.6	5.517	19270.0	19920.0	290.9	136.4	568.6	163.3	34.1	0.0799	1.38856
421.977[b]	312.6	5.378	19520.0	20190.0	291.6	137.0	716.0	153.8	32.8	0.0828	1.37759
421.977[b]	147.5	2.538	23940.0	25360.0	303.8	138.9	817.5	120.6	16.1	0.0749	1.16672
425.0	125.0	2.150	25150.0	26820.0	307.3	137.4	360.3	134.9	15.0	0.168	1.13993
426.0	120.9	2.080	25430.0	27160.0	308.1	137.1	325.2	138.3	14.8	0.0853	1.13514
427.0	117.5	2.021	25690.0	27470.0	308.8	136.9	300.7	141.4	14.7	0.0667	1.13113
428.0	114.5	1.970	25940.0	27770.0	309.5	136.7	282.5	144.3	14.6	0.0593	1.12768
429.0	111.9	1.925	26170.0	28040.0	310.1	136.6	268.4	146.9	14.5	0.0552	1.12465
430.0	109.6	1.885	26390.0	28300.0	310.7	136.5	257.0	149.4	14.4	0.0524	1.12194
431.0	107.5	1.849	26610.0	28560.0	311.3	136.4	247.6	151.7	14.3	0.0505	1.11949
432.0	105.5	1.816	26820.0	28800.0	311.9	136.4	239.8	153.9	14.3	0.0491	1.11726
434.0	102.1	1.757	27220.0	29270.0	313.0	136.3	227.4	158.1	14.2	0.0471	1.11331
436.0	99.15	1.706	27600.0	29710.0	314.0	136.3	217.9	161.9	14.1	0.0458	1.10988
438.0	96.53	1.661	27970.0	30140.0	315.0	136.3	210.5	165.4	14.0	0.0450	1.10686
440.0	94.18	1.620	28330.0	30550.0	315.9	136.4	204.5	168.7	14.0	0.0444	1.10416
442.0	92.05	1.584	28680.0	30960.0	316.8	136.5	199.6	171.8	14.0	0.0440	1.10172
444.0	90.10	1.550	29030.0	31350.0	317.7	136.6	195.5	174.7	13.9	0.0438	1.09949
446.0	88.31	1.519	29370.0	31740.0	318.6	136.8	192.0	177.5	13.9	0.0436	1.09745
448.0	86.65	1.491	29710.0	32120.0	319.4	136.9	189.0	180.1	13.9	0.0435	1.09555
450.0	85.11	1.464	30040.0	32500.0	320.3	137.1	186.4	182.7	13.9	0.0435	1.09379
455.0	81.66	1.405	30850.0	33420.0	322.3	137.7	181.3	188.6	13.9	0.0436	1.08987
460.0	78.68	1.354	31650.0	34310.0	324.3	138.3	177.6	194.0	13.9	0.0439	1.08648
465.0	76.05	1.308	32440.0	35190.0	326.2	138.9	174.9	199.0	13.9	0.0443	1.08351
470.0	73.71	1.268	33220.0	36060.0	328.0	139.6	172.8	203.7	13.9	0.0447	1.08086
475.0	71.60	1.232	34000.0	36920.0	329.9	140.4	171.3	208.0	14.0	0.0452	1.07848
480.0	69.68	1.199	34770.0	37780.0	331.6	141.2	170.1	212.1	14.0	0.0458	1.07632
485.0	67.92	1.168	35540.0	38620.0	333.4	142.0	169.3	216.0	14.1	0.0464	1.07434

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
490.0	66.29	1.141	36310.0	39470.0	335.1	142.8	168.7	219.8	14.1	0.0470	1.07251
495.0	64.78	1.115	37080.0	40310.0	336.8	143.7	168.3	223.3	14.2	0.0476	1.07082
500.0	63.38	1.090	37850.0	41150.0	338.5	144.5	168.1	226.7	14.3	0.0482	1.06925
510.0	60.83	1.047	39390.0	42830.0	341.9	146.3	168.0	233.1	14.4	0.0496	1.06640
520.0	58.57	1.008	40940.0	44510.0	345.1	148.1	168.3	239.1	14.6	0.0510	1.06387
530.0	56.54	0.9727	42500.0	46200.0	348.3	149.9	169.0	244.7	14.7	0.0524	1.06161
540.0	54.70	0.9411	44070.0	47890.0	351.5	151.7	169.8	250.0	14.9	0.0538	1.05956
550.0	53.02	0.9122	45650.0	49600.0	354.6	153.6	170.8	255.0	15.1	0.0553	1.05769
560.0	51.48	0.8856	47240.0	51310.0	357.7	155.4	171.9	259.8	15.2	0.0568	1.05598
570.0	50.05	0.8611	48850.0	53030.0	360.8	157.2	173.1	264.3	15.4	0.0583	1.05440
580.0	48.73	0.8383	50480.0	54770.0	363.8	159.1	174.3	268.7	15.6	0.0599	1.05294
590.0	47.49	0.8171	52120.0	56520.0	366.8	160.9	175.7	273.0	15.8	0.0614	1.05157
600.0	46.34	0.7972	53770.0	58280.0	369.7	162.7	177.0	277.0	16.0	0.0630	1.05029
					3.70 MPa isobar						
135.50[a]	736.4	12.67	-22590.0	-22300.0	133.9	82.56	109.5	1678.0	2320.0	0.208	2.04065
160.0	713.6	12.28	-19780.0	-19480.0	153.0	87.41	116.7	1577.0	1100.0	0.183	2.00108
200.0	676.4	11.64	-15110.0	-14800.0	179.1	85.68	118.2	1419.0	504.0	0.153	1.93721
250.0	628.5	10.81	-9017.0	-8675.0	206.4	91.64	127.7	1181.0	267.0	0.128	1.85642
300.0	576.4	9.916	-2337.0	-1963.0	230.8	101.4	141.4	925.8	164.0	0.108	1.77072
320.0	553.3	9.520	540.1	928.7	240.1	105.9	148.0	822.1	137.0	0.101	1.73363
340.0	528.3	9.088	3554.0	3961.0	249.3	110.5	155.5	717.2	115.0	0.0940	1.69387
360.0	500.2	8.606	6729.0	7158.0	258.5	115.4	164.6	610.1	95.1	0.0871	1.65010
380.0	467.3	8.040	10110.0	10570.0	267.7	120.6	177.3	498.4	77.5	0.0803	1.59976
390.0	447.8	7.705	11910.0	12390.0	272.4	123.4	186.5	439.0	68.9	0.0770	1.57049
400.0	424.9	7.310	13810.0	14310.0	277.3	126.4	200.3	374.9	60.3	0.0734	1.53645
405.0	411.3	7.076	14820.0	15340.0	279.8	128.1	210.9	340.0	55.8	0.0716	1.51657
410.0	395.4	6.803	15890.0	16430.0	282.5	129.8	226.9	301.8	51.1	0.0697	1.49353
412.0	388.1	6.677	16340.0	16890.0	283.6	130.6	236.2	285.2	49.0	0.0691	1.48300
414.0	380.0	6.537	16810.0	17380.0	284.8	131.4	248.4	267.5	46.9	0.0687	1.47138
416.0	370.7	6.378	17310.0	17890.0	286.0	132.3	265.6	248.5	44.6	0.0688	1.45827
418.0	359.9	6.192	17850.0	18450.0	287.4	133.3	292.0	227.4	42.0	0.0698	1.44294
420.0	346.3	5.957	18450.0	19070.0	288.9	134.5	340.1	203.3	39.1	0.0728	1.42387
421.0	337.6	5.808	18800.0	19430.0	289.7	135.2	384.3	189.4	37.3	0.0757	1.41187
422.0	326.6	5.619	19200.0	19850.0	290.7	136.1	466.5	173.5	35.2	0.0807	1.39672
422.5	319.5	5.497	19430.0	20100.0	291.3	136.6	544.1	164.3	34.0	0.0844	1.38702
423.0	310.4	5.340	19720.0	20410.0	292.0	137.2	693.4	153.7	32.4	0.0894	1.37455
423.2	305.6	5.258	19850.0	20560.0	292.4	137.6	804.3	148.8	31.7	0.0920	1.36817
423.4	299.8	5.158	20020.0	20740.0	292.8	138.0	993.0	143.4	30.7	0.0951	1.36032
423.587[b]	296.5	5.101	20120.0	20850.0	293.1	138.2	1119.0	140.7	30.2	0.0981	1.35581
423.587[b]	164.3	2.827	23610.0	24920.0	302.7	140.1	1453.0	117.4	17.1	0.0979	1.18700
425.0	143.7	2.473	24490.0	25980.0	305.2	138.9	562.8	125.8	16.0	0.215	1.16218
425.5	139.5	2.399	24700.0	26250.0	305.8	138.7	489.2	128.2	15.7	0.148	1.15709
426.0	135.9	2.339	24890.0	26480.0	306.4	138.4	439.9	130.3	15.6	0.102	1.15290
426.5	132.9	2.287	25070.0	26690.0	306.8	138.2	404.2	132.3	15.4	0.0857	1.14932
427.0	130.3	2.241	25230.0	26880.0	307.3	138.1	377.0	134.2	15.3	0.0767	1.14620
427.5	127.9	2.201	25380.0	27070.0	307.7	137.9	355.4	136.0	15.2	0.0707	1.14342
428.0	125.8	2.164	25530.0	27240.0	308.1	137.8	337.8	137.6	15.1	0.0665	1.14091
429.0	122.1	2.100	25800.0	27560.0	308.9	137.6	310.8	140.8	15.0	0.0607	1.13652
430.0	118.9	2.045	26050.0	27860.0	309.6	137.4	290.9	143.6	14.8	0.0570	1.13277
431.0	116.0	1.997	26290.0	28150.0	310.2	137.2	275.5	146.3	14.7	0.0543	1.12949
432.0	113.5	1.954	26520.0	28410.0	310.9	137.1	263.2	148.8	14.6	0.0523	1.12657
433.0	111.3	1.915	26740.0	28670.0	311.5	137.1	253.2	151.1	14.6	0.0508	1.12395
434.0	109.2	1.879	26950.0	28920.0	312.0	137.0	244.8	153.4	14.5	0.0496	1.12155
436.0	105.6	1.817	27360.0	29400.0	313.1	136.9	231.5	157.5	14.4	0.0478	1.11733
438.0	102.4	1.763	27750.0	29850.0	314.2	136.9	221.5	161.3	14.3	0.0466	1.11369
440.0	99.68	1.715	28130.0	30280.0	315.2	136.9	213.6	164.9	14.2	0.0458	1.11049
442.0	97.20	1.672	28490.0	30710.0	316.1	137.0	207.3	168.2	14.2	0.0452	1.10764
444.0	94.96	1.634	28850.0	31110.0	317.0	137.1	202.1	171.3	14.1	0.0448	1.10506
446.0	92.91	1.599	29200.0	31510.0	317.9	137.2	197.8	174.3	14.1	0.0445	1.10271
448.0	91.03	1.566	29540.0	31910.0	318.8	137.3	194.1	177.1	14.1	0.0443	1.10056

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
450.0	89.30	1.536	29880.0	32290.0	319.7	137.5	191.0	179.8	14.0	0.0442	1.09857
452.0	87.68	1.508	30220.0	32670.0	320.5	137.7	188.3	182.3	14.0	0.0442	1.09672
454.0	86.17	1.483	30550.0	33040.0	321.3	137.9	185.9	184.8	14.0	0.0442	1.09500
460.0	82.16	1.414	31530.0	34140.0	323.7	138.6	180.5	191.6	14.0	0.0444	1.09044
465.0	79.29	1.364	32320.0	35040.0	325.7	139.2	177.2	196.8	14.0	0.0447	1.08717
470.0	76.74	1.320	33110.0	35920.0	327.6	139.9	174.8	201.6	14.0	0.0451	1.08429
475.0	74.46	1.281	33900.0	36790.0	329.4	140.6	173.0	206.1	14.1	0.0455	1.08171
480.0	72.39	1.245	34680.0	37650.0	331.2	141.4	171.6	210.4	14.1	0.0461	1.07937
485.0	70.50	1.213	35450.0	38500.0	333.0	142.2	170.6	214.4	14.2	0.0466	1.07724
490.0	68.76	1.183	36230.0	39350.0	334.7	143.0	169.9	218.2	14.2	0.0472	1.07529
495.0	67.16	1.155	37000.0	40200.0	336.4	143.8	169.4	221.8	14.3	0.0478	1.07348
500.0	65.66	1.130	37770.0	41050.0	338.1	144.7	169.0	225.3	14.3	0.0485	1.07181
510.0	62.96	1.083	39320.0	42740.0	341.5	146.4	168.8	231.9	14.5	0.0498	1.06878
520.0	60.57	1.042	40870.0	44420.0	344.8	148.2	169.0	238.0	14.6	0.0511	1.06611
530.0	58.43	1.005	42440.0	46120.0	348.0	150.0	169.5	243.7	14.8	0.0526	1.06372
540.0	56.50	0.9720	44010.0	47820.0	351.2	151.8	170.3	249.0	14.9	0.0540	1.06157
550.0	54.74	0.9417	45590.0	49520.0	354.3	153.6	171.2	254.1	15.1	0.0555	1.05961
560.0	53.12	0.9139	47190.0	51240.0	357.4	155.5	172.3	259.0	15.3	0.0570	1.05781
570.0	51.63	0.8883	48800.0	52970.0	360.5	157.3	173.4	263.6	15.5	0.0585	1.05616
580.0	50.25	0.8645	50430.0	54710.0	363.5	159.1	174.7	268.1	15.6	0.0600	1.05462
590.0	48.96	0.8423	52070.0	56460.0	366.5	160.9	176.0	272.3	15.8	0.0615	1.05320
600.0	47.76	0.8216	53730.0	58230.0	369.4	162.7	177.3	276.5	16.0	0.0631	1.05187
					3.85 MPa isobar						
135.50[a]	736.5	12.67	-22590.0	-22280.0	133.9	82.59	109.5	1678.0	2320.0	0.208	2.04072
160.0	713.7	12.28	-19780.0	-19470.0	153.0	87.41	116.7	1578.0	1100.0	0.183	2.00121
200.0	676.5	11.64	-15120.0	-14790.0	179.1	85.69	118.2	1420.0	504.0	0.153	1.93738
250.0	628.7	10.82	-9023.0	-8667.0	206.4	91.64	127.6	1182.0	267.0	0.128	1.85666
300.0	576.6	9.920	-2345.0	-1957.0	230.8	101.5	141.3	927.4	165.0	0.109	1.77111
320.0	553.6	9.525	529.4	933.6	240.1	105.9	147.9	824.1	138.0	0.101	1.73412
340.0	528.7	9.095	3540.0	3963.0	249.3	110.5	155.3	719.6	115.0	0.0942	1.69451
360.0	500.8	8.615	6710.0	7157.0	258.4	115.4	164.4	613.2	95.5	0.0873	1.65098
380.0	468.2	8.055	10080.0	10560.0	267.6	120.6	176.7	502.5	77.9	0.0806	1.60109
390.0	449.0	7.725	11870.0	12370.0	272.3	123.4	185.6	443.9	69.4	0.0772	1.57222
400.0	426.5	7.338	13760.0	14290.0	277.2	126.3	198.6	381.1	60.9	0.0737	1.53889
405.0	413.4	7.112	14760.0	15300.0	279.7	127.9	208.3	347.2	56.5	0.0719	1.51961
410.0	398.2	6.851	15810.0	16380.0	282.3	129.7	222.4	310.4	51.9	0.0701	1.49753
415.0	379.6	6.531	16950.0	17540.0	285.1	131.6	246.4	269.3	46.8	0.0689	1.47090
416.0	375.3	6.457	17200.0	17790.0	285.7	132.0	253.5	260.3	45.7	0.0689	1.46472
418.0	365.7	6.291	17700.0	18320.0	287.0	132.9	272.4	241.2	43.4	0.0695	1.45108
420.0	354.2	6.094	18260.0	18890.0	288.4	134.0	302.0	220.0	40.8	0.0717	1.43499
422.0	339.7	5.844	18880.0	19540.0	289.9	135.2	357.1	195.9	37.8	0.0778	1.41472
423.0	330.3	5.682	19240.0	19920.0	290.8	135.9	409.4	182.0	36.0	0.0847	1.40174
424.0	318.1	5.472	19670.0	20370.0	291.9	136.9	509.4	166.2	33.8	0.100	1.38505
424.5	310.1	5.334	19930.0	20650.0	292.5	137.4	606.2	157.1	32.4	0.120	1.37414
425.0	299.5	5.152	20250.0	21000.0	293.4	138.1	795.6	146.9	30.8	0.208	1.35983
425.2	293.9	5.057	20410.0	21170.0	293.8	138.5	935.7	142.3	29.9	0.402	1.35240
425.4	287.0	4.939	20600.0	21380.0	294.2	138.9	1167.0	137.3	28.9	0.183	1.34321
425.6	277.8	4.779	20840.0	21650.0	294.9	139.4	1623.0	131.7	27.7	0.148	1.33090
425.7	271.5	4.671	21010.0	21830.0	295.3	139.8	2064.0	128.6	26.8	0.138	1.32258
425.8	263.1	4.526	21220.0	22070.0	295.9	140.2	2878.0	125.2	25.8	0.131	1.31151
426.0	230.6	3.967	22060.0	23030.0	298.1	141.3	6930.0	118.0	22.3	0.122	1.26949
426.2	198.8	3.421	22940.0	24070.0	300.6	141.4	3322.0	116.6	19.6	0.116	1.22943
426.3	191.1	3.287	23180.0	24350.0	301.2	141.3	2422.0	117.0	19.0	0.113	1.21978
426.4	185.4	3.190	23360.0	24560.0	301.7	141.2	1920.0	117.6	18.6	0.110	1.21282
426.6	177.4	3.052	23630.0	24890.0	302.5	140.9	1389.0	118.8	18.0	0.104	1.20292
427.0	167.1	2.875	24000.0	25340.0	303.6	140.5	943.8	121.0	17.4	0.0946	1.19035
427.5	158.8	2.731	24340.0	25750.0	304.5	140.1	710.5	123.7	16.9	0.0862	1.18025
427.6	157.4	2.708	24400.0	25820.0	304.7	140.1	680.5	124.2	16.8	0.0848	1.17863
427.8	155.0	2.666	24500.0	25950.0	305.0	139.9	629.9	125.1	16.7	0.0823	1.17566
428.0	152.7	2.628	24600.0	26070.0	305.3	139.8	588.9	126.0	16.5	0.0800	1.17298
428.2	150.7	2.593	24700.0	26180.0	305.5	139.7	554.9	126.9	16.4	0.0779	1.17056

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
428.5	148.0	2.546	24830.0	26340.0	305.9	139.6	513.4	128.2	16.3	0.0752	1.16728
429.0	144.1	2.478	25030.0	26590.0	306.5	139.3	461.5	130.3	16.1	0.0714	1.16258
429.5	140.7	2.420	25220.0	26810.0	307.0	139.1	423.4	132.2	15.9	0.0683	1.15857
430.0	137.7	2.370	25390.0	27010.0	307.5	139.0	394.1	134.0	15.8	0.0657	1.15507
430.5	135.1	2.325	25550.0	27200.0	307.9	138.8	370.8	135.7	15.6	0.0635	1.15196
431.0	132.8	2.284	25700.0	27380.0	308.3	138.7	351.8	137.3	15.5	0.0616	1.14917
432.0	128.7	2.213	25980.0	27720.0	309.1	138.5	322.6	140.4	15.4	0.0585	1.14430
433.0	125.1	2.153	26240.0	28030.0	309.8	138.3	301.0	143.2	15.2	0.0562	1.14015
434.0	122.1	2.100	26490.0	28320.0	310.5	138.1	284.4	145.8	15.1	0.0543	1.13653
435.0	119.3	2.053	26730.0	28600.0	311.1	138.0	271.1	148.3	15.0	0.0528	1.13333
436.0	116.9	2.011	26950.0	28870.0	311.7	137.9	260.2	150.6	14.9	0.0516	1.13045
437.0	114.6	1.972	27170.0	29120.0	312.3	137.9	251.2	152.9	14.8	0.0505	1.12784
438.0	112.6	1.937	27380.0	29370.0	312.9	137.8	243.5	155.0	14.7	0.0497	1.12545
440.0	108.9	1.874	27790.0	29840.0	314.0	137.8	231.2	159.0	14.6	0.0483	1.12120
442.0	105.7	1.819	28180.0	30300.0	315.0	137.8	221.8	162.7	14.5	0.0474	1.11751
444.0	102.9	1.771	28560.0	30730.0	316.0	137.8	214.3	166.1	14.5	0.0467	1.11425
446.0	100.4	1.727	28920.0	31150.0	316.9	137.9	208.2	169.3	14.4	0.0462	1.11134
448.0	98.12	1.688	29280.0	31560.0	317.8	138.0	203.1	172.4	14.4	0.0458	1.10870
450.0	96.03	1.652	29640.0	31970.0	318.7	138.1	198.9	175.3	14.3	0.0455	1.10629
452.0	94.10	1.619	29980.0	32360.0	319.6	138.3	195.3	178.1	14.3	0.0453	1.10408
454.0	92.32	1.588	30320.0	32750.0	320.5	138.4	192.2	180.7	14.3	0.0452	1.10203
456.0	90.66	1.560	30660.0	33130.0	321.3	138.6	189.6	183.2	14.2	0.0452	1.10013
458.0	89.10	1.533	31000.0	33510.0	322.1	138.8	187.2	185.6	14.2	0.0452	1.09835
460.0	87.64	1.508	31330.0	33880.0	322.9	139.0	185.2	188.0	14.2	0.0452	1.09669
465.0	84.35	1.451	32140.0	34790.0	324.9	139.6	181.1	193.5	14.2	0.0454	1.09293
470.0	81.46	1.401	32940.0	35690.0	326.8	140.3	178.0	198.6	14.2	0.0457	1.08964
475.0	78.89	1.357	33740.0	36580.0	328.7	140.9	175.7	203.3	14.2	0.0461	1.08673
480.0	76.58	1.318	34530.0	37450.0	330.5	141.7	174.0	207.7	14.3	0.0466	1.08411
485.0	74.48	1.281	35310.0	38320.0	332.3	142.4	172.7	211.9	14.3	0.0471	1.08174
490.0	72.56	1.248	36090.0	39180.0	334.1	143.2	171.7	215.9	14.4	0.0476	1.07957
495.0	70.80	1.218	36870.0	40030.0	335.8	144.1	171.0	219.6	14.4	0.0482	1.07758
500.0	69.16	1.190	37650.0	40890.0	337.6	144.9	170.5	223.2	14.5	0.0488	1.07574
510.0	66.21	1.139	39210.0	42590.0	340.9	146.6	170.0	230.0	14.6	0.0501	1.07243
520.0	63.62	1.095	40770.0	44290.0	344.2	148.4	170.0	236.3	14.7	0.0514	1.06952
530.0	61.31	1.055	42340.0	45990.0	347.5	150.1	170.4	242.1	14.9	0.0528	1.06694
540.0	59.23	1.019	43920.0	47700.0	350.7	151.9	171.0	247.7	15.0	0.0542	1.06461
550.0	57.34	0.9865	45510.0	49410.0	353.8	153.8	171.9	252.9	15.2	0.0557	1.06251
560.0	55.61	0.9568	47110.0	51140.0	356.9	155.6	172.9	257.8	15.4	0.0572	1.06058
570.0	54.02	0.9294	48730.0	52870.0	360.0	157.4	173.9	262.6	15.5	0.0587	1.05882
580.0	52.55	0.9041	50360.0	54620.0	363.0	159.2	175.1	267.1	15.7	0.0602	1.05718
590.0	51.18	0.8806	52000.0	56370.0	366.0	161.0	176.4	271.4	15.9	0.0617	1.05566
600.0	49.90	0.8586	53660.0	58140.0	369.0	162.8	177.7	275.6	16.1	0.0633	1.05425
					3.90 MPa isobar						
135.50[a]	736.5	12.67	-22590.0	-22280.0	133.9	82.59	109.5	1678.0	2320.0	0.208	2.04075
160.0	713.7	12.28	-19780.0	-19460.0	153.0	87.41	116.7	1578.0	1100.0	0.183	2.00126
200.0	676.6	11.64	-15120.0	-14780.0	179.1	85.69	118.2	1420.0	505.0	0.153	1.93743
250.0	628.7	10.82	-9025.0	-8664.0	206.3	91.65	127.6	1182.0	268.0	0.128	1.85674
300.0	576.7	9.922	-2348.0	-1955.0	230.8	101.5	141.3	928.0	165.0	0.109	1.77123
320.0	553.7	9.527	525.9	935.2	240.1	105.9	147.8	824.7	138.0	0.101	1.73428
340.0	528.8	9.098	3536.0	3964.0	249.3	110.5	155.3	720.4	115.0	0.0942	1.69472
360.0	501.0	8.619	6704.0	7157.0	258.4	115.4	164.3	614.2	95.6	0.0873	1.65127
380.0	468.5	8.060	10070.0	10560.0	267.6	120.6	176.6	503.8	78.0	0.0806	1.60153
390.0	449.4	7.731	11860.0	12360.0	272.3	123.4	185.3	445.5	69.6	0.0773	1.57279
400.0	427.1	7.348	13750.0	14280.0	277.1	126.3	198.1	383.1	61.1	0.0738	1.53968
405.0	414.1	7.124	14740.0	15290.0	279.6	127.9	207.5	349.5	56.7	0.0721	1.52058
410.0	399.1	6.866	15790.0	16360.0	282.3	129.6	221.1	313.2	52.2	0.0703	1.49880
415.0	380.9	6.553	16920.0	17510.0	285.1	131.5	243.6	272.8	47.2	0.0690	1.47271
416.0	376.7	6.481	17160.0	17760.0	285.7	131.9	250.2	264.0	46.1	0.0690	1.46669
418.0	367.4	6.320	17660.0	18280.0	286.9	132.8	267.4	245.4	43.8	0.0695	1.45350
420.0	356.5	6.133	18200.0	18840.0	288.2	133.8	293.3	225.0	41.3	0.0715	1.43814
422.0	342.9	5.900	18800.0	19460.0	289.7	135.0	338.6	202.0	38.5	0.0770	1.41923

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
423.0	334.5	5.754	19140.0	19820.0	290.6	135.7	377.9	189.1	36.8	0.0834	1.40753
424.0	324.0	5.575	19530.0	20230.0	291.5	136.5	444.2	174.8	34.9	0.0979	1.39321
424.5	317.6	5.465	19750.0	20460.0	292.1	136.9	498.5	166.9	33.7	0.116	1.38446
425.0	310.0	5.333	20000.0	20730.0	292.7	137.5	583.2	158.3	32.4	0.197	1.37400
425.5	300.1	5.163	20300.0	21060.0	293.5	138.2	734.5	148.8	30.9	0.155	1.36071
425.6	297.7	5.123	20370.0	21130.0	293.7	138.3	780.4	146.7	30.5	0.143	1.35753
425.8	292.4	5.031	20530.0	21300.0	294.0	138.6	900.5	142.4	29.7	0.128	1.35038
426.0	286.0	4.920	20700.0	21500.0	294.5	139.0	1082.0	137.9	28.8	0.119	1.34180
426.2	277.9	4.781	20920.0	21740.0	295.1	139.5	1382.0	133.0	27.7	0.112	1.33101
426.4	266.8	4.590	21220.0	22070.0	295.8	140.1	1934.0	127.9	26.3	0.107	1.31643
427.0	207.7	3.573	22810.0	23900.0	300.1	141.5	2847.0	117.8	20.3	0.0970	1.24050
427.2	194.3	3.344	23210.0	24380.0	301.3	141.4	1998.0	118.1	19.3	0.0944	1.22385
427.4	185.4	3.189	23500.0	24720.0	302.1	141.2	1506.0	118.9	18.6	0.0917	1.21276
428.0	169.4	2.915	24070.0	25410.0	303.7	140.7	896.2	121.8	17.5	0.0843	1.19320
429.0	155.3	2.672	24660.0	26120.0	305.3	140.1	586.5	126.4	16.7	0.0752	1.17609
429.5	150.5	2.589	24890.0	26390.0	306.0	139.8	514.4	128.5	16.4	0.0718	1.17031
430.0	146.5	2.521	25090.0	26640.0	306.5	139.6	463.9	130.5	16.2	0.0689	1.16552
430.5	143.1	2.462	25280.0	26860.0	307.1	139.4	426.4	132.3	16.1	0.0665	1.16141
431.0	140.1	2.410	25450.0	27070.0	307.5	139.2	397.3	134.1	15.9	0.0644	1.15783
431.5	137.4	2.364	25610.0	27260.0	308.0	139.1	374.0	135.8	15.8	0.0625	1.15464
432.0	135.0	2.322	25760.0	27440.0	308.4	139.0	354.9	137.4	15.7	0.0609	1.15177
433.0	130.7	2.249	26050.0	27780.0	309.2	138.8	325.4	140.4	15.5	0.0583	1.14677
434.0	127.1	2.187	26310.0	28090.0	309.9	138.6	303.6	143.2	15.3	0.0561	1.14251
435.0	124.0	2.133	26560.0	28390.0	310.6	138.4	286.7	145.8	15.2	0.0544	1.13880
436.0	121.2	2.085	26800.0	28670.0	311.2	138.3	273.2	148.3	15.1	0.0530	1.13551
437.0	118.7	2.042	27020.0	28940.0	311.8	138.2	262.2	150.6	15.0	0.0518	1.13255
438.0	116.4	2.002	27240.0	29190.0	312.4	138.2	253.0	152.8	14.9	0.0509	1.12988
440.0	112.3	1.933	27670.0	29680.0	313.5	138.1	238.5	157.0	14.8	0.0493	1.12517
442.0	108.9	1.873	28070.0	30150.0	314.6	138.0	227.6	160.8	14.7	0.0482	1.12112
444.0	105.8	1.820	28450.0	30600.0	315.6	138.1	219.1	164.3	14.6	0.0474	1.11758
446.0	103.1	1.774	28830.0	31030.0	316.6	138.1	212.2	167.7	14.5	0.0468	1.11443
448.0	100.6	1.731	29190.0	31450.0	317.5	138.2	206.6	170.8	14.5	0.0463	1.11160
450.0	98.40	1.693	29550.0	31850.0	318.4	138.3	201.9	173.8	14.4	0.0460	1.10903
452.0	96.36	1.658	29900.0	32250.0	319.3	138.5	197.9	176.6	14.4	0.0458	1.10668
454.0	94.47	1.625	30250.0	32650.0	320.2	138.6	194.6	179.3	14.4	0.0456	1.10451
456.0	92.72	1.595	30590.0	33030.0	321.0	138.8	191.6	181.9	14.3	0.0455	1.10249
458.0	91.08	1.567	30920.0	33410.0	321.9	139.0	189.1	184.4	14.3	0.0455	1.10062
460.0	89.55	1.541	31260.0	33790.0	322.7	139.2	186.9	186.8	14.3	0.0455	1.09887
465.0	86.10	1.481	32080.0	34710.0	324.7	139.8	182.5	192.4	14.3	0.0456	1.09492
470.0	83.08	1.429	32890.0	35610.0	326.6	140.4	179.2	197.5	14.3	0.0459	1.09149
475.0	80.41	1.383	33690.0	36500.0	328.5	141.1	176.7	202.3	14.3	0.0463	1.08845
480.0	78.01	1.342	34480.0	37380.0	330.3	141.8	174.8	206.8	14.3	0.0467	1.08573
485.0	75.84	1.305	35260.0	38250.0	332.1	142.5	173.4	211.1	14.4	0.0472	1.08327
490.0	73.86	1.271	36050.0	39120.0	333.9	143.3	172.3	215.1	14.4	0.0478	1.08103
495.0	72.03	1.239	36830.0	39980.0	335.7	144.1	171.6	218.9	14.5	0.0483	1.07897
500.0	70.34	1.210	37610.0	40830.0	337.4	145.0	171.0	222.6	14.5	0.0489	1.07707
510.0	67.31	1.158	39170.0	42540.0	340.8	146.7	170.4	229.4	14.6	0.0502	1.07366
520.0	64.65	1.112	40740.0	44240.0	344.1	148.4	170.4	235.7	14.8	0.0515	1.07068
530.0	62.28	1.072	42310.0	45950.0	347.3	150.2	170.7	241.6	14.9	0.0529	1.06802
540.0	60.15	1.035	43890.0	47660.0	350.5	152.0	171.3	247.2	15.1	0.0543	1.06564
550.0	58.22	1.002	45480.0	49380.0	353.7	153.8	172.1	252.5	15.2	0.0558	1.06349
560.0	56.45	0.9712	47090.0	51100.0	356.8	155.6	173.1	257.4	15.4	0.0573	1.06152
570.0	54.83	0.9432	48700.0	52840.0	359.8	157.4	174.1	262.2	15.6	0.0588	1.05971
580.0	53.32	0.9174	50330.0	54580.0	362.9	159.2	175.3	266.8	15.7	0.0603	1.05804
590.0	51.93	0.8934	51980.0	56340.0	365.9	161.0	176.5	271.2	15.9	0.0618	1.05649
600.0	50.62	0.8709	53640.0	58120.0	368.9	162.8	177.8	275.4	16.1	0.0634	1.05504

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					4.00 MPa isobar						
135.50[a]	736.5	12.67	-22590.0	-22270.0	133.9	82.61	109.5	1679.0	2320.0	0.208	2.04080
160.0	713.8	12.28	-19780.0	-19460.0	153.0	87.41	116.7	1579.0	1100.0	0.183	2.00134
200.0	676.6	11.64	-15120.0	-14780.0	179.1	85.69	118.2	1421.0	505.0	0.153	1.93754
250.0	628.8	10.82	-9028.0	-8658.0	206.3	91.65	127.6	1183.0	268.0	0.128	1.85690
300.0	576.9	9.924	-2354.0	-1951.0	230.8	101.5	141.3	929.1	165.0	0.109	1.77149
320.0	553.9	9.530	518.8	938.5	240.1	105.9	147.8	826.0	138.0	0.101	1.73461
340.0	529.1	9.102	3527.0	3966.0	249.2	110.5	155.2	722.1	115.0	0.0943	1.69514
360.0	501.3	8.625	6692.0	7156.0	258.4	115.4	164.1	616.3	95.9	0.0874	1.65185
380.0	469.0	8.070	10060.0	10550.0	267.5	120.6	176.2	506.5	78.3	0.0808	1.60239
390.0	450.1	7.744	11840.0	12360.0	272.2	123.3	184.8	448.7	69.9	0.0774	1.57391
400.0	428.1	7.366	13720.0	14260.0	277.0	126.3	197.1	387.1	61.5	0.0740	1.54123
405.0	415.4	7.146	14710.0	15270.0	279.5	127.8	206.0	354.1	57.2	0.0723	1.52249
410.0	400.8	6.895	15750.0	16330.0	282.1	129.5	218.6	318.6	52.7	0.0705	1.50126
415.0	383.3	6.595	16860.0	17460.0	284.9	131.4	238.7	279.5	47.8	0.0692	1.47614
416.0	379.3	6.526	17090.0	17710.0	285.5	131.8	244.4	271.1	46.8	0.0691	1.47042
418.0	370.6	6.375	17580.0	18210.0	286.7	132.6	258.8	253.4	44.6	0.0694	1.45801
420.0	360.5	6.203	18100.0	18740.0	288.0	133.6	279.4	234.2	42.3	0.0710	1.44384
422.0	348.5	5.996	18670.0	19330.0	289.4	134.6	312.0	213.2	39.6	0.0757	1.42700
423.0	341.3	5.873	18980.0	19660.0	290.1	135.2	337.2	201.7	38.2	0.0812	1.41706
424.0	333.0	5.730	19310.0	20010.0	291.0	135.9	373.8	189.2	36.6	0.0936	1.40555
425.0	322.9	5.556	19690.0	20410.0	291.9	136.7	432.6	175.7	34.7	0.179	1.39168
425.5	316.9	5.451	19910.0	20640.0	292.4	137.1	478.1	168.3	33.6	0.144	1.38339
426.0	309.8	5.329	20140.0	20890.0	293.0	137.6	543.6	160.5	32.4	0.113	1.37374
426.5	301.1	5.180	20420.0	21190.0	293.7	138.2	646.0	152.1	31.1	0.103	1.36205
426.6	299.1	5.146	20480.0	21250.0	293.9	138.3	673.7	150.4	30.8	0.101	1.35937
426.8	294.8	5.072	20610.0	21400.0	294.2	138.6	739.6	146.8	30.1	0.0988	1.35358
427.0	289.9	4.988	20750.0	21550.0	294.6	138.9	824.2	143.2	29.4	0.0966	1.34707
427.5	274.2	4.718	21190.0	22040.0	295.7	139.8	1173.0	133.7	27.3	0.0918	1.32620
428.0	250.4	4.308	21840.0	22770.0	297.4	140.9	1762.0	125.2	24.4	0.0873	1.29498
428.5	220.7	3.798	22670.0	23720.0	299.7	141.6	1884.0	120.8	21.5	0.0836	1.25699
429.0	197.7	3.401	23370.0	24550.0	301.6	141.6	1398.0	120.4	19.6	0.0807	1.22799
429.5	182.9	3.147	23870.0	25140.0	303.0	141.3	1013.0	121.8	18.5	0.0779	1.20972
430.0	172.9	2.975	24240.0	25590.0	304.0	141.0	790.6	123.7	17.8	0.0750	1.19747
431.0	159.8	2.749	24800.0	26250.0	305.6	140.5	568.9	127.6	17.0	0.0700	1.18148
432.0	151.0	2.598	25220.0	26760.0	306.7	140.1	462.1	131.3	16.5	0.0660	1.17089
432.5	147.5	2.537	25410.0	26980.0	307.2	139.9	427.2	133.0	16.4	0.0643	1.16669
433.0	144.4	2.484	25580.0	27190.0	307.7	139.8	399.6	134.6	16.2	0.0628	1.16300
433.5	141.6	2.437	25740.0	27380.0	308.2	139.6	377.1	136.2	16.1	0.0614	1.15970
434.0	139.1	2.394	25900.0	27570.0	308.6	139.5	358.5	137.8	15.9	0.0602	1.15672
435.0	134.8	2.318	26190.0	27910.0	309.4	139.3	329.3	140.7	15.7	0.0580	1.15151
436.0	131.0	2.254	26450.0	28230.0	310.1	139.1	307.4	143.4	15.6	0.0562	1.14707
437.0	127.7	2.197	26710.0	28530.0	310.8	139.0	290.4	145.9	15.4	0.0548	1.14319
438.0	124.8	2.147	26950.0	28810.0	311.4	138.9	276.7	148.4	15.3	0.0535	1.13975
439.0	122.2	2.102	27180.0	29080.0	312.1	138.8	265.5	150.7	15.2	0.0524	1.13666
440.0	119.8	2.061	27400.0	29340.0	312.7	138.7	256.1	152.8	15.1	0.0515	1.13386
442.0	115.6	1.988	27830.0	29840.0	313.8	138.6	241.3	157.0	15.0	0.0501	1.12894
444.0	111.9	1.926	28230.0	30310.0	314.8	138.6	230.1	160.8	14.9	0.0490	1.12472
446.0	108.8	1.871	28620.0	30760.0	315.9	138.6	221.4	164.3	14.8	0.0482	1.12102
448.0	105.9	1.823	29000.0	31200.0	316.8	138.7	214.3	167.6	14.7	0.0476	1.11774
450.0	103.4	1.779	29370.0	31620.0	317.8	138.7	208.5	170.8	14.6	0.0471	1.11479
452.0	101.1	1.739	29730.0	32030.0	318.7	138.9	203.7	173.7	14.6	0.0468	1.11212
454.0	98.95	1.702	30080.0	32430.0	319.6	139.0	199.7	176.6	14.5	0.0465	1.10967
456.0	97.00	1.669	30430.0	32830.0	320.4	139.1	196.2	179.3	14.5	0.0463	1.10741
458.0	95.18	1.637	30780.0	33220.0	321.3	139.3	193.2	181.8	14.5	0.0462	1.10532
460.0	93.48	1.608	31120.0	33600.0	322.1	139.5	190.6	184.3	14.5	0.0462	1.10337
465.0	89.69	1.543	31950.0	34540.0	324.2	140.0	185.4	190.1	14.4	0.0462	1.09903
470.0	86.41	1.487	32770.0	35460.0	326.1	140.6	181.6	195.5	14.4	0.0464	1.09528
475.0	83.51	1.437	33580.0	36360.0	328.0	141.3	178.7	200.4	14.4	0.0467	1.09198
480.0	80.93	1.392	34370.0	37250.0	329.9	142.0	176.5	205.1	14.4	0.0471	1.08905
485.0	78.60	1.352	35170.0	38130.0	331.7	142.7	174.9	209.4	14.5	0.0476	1.08640

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
490.0	76.48	1.316	35960.0	39000.0	333.5	143.5	173.7	213.6	14.5	0.0481	1.08400
495.0	74.54	1.282	36740.0	39860.0	335.3	144.3	172.7	217.5	14.5	0.0486	1.08181
500.0	72.75	1.252	37530.0	40720.0	337.0	145.1	172.1	221.2	14.6	0.0492	1.07978
505.0	71.08	1.223	38310.0	41580.0	338.7	146.0	171.6	224.8	14.7	0.0498	1.07791
510.0	69.54	1.196	39100.0	42440.0	340.4	146.8	171.3	228.2	14.7	0.0504	1.07617
520.0	66.73	1.148	40670.0	44150.0	343.7	148.5	171.1	234.6	14.8	0.0517	1.07301
530.0	64.24	1.105	42240.0	45860.0	347.0	150.3	171.3	240.6	15.0	0.0531	1.07022
540.0	62.00	1.067	43830.0	47580.0	350.2	152.1	171.8	246.3	15.1	0.0545	1.06772
550.0	59.98	1.032	45430.0	49300.0	353.3	153.9	172.6	251.6	15.3	0.0559	1.06546
560.0	58.13	1.000	47030.0	51030.0	356.5	155.7	173.5	256.7	15.5	0.0574	1.06340
570.0	56.44	0.9710	48650.0	52770.0	359.5	157.5	174.5	261.5	15.6	0.0589	1.06151
580.0	54.87	0.9441	50280.0	54520.0	362.6	159.3	175.6	266.1	15.8	0.0604	1.05977
590.0	53.42	0.9191	51930.0	56280.0	365.6	161.1	176.8	270.6	16.0	0.0619	1.05815
600.0	52.07	0.8958	53590.0	58060.0	368.6	162.9	178.1	274.8	16.2	0.0635	1.05665
					4.20 MPa isobar						
135.60[a]	736.6	12.67	-22580.0	-22250.0	133.9	82.64	109.6	1679.0	2320.0	0.208	2.04089
160.0	713.9	12.28	-19790.0	-19440.0	152.9	87.41	116.7	1579.0	1100.0	0.183	2.00152
200.0	676.8	11.64	-15130.0	-14770.0	179.0	85.70	118.2	1422.0	506.0	0.154	1.93777
250.0	629.0	10.82	-9035.0	-8647.0	206.3	91.66	127.6	1184.0	268.0	0.128	1.85722
300.0	577.2	9.930	-2365.0	-1942.0	230.7	101.5	141.2	931.2	165.0	0.109	1.77200
320.0	554.3	9.537	504.7	945.1	240.0	105.9	147.6	828.7	138.0	0.102	1.73525
340.0	529.6	9.112	3509.0	3970.0	249.2	110.5	155.0	725.3	116.0	0.0945	1.69598
360.0	502.1	8.638	6668.0	7155.0	258.3	115.4	163.8	620.3	96.4	0.0877	1.65299
380.0	470.2	8.089	10020.0	10540.0	267.4	120.5	175.6	511.8	78.9	0.0810	1.60409
390.0	451.6	7.769	11800.0	12340.0	272.1	123.3	183.7	455.0	70.6	0.0778	1.57609
400.0	430.2	7.401	13660.0	14230.0	276.9	126.2	195.2	394.9	62.3	0.0744	1.54423
405.0	417.9	7.189	14640.0	15220.0	279.4	127.7	203.2	362.8	58.1	0.0727	1.52613
410.0	404.0	6.950	15660.0	16260.0	281.9	129.3	214.2	328.9	53.7	0.0710	1.50588
415.0	387.7	6.670	16740.0	17370.0	284.6	131.1	230.7	292.0	49.1	0.0696	1.48240
416.0	384.0	6.607	16970.0	17610.0	285.2	131.5	235.1	284.2	48.1	0.0694	1.47717
418.0	376.2	6.472	17440.0	18090.0	286.3	132.3	245.8	267.9	46.1	0.0695	1.46596
420.0	367.4	6.321	17930.0	18590.0	287.5	133.1	260.0	250.7	43.9	0.0705	1.45351
422.0	357.3	6.148	18450.0	19130.0	288.8	134.1	279.9	232.2	41.6	0.0738	1.43937
424.0	345.4	5.943	19010.0	19720.0	290.2	135.1	310.6	212.1	39.1	0.0871	1.42272
426.0	330.4	5.685	19650.0	20390.0	291.8	136.3	364.4	189.9	36.1	0.103	1.40196
427.0	321.0	5.522	20010.0	20770.0	292.7	137.0	410.2	177.8	34.4	0.0914	1.38902
427.5	315.5	5.428	20210.0	20990.0	293.2	137.4	442.2	171.4	33.5	0.0889	1.38156
428.0	309.4	5.323	20430.0	21220.0	293.7	137.9	483.3	164.8	32.5	0.0870	1.37321
428.5	302.3	5.202	20660.0	21470.0	294.3	138.3	537.7	158.1	31.3	0.0853	1.36371
429.0	294.2	5.061	20930.0	21760.0	295.0	138.9	610.9	151.3	30.1	0.0838	1.35272
430.0	272.8	4.694	21580.0	22470.0	296.6	140.1	833.6	138.1	27.2	0.0803	1.32435
431.0	243.9	4.196	22430.0	23430.0	298.9	141.3	1048.0	128.7	23.8	0.0763	1.28662
432.0	214.5	3.690	23330.0	24470.0	301.3	141.9	991.8	125.3	21.0	0.0730	1.24909
434.0	177.1	3.047	24680.0	26060.0	304.9	141.5	619.3	128.1	18.2	0.0678	1.20258
436.0	158.2	2.722	25550.0	27090.0	307.3	140.9	439.5	133.8	17.1	0.0632	1.17960
436.5	154.8	2.664	25730.0	27310.0	307.8	140.7	413.2	135.2	16.9	0.0622	1.17551
437.0	151.8	2.611	25900.0	27510.0	308.3	140.6	391.1	136.7	16.7	0.0612	1.17183
437.5	149.0	2.563	26060.0	27700.0	308.7	140.5	372.4	138.0	16.6	0.0604	1.16850
438.0	146.4	2.520	26210.0	27880.0	309.1	140.4	356.3	139.4	16.4	0.0595	1.16545
439.0	141.9	2.442	26500.0	28220.0	309.9	140.2	330.2	142.0	16.2	0.0580	1.16006
440.0	138.0	2.375	26770.0	28540.0	310.6	140.1	310.0	144.5	16.0	0.0567	1.15540
441.0	134.6	2.315	27030.0	28840.0	311.3	140.0	293.8	146.9	15.9	0.0555	1.15131
442.0	131.5	2.262	27270.0	29130.0	312.0	139.9	280.5	149.2	15.8	0.0545	1.14766
443.0	128.7	2.214	27510.0	29400.0	312.6	139.8	269.5	151.4	15.6	0.0536	1.14438
444.0	126.2	2.171	27730.0	29670.0	313.2	139.7	260.2	153.5	15.5	0.0528	1.14139
446.0	121.7	2.094	28170.0	30170.0	314.3	139.6	245.3	157.5	15.4	0.0515	1.13613
448.0	117.8	2.027	28580.0	30650.0	315.4	139.6	234.0	161.2	15.2	0.0505	1.13161
450.0	114.5	1.969	28980.0	31110.0	316.4	139.6	225.0	164.6	15.1	0.0497	1.12765
452.0	111.4	1.917	29360.0	31550.0	317.4	139.7	217.8	167.9	15.0	0.0491	1.12413
454.0	108.7	1.871	29740.0	31980.0	318.3	139.8	211.8	171.0	15.0	0.0486	1.12097
456.0	106.3	1.828	30100.0	32400.0	319.3	139.9	206.9	174.0	14.9	0.0482	1.11811

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
458.0	104.0	1.789	30460.0	32810.0	320.2	140.0	202.6	176.8	14.9	0.0479	1.11548
460.0	101.9	1.753	30820.0	33210.0	321.0	140.2	199.0	179.5	14.8	0.0477	1.11307
462.0	99.97	1.720	31170.0	33610.0	321.9	140.3	195.9	182.0	14.8	0.0476	1.11084
464.0	98.16	1.689	31510.0	34000.0	322.7	140.5	193.2	184.5	14.7	0.0475	1.10876
466.0	96.47	1.660	31850.0	34380.0	323.6	140.7	190.8	186.9	14.7	0.0475	1.10681
470.0	93.39	1.607	32520.0	35140.0	325.2	141.2	186.9	191.4	14.7	0.0475	1.10328
475.0	90.00	1.548	33350.0	36060.0	327.1	141.8	183.1	196.7	14.7	0.0476	1.09938
480.0	87.00	1.497	34160.0	36970.0	329.0	142.4	180.3	201.6	14.7	0.0479	1.09596
485.0	84.32	1.451	34970.0	37860.0	330.9	143.1	178.1	206.2	14.7	0.0483	1.09291
490.0	81.90	1.409	35770.0	38750.0	332.7	143.9	176.4	210.5	14.7	0.0487	1.09015
495.0	79.70	1.371	36570.0	39630.0	334.5	144.6	175.2	214.6	14.7	0.0492	1.08765
500.0	77.68	1.336	37360.0	40500.0	336.2	145.4	174.2	218.5	14.8	0.0498	1.08536
505.0	75.81	1.304	38150.0	41370.0	338.0	146.2	173.6	222.2	14.8	0.0503	1.08325
510.0	74.09	1.275	38940.0	42240.0	339.7	147.1	173.1	225.8	14.9	0.0509	1.08130
520.0	70.97	1.221	40530.0	43970.0	343.0	148.8	172.6	232.5	15.0	0.0522	1.07778
530.0	68.22	1.174	42110.0	45690.0	346.3	150.5	172.6	238.7	15.1	0.0535	1.07469
540.0	65.77	1.131	43710.0	47420.0	349.5	152.3	172.9	244.5	15.3	0.0549	1.07193
550.0	63.55	1.093	45310.0	49150.0	352.7	154.0	173.5	250.0	15.4	0.0563	1.06946
560.0	61.54	1.059	46920.0	50890.0	355.9	155.8	174.3	255.2	15.6	0.0577	1.06721
570.0	59.70	1.027	48550.0	52640.0	359.0	157.6	175.2	260.2	15.7	0.0592	1.06515
580.0	58.01	0.9980	50190.0	54400.0	362.0	159.4	176.3	264.9	15.9	0.0607	1.06326
590.0	56.44	0.9710	51840.0	56160.0	365.0	161.2	177.4	269.4	16.1	0.0622	1.06151
600.0	54.98	0.9458	53500.0	57940.0	368.0	163.0	178.7	273.8	16.3	0.0638	1.05988
				4.40 MPa isobar							
135.60[a]	736.7	12.67	-22580.0	-22240.0	133.9	82.66	109.6	1680.0	2330.0	0.208	2.04099
160.0	714.0	12.28	-19790.0	-19430.0	152.9	87.41	116.7	1580.0	1100.0	0.183	2.00169
200.0	676.9	11.65	-15130.0	-14750.0	179.0	85.71	118.2	1423.0	507.0	0.154	1.93799
250.0	629.2	10.83	-9042.0	-8636.0	206.3	91.67	127.5	1186.0	269.0	0.129	1.85754
300.0	577.5	9.935	-2376.0	-1933.0	230.7	101.5	141.1	933.4	166.0	0.109	1.77252
320.0	554.7	9.544	490.8	951.8	240.0	105.9	147.5	831.3	139.0	0.102	1.73589
340.0	530.1	9.121	3491.0	3973.0	249.1	110.5	154.8	728.4	116.0	0.0947	1.69681
360.0	502.8	8.651	6645.0	7154.0	258.2	115.4	163.5	624.3	96.8	0.0879	1.65412
380.0	471.3	8.108	9989.0	10530.0	267.4	120.5	175.0	517.0	79.5	0.0813	1.60576
390.0	453.0	7.794	11750.0	12320.0	272.0	123.2	182.8	461.1	71.2	0.0781	1.57821
400.0	432.1	7.434	13600.0	14200.0	276.7	126.1	193.5	402.3	63.0	0.0748	1.54709
405.0	420.2	7.229	14570.0	15180.0	279.2	127.6	200.8	371.2	58.9	0.0731	1.52957
410.0	406.9	7.001	15580.0	16210.0	281.7	129.2	210.5	338.5	54.6	0.0715	1.51016
415.0	391.6	6.737	16640.0	17290.0	284.3	130.9	224.4	303.5	50.2	0.0700	1.48802
420.0	373.1	6.419	17780.0	18470.0	287.2	132.8	246.9	265.1	45.4	0.0703	1.46162
422.0	364.3	6.268	18270.0	18970.0	288.4	133.6	260.7	248.4	43.3	0.0726	1.44919
424.0	354.3	6.096	18790.0	19510.0	289.6	134.5	279.8	230.7	41.0	0.0825	1.43513
426.0	342.6	5.894	19350.0	20100.0	291.0	135.6	308.0	211.7	38.6	0.0945	1.41876
427.0	335.8	5.777	19650.0	20420.0	291.8	136.1	327.9	201.6	37.2	0.0863	1.40935
428.0	328.1	5.645	19980.0	20760.0	292.6	136.7	354.0	191.1	35.8	0.0834	1.39881
429.0	319.3	5.494	20330.0	21130.0	293.4	137.4	389.6	180.3	34.2	0.0818	1.38677
430.0	309.0	5.316	20710.0	21540.0	294.4	138.1	439.5	169.1	32.5	0.0805	1.37269
430.5	303.0	5.214	20920.0	21770.0	294.9	138.5	472.1	163.4	31.5	0.0797	1.36465
431.0	296.5	5.100	21150.0	22010.0	295.5	139.0	511.1	157.8	30.5	0.0789	1.35579
431.5	289.1	4.974	21400.0	22280.0	296.1	139.4	556.7	152.4	29.5	0.0780	1.34598
434.0	241.4	4.154	22910.0	23970.0	300.0	141.6	759.7	132.9	23.7	0.0720	1.28342
436.0	204.3	3.514	24180.0	25430.0	303.4	142.2	667.4	129.9	20.3	0.0681	1.23623
438.0	179.4	3.087	25180.0	26600.0	306.0	141.9	510.4	132.7	18.5	0.0649	1.20545
440.0	163.5	2.813	25950.0	27510.0	308.1	141.5	407.1	137.2	17.5	0.0619	1.18601
445.0	140.6	2.419	27390.0	29210.0	312.0	140.8	292.5	148.7	16.3	0.0562	1.15846
446.0	137.5	2.365	27630.0	29490.0	312.6	140.8	280.5	150.8	16.2	0.0554	1.15473
447.0	134.6	2.316	27870.0	29770.0	313.2	140.7	270.3	152.8	16.0	0.0546	1.15134
448.0	132.0	2.271	28100.0	30040.0	313.8	140.6	261.6	154.8	15.9	0.0540	1.14825
450.0	127.3	2.191	28540.0	30540.0	314.9	140.6	247.3	158.6	15.7	0.0528	1.14277
452.0	123.3	2.122	28950.0	31030.0	316.0	140.6	236.3	162.2	15.6	0.0519	1.13803
454.0	119.8	2.061	29360.0	31490.0	317.0	140.6	227.4	165.5	15.5	0.0511	1.13388
456.0	116.6	2.006	29750.0	31940.0	318.0	140.7	220.3	168.7	15.4	0.0505	1.13018

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
458.0	113.8	1.957	30120.0	32370.0	319.0	140.8	214.3	171.7	15.3	0.0500	1.12684
460.0	111.2	1.913	30500.0	32800.0	319.9	140.9	209.3	174.6	15.2	0.0496	1.12382
462.0	108.8	1.872	30860.0	33210.0	320.8	141.0	205.0	177.4	15.2	0.0493	1.12105
464.0	106.6	1.834	31220.0	33620.0	321.7	141.2	201.4	180.0	15.1	0.0491	1.11850
466.0	104.6	1.799	31570.0	34020.0	322.5	141.3	198.2	182.6	15.1	0.0489	1.11614
468.0	102.7	1.766	31920.0	34410.0	323.4	141.5	195.4	185.0	15.0	0.0488	1.11395
470.0	100.9	1.736	32260.0	34800.0	324.2	141.7	193.0	187.4	15.0	0.0487	1.11189
475.0	96.88	1.667	33110.0	35750.0	326.2	142.3	188.1	193.0	15.0	0.0487	1.10729
480.0	93.40	1.607	33940.0	36680.0	328.2	142.9	184.4	198.2	14.9	0.0489	1.10329
485.0	90.32	1.554	34760.0	37600.0	330.1	143.5	181.6	203.0	14.9	0.0491	1.09975
490.0	87.56	1.506	35580.0	38500.0	331.9	144.2	179.5	207.5	14.9	0.0495	1.09660
495.0	85.06	1.463	36380.0	39390.0	333.7	145.0	177.9	211.8	15.0	0.0499	1.09376
500.0	82.79	1.424	37190.0	40280.0	335.5	145.7	176.6	215.9	15.0	0.0504	1.09117
505.0	80.70	1.388	37990.0	41160.0	337.3	146.5	175.7	219.7	15.0	0.0509	1.08880
510.0	78.77	1.355	38790.0	42030.0	339.0	147.3	175.0	223.4	15.1	0.0514	1.08661
515.0	76.98	1.324	39590.0	42910.0	340.7	148.2	174.5	227.0	15.1	0.0520	1.08458
520.0	75.32	1.296	40380.0	43780.0	342.4	149.0	174.1	230.4	15.2	0.0526	1.08270
530.0	72.29	1.244	41980.0	45520.0	345.7	150.7	173.9	236.8	15.3	0.0539	1.07928
540.0	69.60	1.197	43580.0	47260.0	348.9	152.4	174.0	242.8	15.4	0.0552	1.07625
550.0	67.19	1.156	45190.0	49000.0	352.1	154.2	174.5	248.4	15.6	0.0566	1.07354
560.0	65.00	1.118	46810.0	50750.0	355.3	156.0	175.2	253.8	15.7	0.0581	1.07109
570.0	63.01	1.084	48450.0	52500.0	358.4	157.7	176.0	258.8	15.9	0.0595	1.06885
580.0	61.18	1.053	50090.0	54270.0	361.5	159.5	177.0	263.7	16.0	0.0610	1.06680
590.0	59.49	1.023	51750.0	56040.0	364.5	161.3	178.1	268.3	16.2	0.0625	1.06491
600.0	57.92	0.9964	53410.0	57830.0	367.5	163.1	179.2	272.8	16.4	0.0640	1.06316
					4.60 MPa isobar						
135.60[a]	736.7	12.68	-22580.0	-22220.0	133.9	82.69	109.6	1681.0	2330.0	0.208	2.04109
160.0	714.1	12.29	-19790.0	-19420.0	152.9	87.41	116.7	1581.0	1110.0	0.183	2.00186
200.0	677.0	11.65	-15140.0	-14740.0	179.0	85.71	118.1	1424.0	508.0	0.154	1.93821
250.0	629.4	10.83	-9050.0	-8625.0	206.2	91.68	127.5	1187.0	269.0	0.129	1.85786
300.0	577.8	9.941	-2388.0	-1925.0	230.6	101.5	141.0	935.6	166.0	0.109	1.77302
320.0	555.2	9.551	476.9	958.5	239.9	105.9	147.4	833.9	139.0	0.102	1.73653
340.0	530.7	9.130	3473.0	3977.0	249.1	110.5	154.6	731.6	117.0	0.0948	1.69763
360.0	503.5	8.663	6622.0	7153.0	258.2	115.3	163.2	628.2	97.3	0.0881	1.65523
380.0	472.3	8.126	9956.0	10520.0	267.3	120.5	174.4	522.1	80.0	0.0816	1.60738
390.0	454.4	7.817	11710.0	12300.0	271.9	123.1	181.9	467.0	71.8	0.0784	1.58027
400.0	434.0	7.466	13550.0	14170.0	276.6	126.0	191.9	409.5	63.8	0.0752	1.54983
410.0	409.7	7.048	15510.0	16160.0	281.5	129.0	207.3	347.7	55.5	0.0719	1.51415
415.0	395.2	6.798	16550.0	17220.0	284.1	130.7	219.3	314.2	51.2	0.0704	1.49314
420.0	378.1	6.504	17650.0	18360.0	286.8	132.5	237.4	278.1	46.7	0.0702	1.46864
422.0	370.1	6.368	18120.0	18850.0	288.0	133.3	247.7	262.7	44.7	0.0719	1.45742
424.0	361.4	6.217	18610.0	19350.0	289.2	134.1	261.1	246.5	42.7	0.0792	1.44504
426.0	351.5	6.047	19130.0	19890.0	290.5	135.0	279.1	229.6	40.5	0.0885	1.43114
428.0	340.0	5.849	19690.0	20470.0	291.8	136.0	304.7	211.6	38.1	0.0803	1.41512
429.0	333.4	5.736	19990.0	20790.0	292.5	136.5	321.9	202.3	36.8	0.0793	1.40604
430.0	326.1	5.610	20300.0	21120.0	293.3	137.1	343.5	192.7	35.5	0.0787	1.39603
431.0	317.9	5.470	20640.0	21480.0	294.1	137.7	371.0	183.0	34.0	0.0781	1.38484
432.0	308.6	5.309	21000.0	21860.0	295.0	138.4	406.3	173.2	32.5	0.0774	1.37218
433.0	297.9	5.125	21390.0	22290.0	296.0	139.1	451.0	163.6	30.8	0.0764	1.35770
434.0	285.5	4.911	21830.0	22770.0	297.1	139.9	504.1	154.6	29.0	0.0750	1.34109
436.0	255.8	4.401	22840.0	23880.0	299.7	141.4	597.1	141.1	25.3	0.0715	1.30208
440.0	199.6	3.434	24880.0	26220.0	305.0	142.5	523.2	134.9	20.0	0.0656	1.23040
445.0	162.0	2.787	26700.0	28350.0	309.9	142.0	351.5	143.0	17.5	0.0602	1.18416
450.0	142.7	2.454	28030.0	29900.0	313.3	141.6	277.6	153.0	16.5	0.0562	1.16093
451.0	139.8	2.405	28260.0	30170.0	313.9	141.5	268.6	154.9	16.4	0.0556	1.15753
452.0	137.2	2.360	28490.0	30440.0	314.5	141.5	260.7	156.7	16.3	0.0550	1.15440
454.0	132.5	2.279	28930.0	30950.0	315.6	141.5	247.5	160.3	16.1	0.0540	1.14882
456.0	128.4	2.208	29350.0	31430.0	316.7	141.5	237.1	163.6	15.9	0.0531	1.14396
458.0	124.7	2.146	29750.0	31900.0	317.7	141.5	228.7	166.9	15.8	0.0524	1.13967
460.0	121.5	2.090	30150.0	32350.0	318.7	141.6	221.8	169.9	15.7	0.0518	1.13584

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
462.0	118.5	2.039	30530.0	32780.0	319.6	141.7	215.9	172.9	15.6	0.0514	1.13238
464.0	115.8	1.992	30900.0	33210.0	320.6	141.8	211.0	175.7	15.5	0.0510	1.12923
466.0	113.3	1.950	31270.0	33630.0	321.5	141.9	206.8	178.4	15.5	0.0507	1.12634
468.0	111.0	1.911	31630.0	34040.0	322.3	142.1	203.2	181.0	15.4	0.0504	1.12368
470.0	108.9	1.874	31990.0	34440.0	323.2	142.3	200.0	183.5	15.4	0.0502	1.12122
472.0	106.9	1.840	32340.0	34840.0	324.0	142.4	197.2	185.9	15.3	0.0501	1.11892
474.0	105.1	1.808	32690.0	35230.0	324.9	142.6	194.8	188.2	15.3	0.0500	1.11677
480.0	100.2	1.723	33710.0	36380.0	327.3	143.3	189.0	194.8	15.2	0.0500	1.11107
485.0	96.61	1.662	34550.0	37320.0	329.2	143.9	185.5	199.9	15.2	0.0501	1.10698
490.0	93.46	1.608	35380.0	38240.0	331.1	144.6	182.8	204.6	15.2	0.0503	1.10337
495.0	90.64	1.559	36200.0	39150.0	333.0	145.3	180.7	209.1	15.2	0.0507	1.10013
500.0	88.08	1.515	37010.0	40050.0	334.8	146.0	179.1	213.3	15.2	0.0511	1.09721
505.0	85.75	1.475	37820.0	40940.0	336.5	146.8	177.9	217.3	15.2	0.0515	1.09454
510.0	83.60	1.438	38630.0	41830.0	338.3	147.6	177.0	221.1	15.3	0.0520	1.09210
515.0	81.62	1.404	39430.0	42710.0	340.0	148.4	176.3	224.8	15.3	0.0526	1.08984
520.0	79.78	1.373	40240.0	43590.0	341.7	149.2	175.8	228.3	15.3	0.0531	1.08775
530.0	76.45	1.315	41850.0	45340.0	345.1	150.9	175.3	234.9	15.4	0.0544	1.08398
540.0	73.51	1.265	43460.0	47100.0	348.3	152.6	175.2	241.1	15.6	0.0557	1.08066
550.0	70.89	1.220	45080.0	48850.0	351.5	154.4	175.5	246.9	15.7	0.0570	1.07770
560.0	68.52	1.179	46700.0	50610.0	354.7	156.1	176.0	252.4	15.8	0.0584	1.07503
570.0	66.36	1.142	48340.0	52370.0	357.8	157.9	176.8	257.6	16.0	0.0598	1.07261
580.0	64.39	1.108	49990.0	54140.0	360.9	159.6	177.7	262.5	16.1	0.0613	1.07040
590.0	62.57	1.076	51650.0	55920.0	364.0	161.4	178.7	267.3	16.3	0.0628	1.06836
600.0	60.89	1.048	53320.0	57720.0	367.0	163.2	179.8	271.8	16.5	0.0643	1.06648
					4.80 MPa isobar						
135.70[a]	736.8	12.68	-22580.0	-22200.0	133.9	82.72	109.6	1682.0	2330.0	0.208	2.04118
160.0	714.2	12.29	-19800.0	-19410.0	152.9	87.42	116.7	1582.0	1110.0	0.183	2.00204
200.0	677.2	11.65	-15140.0	-14730.0	179.0	85.72	118.1	1425.0	509.0	0.154	1.93843
250.0	629.6	10.83	-9057.0	-8613.0	206.2	91.69	127.5	1189.0	270.0	0.129	1.85818
300.0	578.1	9.946	-2399.0	-1916.0	230.6	101.5	141.0	937.7	167.0	0.109	1.77353
320.0	555.6	9.558	463.1	965.3	239.9	105.9	147.3	836.4	140.0	0.102	1.73716
340.0	531.2	9.139	3456.0	3981.0	249.0	110.5	154.5	734.7	117.0	0.0950	1.69844
360.0	504.2	8.675	6599.0	7152.0	258.1	115.3	162.9	632.1	97.8	0.0883	1.65633
380.0	473.4	8.144	9924.0	10510.0	267.2	120.4	173.8	527.1	80.6	0.0818	1.60897
390.0	455.7	7.840	11670.0	12290.0	271.8	123.1	181.0	472.9	72.5	0.0787	1.58227
400.0	435.7	7.497	13500.0	14140.0	276.5	125.9	190.5	416.4	64.5	0.0755	1.55247
410.0	412.2	7.092	15430.0	16110.0	281.3	128.9	204.6	356.4	56.4	0.0723	1.51790
415.0	398.4	6.854	16460.0	17160.0	283.9	130.5	215.0	324.3	52.2	0.0709	1.49784
420.0	382.4	6.579	17540.0	18270.0	286.5	132.2	230.0	290.0	47.8	0.0703	1.47488
425.0	363.0	6.246	18710.0	19470.0	289.4	134.2	254.2	252.9	43.1	0.105	1.44738
426.0	358.6	6.169	18950.0	19730.0	290.0	134.6	261.0	245.1	42.1	0.0841	1.44108
428.0	348.8	6.000	19470.0	20270.0	291.3	135.5	277.8	228.9	40.0	0.0778	1.42738
430.0	337.5	5.807	20020.0	20850.0	292.6	136.4	300.7	212.0	37.7	0.0768	1.41178
431.0	331.2	5.698	20310.0	21150.0	293.3	136.9	315.5	203.4	36.5	0.0766	1.40306
432.0	324.3	5.580	20620.0	21480.0	294.1	137.5	333.2	194.7	35.2	0.0764	1.39357
433.0	316.7	5.449	20940.0	21820.0	294.9	138.0	354.6	185.9	33.9	0.0761	1.38316
434.0	308.2	5.303	21280.0	22190.0	295.7	138.6	380.2	177.2	32.5	0.0756	1.37168
435.0	298.8	5.141	21650.0	22580.0	296.6	139.3	410.1	168.8	31.0	0.0748	1.35898
436.0	288.3	4.961	22040.0	23010.0	297.6	139.9	443.0	161.1	29.5	0.0738	1.34494
440.0	239.2	4.115	23820.0	24990.0	302.1	142.2	519.0	141.6	23.6	0.0684	1.28051
445.0	189.0	3.252	25890.0	27370.0	307.5	142.8	415.8	140.7	19.4	0.0633	1.21725
450.0	161.1	2.771	27440.0	29170.0	311.5	142.5	316.3	148.5	17.6	0.0594	1.18306
451.0	157.1	2.703	27710.0	29480.0	312.2	142.4	303.2	150.3	17.4	0.0587	1.17827
452.0	153.5	2.641	27960.0	29780.0	312.9	142.4	291.8	152.1	17.2	0.0581	1.17392
453.0	150.2	2.584	28210.0	30070.0	313.5	142.3	281.7	153.9	17.0	0.0575	1.16996
454.0	147.2	2.532	28450.0	30350.0	314.1	142.3	272.9	155.6	16.9	0.0569	1.16632
456.0	141.8	2.439	28910.0	30880.0	315.3	142.3	258.1	159.1	16.7	0.0559	1.15987
458.0	137.1	2.358	29340.0	31380.0	316.4	142.3	246.4	162.4	16.4	0.0550	1.15428
460.0	132.9	2.287	29760.0	31860.0	317.4	142.3	236.9	165.6	16.3	0.0543	1.14937
462.0	129.2	2.224	30170.0	32330.0	318.5	142.4	229.0	168.6	16.1	0.0536	1.14501
464.0	125.9	2.166	30560.0	32780.0	319.4	142.4	222.4	171.6	16.0	0.0531	1.14110

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
466.0	122.9	2.115	30950.0	33220.0	320.4	142.5	216.9	174.4	15.9	0.0526	1.13755
468.0	120.1	2.067	31330.0	33650.0	321.3	142.7	212.1	177.1	15.8	0.0523	1.13431
470.0	117.6	2.023	31700.0	34070.0	322.2	142.8	208.1	179.7	15.8	0.0520	1.13134
472.0	115.3	1.983	32060.0	34480.0	323.1	143.0	204.5	182.2	15.7	0.0517	1.12859
474.0	113.1	1.945	32420.0	34890.0	323.9	143.2	201.4	184.7	15.7	0.0515	1.12604
476.0	111.0	1.910	32770.0	35290.0	324.8	143.3	198.7	187.1	15.6	0.0514	1.12366
480.0	107.3	1.846	33470.0	36070.0	326.4	143.8	194.1	191.6	15.5	0.0512	1.11934
485.0	103.2	1.776	34330.0	37030.0	328.4	144.3	189.7	196.8	15.5	0.0512	1.11462
490.0	99.64	1.714	35170.0	37970.0	330.3	145.0	186.4	201.8	15.4	0.0513	1.11047
495.0	96.45	1.659	36000.0	38900.0	332.2	145.6	183.8	206.4	15.4	0.0515	1.10680
500.0	93.57	1.610	36830.0	39810.0	334.0	146.4	181.8	210.8	15.4	0.0518	1.10350
505.0	90.97	1.565	37650.0	40720.0	335.8	147.1	180.3	215.0	15.4	0.0522	1.10051
510.0	88.58	1.524	38460.0	41610.0	337.6	147.9	179.1	218.9	15.5	0.0527	1.09778
515.0	86.39	1.486	39280.0	42510.0	339.3	148.7	178.2	222.7	15.5	0.0532	1.09528
520.0	84.36	1.451	40090.0	43400.0	341.1	149.5	177.5	226.3	15.5	0.0537	1.09296
530.0	80.71	1.389	41710.0	45170.0	344.4	151.1	176.7	233.1	15.6	0.0548	1.08881
540.0	77.50	1.333	43330.0	46930.0	347.7	152.8	176.4	239.5	15.7	0.0561	1.08518
550.0	74.65	1.284	44960.0	48700.0	351.0	154.5	176.5	245.4	15.8	0.0574	1.08195
560.0	72.09	1.240	46590.0	50460.0	354.2	156.3	176.9	251.0	16.0	0.0588	1.07906
570.0	69.76	1.200	48240.0	52230.0	357.3	158.0	177.6	256.4	16.1	0.0602	1.07644
580.0	67.64	1.164	49890.0	54010.0	360.4	159.8	178.4	261.4	16.3	0.0616	1.07405
590.0	65.69	1.130	51560.0	55800.0	363.5	161.5	179.3	266.2	16.4	0.0631	1.07186
600.0	63.88	1.099	53230.0	57600.0	366.5	163.3	180.4	270.9	16.6	0.0646	1.06984
					5.00 MPa isobar						
135.70[a]	736.9	12.68	-22580.0	-22190.0	133.9	82.75	109.7	1682.0	2330.0	0.208	2.04128
160.0	714.3	12.29	-19800.0	-19390.0	152.9	87.42	116.7	1583.0	1110.0	0.183	2.00221
200.0	677.3	11.65	-15140.0	-14720.0	178.9	85.73	118.1	1426.0	510.0	0.154	1.93865
250.0	629.8	10.84	-9064.0	-8602.0	206.2	91.70	127.4	1190.0	270.0	0.129	1.85850
300.0	578.4	9.952	-2410.0	-1907.0	230.6	101.5	140.9	939.8	167.0	0.109	1.77403
320.0	555.9	9.565	449.5	972.2	239.8	105.9	147.2	839.0	140.0	0.102	1.73778
340.0	531.7	9.148	3439.0	3985.0	249.0	110.5	154.3	737.8	118.0	0.0952	1.69925
360.0	504.9	8.687	6576.0	7152.0	258.0	115.3	162.6	635.9	98.3	0.0885	1.65741
380.0	474.4	8.162	9893.0	10510.0	267.1	120.4	173.3	532.0	81.1	0.0821	1.61053
390.0	457.0	7.863	11640.0	12270.0	271.7	123.0	180.2	478.5	73.0	0.0790	1.58421
400.0	437.5	7.526	13450.0	14120.0	276.3	125.8	189.2	423.2	65.1	0.0759	1.55500
410.0	414.7	7.134	15370.0	16070.0	281.2	128.8	202.2	364.7	57.2	0.0728	1.52144
415.0	401.4	6.906	16380.0	17100.0	283.7	130.3	211.4	333.7	53.1	0.0713	1.50221
420.0	386.4	6.647	17440.0	18190.0	286.3	132.0	224.2	301.1	48.9	0.0705	1.48050
425.0	368.5	6.341	18560.0	19350.0	289.0	133.8	243.3	266.2	44.4	0.0969	1.45515
426.0	364.5	6.272	18800.0	19600.0	289.6	134.2	248.4	258.9	43.5	0.0808	1.44947
428.0	355.9	6.123	19290.0	20110.0	290.8	135.0	260.5	244.0	41.6	0.0760	1.43732
430.0	346.2	5.957	19800.0	20640.0	292.1	135.9	276.0	228.6	39.5	0.0753	1.42386
432.0	335.3	5.769	20350.0	21210.0	293.4	136.8	296.3	212.8	37.3	0.0752	1.40871
434.0	322.7	5.552	20930.0	21830.0	294.8	137.8	323.4	196.8	35.0	0.0750	1.39138
435.0	315.6	5.430	21240.0	22160.0	295.6	138.3	340.2	188.9	33.8	0.0748	1.38168
436.0	307.9	5.297	21570.0	22510.0	296.4	138.9	359.2	181.1	32.5	0.0744	1.37120
437.0	299.5	5.152	21910.0	22880.0	297.2	139.5	380.2	173.7	31.2	0.0738	1.35985
438.0	290.4	4.996	22270.0	23280.0	298.1	140.1	402.2	166.8	29.9	0.0730	1.34763
450.0	182.8	3.145	26790.0	28380.0	309.6	143.2	356.0	146.5	19.1	0.0620	1.20961
451.0	177.5	3.053	27090.0	28730.0	310.4	143.2	340.5	147.8	18.7	0.0614	1.20305
452.0	172.6	2.970	27380.0	29060.0	311.1	143.1	326.4	149.2	18.4	0.0608	1.19712
453.0	168.2	2.894	27650.0	29380.0	311.8	143.1	313.7	150.7	18.2	0.0602	1.19175
454.0	164.2	2.825	27920.0	29690.0	312.5	143.1	302.2	152.3	17.9	0.0596	1.18686
455.0	160.5	2.762	28170.0	29980.0	313.2	143.0	292.0	153.8	17.7	0.0591	1.18239
456.0	157.1	2.703	28420.0	30270.0	313.8	143.0	282.8	155.4	17.5	0.0586	1.17828
458.0	151.1	2.599	28900.0	30820.0	315.0	143.0	267.2	158.6	17.2	0.0576	1.17099
460.0	145.8	2.508	29350.0	31340.0	316.1	143.0	254.6	161.8	17.0	0.0567	1.16469
462.0	141.2	2.429	29780.0	31840.0	317.2	143.0	244.3	164.8	16.8	0.0560	1.15917
464.0	137.1	2.358	30200.0	32320.0	318.2	143.1	235.7	167.8	16.6	0.0553	1.15428
466.0	133.4	2.295	30610.0	32790.0	319.2	143.2	228.5	170.7	16.5	0.0547	1.14991
468.0	130.0	2.237	31000.0	33240.0	320.2	143.3	222.4	173.5	16.3	0.0542	1.14596

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	127.0	2.185	31390.0	33680.0	321.1	143.4	217.2	176.2	16.2	0.0538	1.14236
472.0	124.2	2.137	31770.0	34110.0	322.1	143.5	212.7	178.8	16.1	0.0535	1.13907
474.0	121.6	2.092	32140.0	34530.0	323.0	143.7	208.8	181.4	16.1	0.0532	1.13603
476.0	119.2	2.051	32500.0	34940.0	323.8	143.8	205.4	183.8	16.0	0.0529	1.13322
478.0	117.0	2.013	32860.0	35350.0	324.7	144.0	202.4	186.2	15.9	0.0527	1.13061
480.0	114.9	1.977	33220.0	35750.0	325.5	144.2	199.8	188.5	15.9	0.0526	1.12816
485.0	110.2	1.896	34100.0	36740.0	327.6	144.8	194.4	194.0	15.8	0.0524	1.12269
490.0	106.1	1.825	34960.0	37700.0	329.5	145.3	190.3	199.1	15.7	0.0524	1.11795
495.0	102.5	1.763	35800.0	38640.0	331.4	146.0	187.1	203.9	15.7	0.0525	1.11377
500.0	99.27	1.708	36640.0	39570.0	333.3	146.7	184.7	208.4	15.7	0.0527	1.11005
505.0	96.36	1.658	37470.0	40490.0	335.1	147.4	182.8	212.7	15.7	0.0530	1.10670
510.0	93.71	1.612	38300.0	41400.0	336.9	148.1	181.3	216.8	15.7	0.0534	1.10366
515.0	91.29	1.571	39120.0	42300.0	338.7	148.9	180.2	220.7	15.7	0.0538	1.10088
520.0	89.05	1.532	39940.0	43200.0	340.4	149.7	179.3	224.4	15.7	0.0543	1.09832
525.0	86.98	1.497	40750.0	44090.0	342.1	150.5	178.6	228.0	15.7	0.0548	1.09596
530.0	85.06	1.463	41570.0	44990.0	343.8	151.3	178.2	231.4	15.8	0.0554	1.09376
540.0	81.57	1.403	43200.0	46760.0	347.2	153.0	177.7	237.9	15.9	0.0565	1.08979
550.0	78.47	1.350	44840.0	48540.0	350.4	154.7	177.6	244.0	16.0	0.0578	1.08628
560.0	75.71	1.302	46480.0	50320.0	353.6	156.4	177.9	249.8	16.1	0.0591	1.08315
570.0	73.20	1.259	48130.0	52100.0	356.8	158.1	178.4	255.2	16.2	0.0605	1.08032
580.0	70.93	1.220	49790.0	53890.0	359.9	159.9	179.1	260.3	16.4	0.0619	1.07775
590.0	68.84	1.184	51460.0	55680.0	363.0	161.6	180.0	265.3	16.5	0.0634	1.07540
600.0	66.91	1.151	53140.0	57490.0	366.0	163.3	181.0	270.0	16.7	0.0649	1.07323
					5.50 MPa isobar						
135.80[a]	737.0	12.68	-22580.0	-22140.0	133.9	82.81	109.7	1684.0	2340.0	0.208	2.04152
160.0	714.6	12.29	-19810.0	-19360.0	152.8	87.42	116.6	1585.0	1110.0	0.183	2.00264
200.0	677.6	11.66	-15160.0	-14680.0	178.9	85.74	118.1	1428.0	512.0	0.154	1.93920
250.0	630.3	10.84	-9081.0	-8574.0	206.1	91.73	127.3	1194.0	272.0	0.129	1.85929
300.0	579.2	9.965	-2437.0	-1885.0	230.5	101.5	140.7	945.1	168.0	0.110	1.77528
320.0	556.9	9.582	415.6	989.7	239.7	105.9	146.9	845.3	141.0	0.102	1.73933
340.0	533.0	9.169	3396.0	3996.0	248.9	110.5	153.9	745.5	119.0	0.0956	1.70123
360.0	506.7	8.717	6521.0	7152.0	257.9	115.3	161.9	645.3	99.4	0.0890	1.66006
380.0	476.9	8.205	9816.0	10490.0	266.9	120.3	172.0	543.9	82.4	0.0827	1.61429
390.0	460.1	7.916	11540.0	12240.0	271.4	122.9	178.4	492.2	74.5	0.0797	1.58886
400.0	441.5	7.595	13340.0	14060.0	276.0	125.6	186.4	439.2	66.8	0.0767	1.56096
410.0	420.2	7.229	15210.0	15970.0	280.8	128.5	197.1	384.1	59.1	0.0737	1.52953
415.0	408.2	7.022	16190.0	16980.0	283.2	130.0	204.3	355.4	55.3	0.0723	1.51195
420.0	394.8	6.792	17210.0	18020.0	285.7	131.6	213.5	325.8	51.4	0.0712	1.49262
425.0	379.7	6.532	18280.0	19120.0	288.3	133.2	225.8	294.9	47.3	0.0845	1.47095
430.0	362.0	6.229	19400.0	20290.0	291.0	135.0	243.4	262.7	43.1	0.0729	1.44595
432.0	354.0	6.091	19880.0	20780.0	292.2	135.7	252.7	249.4	41.3	0.0729	1.43469
434.0	345.3	5.940	20370.0	21300.0	293.4	136.5	263.8	236.1	39.5	0.0731	1.42251
436.0	335.7	5.775	20890.0	21840.0	294.6	137.3	277.1	222.6	37.6	0.0733	1.40923
438.0	325.1	5.593	21430.0	22410.0	295.9	138.2	292.9	209.4	35.6	0.0734	1.39466
440.0	313.4	5.391	21990.0	23010.0	297.3	139.1	311.2	196.6	33.6	0.0732	1.37863
442.0	300.4	5.168	22590.0	23660.0	298.8	140.0	331.1	184.9	31.6	0.0725	1.36104
444.0	286.2	4.923	23220.0	24340.0	300.3	141.0	350.0	174.7	29.5	0.0714	1.34205
450.0	240.9	4.145	25200.0	26530.0	305.2	143.2	369.5	157.0	24.1	0.0669	1.28281
452.0	227.0	3.905	25850.0	27260.0	306.8	143.6	361.3	155.0	22.8	0.0656	1.26492
453.0	220.5	3.793	26170.0	27620.0	307.6	143.8	355.4	154.5	22.2	0.0651	1.25664
454.0	214.3	3.686	26480.0	27970.0	308.4	143.9	348.4	154.3	21.7	0.0645	1.24882
455.0	208.4	3.586	26780.0	28320.0	309.1	144.1	340.9	154.4	21.2	0.0640	1.24147
456.0	202.9	3.491	27080.0	28650.0	309.9	144.1	332.9	154.7	20.8	0.0636	1.23459
457.0	197.8	3.403	27370.0	28980.0	310.6	144.2	324.7	155.2	20.4	0.0631	1.22816
458.0	193.0	3.320	27650.0	29300.0	311.3	144.3	316.5	155.9	20.0	0.0627	1.22216
459.0	188.5	3.242	27920.0	29620.0	312.0	144.3	308.5	156.7	19.7	0.0623	1.21657
460.0	184.2	3.170	28190.0	29920.0	312.7	144.4	300.8	157.6	19.4	0.0619	1.21136
462.0	176.6	3.038	28700.0	30510.0	313.9	144.4	286.3	159.7	19.0	0.0611	1.20197
464.0	169.9	2.922	29180.0	31070.0	315.1	144.5	273.5	162.0	18.6	0.0604	1.19375
466.0	163.9	2.820	29650.0	31600.0	316.3	144.5	262.3	164.4	18.2	0.0597	1.18652
468.0	158.6	2.729	30100.0	32120.0	317.4	144.6	252.6	167.0	17.9	0.0591	1.18011

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
470.0	153.9	2.647	30540.0	32610.0	318.4	144.7	244.2	169.5	17.7	0.0585	1.17439
472.0	149.6	2.574	30960.0	33090.0	319.5	144.8	237.0	172.1	17.5	0.0580	1.16924
474.0	145.7	2.507	31370.0	33560.0	320.5	144.9	230.7	174.6	17.3	0.0576	1.16458
476.0	142.1	2.446	31770.0	34020.0	321.4	145.0	225.2	177.1	17.2	0.0572	1.16033
478.0	138.9	2.389	32160.0	34460.0	322.3	145.2	220.4	179.5	17.0	0.0568	1.15644
480.0	135.9	2.337	32550.0	34900.0	323.3	145.3	216.2	181.9	16.9	0.0565	1.15285
482.0	133.1	2.289	32930.0	35330.0	324.1	145.5	212.5	184.2	16.8	0.0562	1.14953
484.0	130.5	2.244	33300.0	35750.0	325.0	145.7	209.2	186.5	16.8	0.0559	1.14645
486.0	128.0	2.202	33670.0	36160.0	325.9	145.9	206.2	188.7	16.7	0.0557	1.14357
488.0	125.7	2.163	34030.0	36570.0	326.7	146.1	203.6	190.9	16.6	0.0556	1.14088
490.0	123.6	2.126	34390.0	36980.0	327.5	146.3	201.3	193.1	16.5	0.0554	1.13835
495.0	118.7	2.042	35280.0	37970.0	329.6	146.8	196.4	198.2	16.4	0.0552	1.13264
500.0	114.4	1.969	36150.0	38950.0	331.5	147.4	192.6	203.0	16.3	0.0552	1.12765
505.0	110.6	1.903	37010.0	39900.0	333.4	148.1	189.7	207.6	16.3	0.0553	1.12322
510.0	107.2	1.845	37860.0	40840.0	335.3	148.8	187.4	211.9	16.3	0.0554	1.11926
515.0	104.1	1.792	38710.0	41780.0	337.1	149.5	185.5	216.1	16.2	0.0557	1.11569
520.0	101.3	1.743	39540.0	42700.0	338.9	150.3	184.1	220.0	16.2	0.0560	1.11243
525.0	98.74	1.699	40380.0	43620.0	340.6	151.0	183.0	223.8	16.2	0.0564	1.10945
530.0	96.35	1.658	41210.0	44530.0	342.4	151.8	182.1	227.5	16.2	0.0569	1.10670
535.0	94.13	1.619	42040.0	45440.0	344.1	152.6	181.4	231.0	16.3	0.0573	1.10415
540.0	92.06	1.584	42870.0	46340.0	345.8	153.4	180.9	234.4	16.3	0.0579	1.10178
550.0	88.31	1.519	44530.0	48150.0	349.1	155.1	180.4	240.8	16.4	0.0590	1.09749
560.0	84.99	1.462	46190.0	49950.0	352.3	156.7	180.3	246.8	16.5	0.0602	1.09369
570.0	82.01	1.411	47860.0	51760.0	355.5	158.4	180.5	252.5	16.6	0.0615	1.09030
580.0	79.31	1.364	49530.0	53570.0	358.7	160.1	181.0	257.9	16.7	0.0628	1.08724
590.0	76.85	1.322	51220.0	55380.0	361.8	161.9	181.6	263.0	16.8	0.0642	1.08445
600.0	74.59	1.283	52910.0	57200.0	364.8	163.6	182.5	267.9	17.0	0.0657	1.08190
					6.00 MPa isobar						
135.90[a]	737.2	12.68	-22580.0	-22100.0	134.0	82.88	109.8	1686.0	2340.0	0.208	2.04176
160.0	714.9	12.30	-19820.0	-19330.0	152.7	87.43	116.6	1588.0	1120.0	0.183	2.00307
200.0	678.0	11.66	-15170.0	-14650.0	178.8	85.76	118.0	1431.0	514.0	0.154	1.93974
250.0	630.8	10.85	-9098.0	-8546.0	206.0	91.75	127.3	1197.0	273.0	0.129	1.86007
300.0	580.0	9.979	-2465.0	-1863.0	230.4	101.5	140.5	950.3	169.0	0.110	1.77651
320.0	557.9	9.598	382.4	1007.0	239.6	105.9	146.7	851.5	142.0	0.103	1.74086
340.0	534.2	9.191	3355.0	4007.0	248.7	110.5	153.5	752.9	120.0	0.0960	1.70317
360.0	508.3	8.745	6467.0	7153.0	257.7	115.3	161.3	654.4	101.0	0.0895	1.66262
380.0	479.3	8.245	9743.0	10470.0	266.7	120.2	170.9	555.3	83.7	0.0833	1.61787
390.0	463.0	7.966	11460.0	12210.0	271.2	122.8	176.8	505.1	75.9	0.0804	1.59323
400.0	445.2	7.659	13230.0	14010.0	275.8	125.5	184.0	454.1	68.3	0.0775	1.56645
410.0	425.1	7.314	15070.0	15890.0	280.4	128.3	193.2	401.8	60.9	0.0746	1.53675
420.0	401.8	6.914	17020.0	17890.0	285.2	131.2	206.2	347.4	53.5	0.0721	1.50279
425.0	388.5	6.683	18040.0	18940.0	287.7	132.7	215.1	319.3	49.8	0.0786	1.48349
430.0	373.4	6.424	19110.0	20040.0	290.3	134.4	226.6	290.4	45.9	0.0719	1.46203
432.0	366.8	6.311	19550.0	20500.0	291.3	135.0	232.2	278.7	44.3	0.0719	1.45269
434.0	359.8	6.190	20000.0	20970.0	292.4	135.7	238.6	266.9	42.7	0.0719	1.44282
436.0	352.4	6.062	20470.0	21460.0	293.5	136.4	245.8	255.1	41.1	0.0721	1.43237
438.0	344.4	5.925	20940.0	21960.0	294.7	137.2	254.0	243.3	39.5	0.0724	1.42126
440.0	335.8	5.778	21430.0	22470.0	295.9	137.9	263.1	231.7	37.8	0.0726	1.40941
442.0	326.6	5.620	21940.0	23010.0	297.1	138.7	273.3	220.4	36.1	0.0727	1.39676
444.0	316.8	5.450	22470.0	23570.0	298.3	139.5	284.3	209.6	34.4	0.0727	1.38326
446.0	306.2	5.268	23010.0	24150.0	299.6	140.3	295.5	199.6	32.6	0.0723	1.36892
448.0	295.0	5.075	23570.0	24750.0	301.0	141.0	306.1	190.6	30.9	0.0716	1.35384
450.0	283.3	4.874	24140.0	25370.0	302.4	141.8	314.9	182.9	29.3	0.0707	1.33823
455.0	253.5	4.361	25600.0	26970.0	305.9	143.4	323.6	170.1	25.7	0.0680	1.29906
456.0	247.7	4.262	25890.0	27300.0	306.6	143.7	322.8	168.6	25.1	0.0675	1.29155
458.0	236.6	4.070	26470.0	27940.0	308.0	144.2	319.1	166.4	23.9	0.0665	1.27717
460.0	226.1	3.889	27030.0	28570.0	309.4	144.5	313.1	165.1	22.9	0.0656	1.26376
462.0	216.3	3.722	27580.0	29190.0	310.8	144.8	305.4	164.7	22.1	0.0648	1.25143
464.0	207.4	3.568	28110.0	29790.0	312.1	145.1	296.6	164.9	21.4	0.0641	1.24019
466.0	199.3	3.428	28630.0	30380.0	313.3	145.3	287.3	165.6	20.8	0.0635	1.23001

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
468.0	191.9	3.301	29130.0	30940.0	314.5	145.4	278.1	166.8	20.2	0.0629	1.22083
470.0	185.2	3.186	29610.0	31490.0	315.7	145.6	269.2	168.2	19.8	0.0624	1.21256
472.0	179.1	3.082	30070.0	32020.0	316.8	145.7	260.8	170.0	19.4	0.0619	1.20509
474.0	173.6	2.987	30530.0	32530.0	317.9	145.8	253.2	171.8	19.1	0.0614	1.19834
476.0	168.6	2.901	30960.0	33030.0	319.0	146.0	246.2	173.8	18.8	0.0610	1.19222
478.0	164.0	2.822	31390.0	33520.0	320.0	146.1	239.9	175.9	18.5	0.0606	1.18664
480.0	159.8	2.749	31810.0	33990.0	321.0	146.3	234.3	178.0	18.3	0.0602	1.18154
482.0	155.9	2.683	32220.0	34460.0	321.9	146.4	229.2	180.2	18.1	0.0599	1.17686
484.0	152.3	2.621	32620.0	34910.0	322.9	146.6	224.7	182.3	18.0	0.0596	1.17254
486.0	149.0	2.564	33020.0	35360.0	323.8	146.7	220.7	184.4	17.8	0.0593	1.16855
488.0	145.9	2.510	33400.0	35790.0	324.7	146.9	217.0	186.6	17.7	0.0590	1.16485
490.0	143.0	2.461	33790.0	36220.0	325.6	147.1	213.7	188.7	17.6	0.0588	1.16139
492.0	140.3	2.414	34160.0	36650.0	326.4	147.3	210.8	190.7	17.5	0.0586	1.15817
494.0	137.8	2.370	34540.0	37070.0	327.3	147.5	208.1	192.8	17.4	0.0584	1.15514
500.0	131.0	2.253	35630.0	38300.0	329.7	148.2	201.6	198.7	17.2	0.0580	1.14708
505.0	126.1	2.169	36530.0	39290.0	331.7	148.8	197.4	203.4	17.0	0.0579	1.14131
510.0	121.8	2.095	37410.0	40270.0	333.7	149.4	194.1	207.9	16.9	0.0578	1.13622
515.0	117.9	2.028	38280.0	41230.0	335.5	150.1	191.5	212.2	16.9	0.0579	1.13167
520.0	114.4	1.967	39140.0	42190.0	337.4	150.8	189.3	216.4	16.8	0.0581	1.12757
525.0	111.2	1.913	39990.0	43130.0	339.2	151.5	187.7	220.3	16.8	0.0583	1.12384
530.0	108.2	1.862	40840.0	44060.0	341.0	152.3	186.3	224.1	16.8	0.0586	1.12044
535.0	105.5	1.816	41690.0	44990.0	342.7	153.1	185.3	227.8	16.8	0.0590	1.11731
540.0	103.0	1.773	42530.0	45920.0	344.4	153.8	184.5	231.3	16.8	0.0594	1.11442
550.0	98.54	1.695	44220.0	47760.0	347.8	155.4	183.4	238.0	16.8	0.0603	1.10923
560.0	94.59	1.627	45900.0	49590.0	351.1	157.1	182.8	244.3	16.9	0.0614	1.10468
570.0	91.07	1.567	47580.0	51410.0	354.3	158.7	182.7	250.2	16.9	0.0626	1.10065
580.0	87.92	1.513	49270.0	53240.0	357.5	160.4	182.9	255.8	17.0	0.0638	1.09704
590.0	85.05	1.463	50970.0	55070.0	360.6	162.1	183.4	261.1	17.1	0.0652	1.09378
600.0	82.44	1.418	52680.0	56910.0	363.7	163.8	184.0	266.2	17.3	0.0665	1.09081
					6.50 MPa isobar						
135.90[a]	737.3	12.69	-22570.0	-22060.0	134.0	82.95	109.9	1688.0	2350.0	0.208	2.04200
160.0	715.1	12.30	-19820.0	-19300.0	152.7	87.43	116.6	1590.0	1130.0	0.183	2.00349
200.0	678.3	11.67	-15180.0	-14620.0	178.8	85.78	118.0	1434.0	516.0	0.154	1.94029
250.0	631.2	10.86	-9116.0	-8517.0	206.0	91.78	127.2	1201.0	274.0	0.129	1.86085
300.0	580.8	9.992	-2491.0	-1841.0	230.3	101.6	140.3	955.5	170.0	0.110	1.77772
320.0	558.8	9.614	349.6	1026.0	239.5	105.9	146.4	857.6	143.0	0.103	1.74235
340.0	535.4	9.211	3314.0	4019.0	248.6	110.5	153.1	760.2	121.0	0.0964	1.70507
360.0	509.9	8.773	6415.0	7156.0	257.6	115.3	160.7	663.3	102.0	0.0900	1.66511
380.0	481.5	8.284	9674.0	10460.0	266.5	120.2	169.9	566.3	85.0	0.0839	1.62130
400.0	448.6	7.718	13130.0	13970.0	275.5	125.4	181.9	468.2	69.8	0.0782	1.57156
410.0	429.6	7.390	14950.0	15830.0	280.1	128.1	190.0	418.1	62.6	0.0755	1.54330
420.0	407.9	7.018	16850.0	17780.0	284.8	130.9	200.8	366.9	55.5	0.0729	1.51160
430.0	382.4	6.580	18870.0	19860.0	289.7	133.9	216.1	314.2	48.3	0.0718	1.47487
435.0	367.6	6.324	19940.0	20960.0	292.2	135.5	226.6	287.4	44.7	0.0716	1.45380
440.0	350.9	6.037	21050.0	22130.0	294.9	137.1	239.8	260.8	41.0	0.0720	1.43030
442.0	343.5	5.911	21510.0	22610.0	296.0	137.8	246.0	250.3	39.5	0.0722	1.42010
444.0	335.8	5.778	21990.0	23110.0	297.1	138.5	252.6	240.1	37.9	0.0724	1.40939
446.0	327.7	5.637	22470.0	23620.0	298.3	139.2	259.5	230.3	36.4	0.0725	1.39816
448.0	319.1	5.490	22970.0	24150.0	299.4	139.9	266.7	220.9	34.9	0.0725	1.38640
450.0	310.1	5.335	23470.0	24690.0	300.6	140.6	273.8	212.2	33.4	0.0723	1.37416
455.0	286.1	4.922	24780.0	26100.0	303.8	142.3	288.4	194.1	29.9	0.0709	1.34195
460.0	261.4	4.498	26120.0	27560.0	307.0	143.8	294.1	182.4	26.8	0.0689	1.30941
462.0	251.9	4.333	26650.0	28150.0	308.2	144.3	293.4	179.3	25.7	0.0681	1.29692
464.0	242.6	4.174	27180.0	28730.0	309.5	144.7	291.2	177.2	24.7	0.0673	1.28496
466.0	233.8	4.022	27700.0	29310.0	310.7	145.1	287.7	175.7	23.9	0.0666	1.27361
468.0	225.4	3.878	28210.0	29880.0	312.0	145.5	283.3	174.8	23.1	0.0660	1.26296
470.0	217.6	3.743	28710.0	30440.0	313.2	145.8	278.1	174.5	22.4	0.0654	1.25302
472.0	210.3	3.618	29200.0	31000.0	314.3	146.0	272.4	174.7	21.8	0.0649	1.24379
474.0	203.5	3.501	29680.0	31530.0	315.5	146.3	266.5	175.2	21.3	0.0644	1.23526
476.0	197.2	3.392	30140.0	32060.0	316.6	146.5	260.6	176.1	20.9	0.0640	1.22739

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
478.0	191.3	3.292	30600.0	32580.0	317.7	146.7	254.8	177.2	20.5	0.0636	1.22014
480.0	185.9	3.199	31050.0	33080.0	318.7	146.9	249.2	178.5	20.1	0.0633	1.21346
482.0	180.9	3.113	31490.0	33570.0	319.7	147.1	243.8	180.0	19.8	0.0629	1.20730
484.0	176.3	3.033	31910.0	34060.0	320.7	147.2	238.9	181.6	19.5	0.0626	1.20162
486.0	172.0	2.959	32330.0	34530.0	321.7	147.4	234.2	183.3	19.3	0.0623	1.19635
488.0	168.0	2.890	32740.0	34990.0	322.7	147.6	230.0	185.0	19.1	0.0621	1.19147
490.0	164.3	2.826	33150.0	35450.0	323.6	147.8	226.1	186.8	18.9	0.0618	1.18694
492.0	160.8	2.766	33550.0	35900.0	324.5	148.0	222.5	188.6	18.7	0.0616	1.18272
494.0	157.5	2.710	33940.0	36340.0	325.4	148.2	219.2	190.5	18.5	0.0614	1.17877
496.0	154.4	2.657	34330.0	36770.0	326.3	148.4	216.2	192.4	18.4	0.0612	1.17507
498.0	151.6	2.607	34710.0	37200.0	327.1	148.6	213.4	194.2	18.3	0.0610	1.17161
500.0	148.8	2.561	35090.0	37630.0	328.0	148.8	210.9	196.1	18.2	0.0609	1.16834
505.0	142.7	2.454	36020.0	38670.0	330.1	149.4	205.5	200.6	17.9	0.0606	1.16097
510.0	137.2	2.361	36930.0	39690.0	332.1	150.0	201.2	205.1	17.7	0.0604	1.15452
515.0	132.4	2.279	37830.0	40680.0	334.0	150.7	197.7	209.4	17.6	0.0603	1.14882
520.0	128.1	2.204	38720.0	41660.0	335.9	151.3	194.9	213.6	17.5	0.0603	1.14373
525.0	124.2	2.137	39590.0	42630.0	337.8	152.0	192.6	217.6	17.4	0.0604	1.13914
530.0	120.7	2.077	40460.0	43590.0	339.6	152.7	190.8	221.5	17.4	0.0606	1.13498
535.0	117.5	2.021	41320.0	44540.0	341.4	153.5	189.3	225.2	17.3	0.0609	1.13119
540.0	114.5	1.969	42180.0	45480.0	343.1	154.2	188.1	228.9	17.3	0.0611	1.12770
545.0	111.7	1.922	43040.0	46420.0	344.9	155.0	187.2	232.4	17.3	0.0615	1.12448
550.0	109.1	1.878	43900.0	47360.0	346.6	155.8	186.5	235.8	17.3	0.0619	1.12149
560.0	104.5	1.798	45600.0	49220.0	349.9	157.4	185.5	242.2	17.3	0.0628	1.11610
570.0	100.4	1.727	47310.0	51070.0	353.2	159.0	185.0	248.3	17.3	0.0638	1.11137
580.0	96.73	1.664	49010.0	52920.0	356.4	160.7	184.9	254.1	17.4	0.0650	1.10716
590.0	93.44	1.608	50720.0	54770.0	359.6	162.3	185.1	259.6	17.5	0.0662	1.10337
600.0	90.44	1.556	52440.0	56620.0	362.7	164.0	185.6	264.8	17.6	0.0675	1.09994
					7.00 MPa isobar						
136.00[a]	737.5	12.69	-22570.0	-22020.0	134.0	83.01	109.9	1690.0	2350.0	0.208	2.04224
160.0	715.4	12.31	-19830.0	-19260.0	152.6	87.43	116.6	1592.0	1130.0	0.183	2.00392
200.0	678.7	11.68	-15190.0	-14590.0	178.7	85.79	118.0	1436.0	519.0	0.154	1.94083
250.0	631.7	10.87	-9133.0	-8489.0	205.9	91.80	127.1	1204.0	276.0	0.130	1.86163
300.0	581.5	10.00	-2518.0	-1818.0	230.2	101.6	140.2	960.6	171.0	0.110	1.77892
320.0	559.8	9.631	317.3	1044.0	239.4	106.0	146.2	863.6	144.0	0.104	1.74383
340.0	536.6	9.232	3274.0	4032.0	248.5	110.5	152.7	767.4	122.0	0.0969	1.70692
360.0	511.5	8.800	6364.0	7159.0	257.4	115.2	160.2	671.9	103.0	0.0905	1.66752
380.0	483.7	8.321	9606.0	10450.0	266.3	120.1	168.9	576.8	86.2	0.0845	1.62458
400.0	451.8	7.773	13030.0	13930.0	275.2	125.2	180.1	481.6	71.2	0.0789	1.57634
410.0	433.6	7.460	14830.0	15770.0	279.8	127.9	187.4	433.4	64.1	0.0763	1.54929
420.0	413.3	7.111	16700.0	17690.0	284.4	130.6	196.6	384.7	57.2	0.0738	1.51943
430.0	390.0	6.709	18670.0	19710.0	289.2	133.5	208.8	335.3	50.4	0.0722	1.48564
435.0	376.8	6.482	19690.0	20770.0	291.6	135.0	216.6	310.4	47.0	0.0716	1.46678
440.0	362.3	6.232	20760.0	21880.0	294.1	136.5	226.0	285.8	43.6	0.0717	1.44625
445.0	346.2	5.956	21860.0	23040.0	296.8	138.1	237.0	261.8	40.1	0.0721	1.42376
450.0	328.4	5.649	23010.0	24250.0	299.5	139.7	249.2	239.4	36.7	0.0726	1.39911
455.0	308.8	5.312	24210.0	25530.0	302.3	141.3	261.3	219.8	33.4	0.0724	1.37240
460.0	287.9	4.954	25450.0	26860.0	305.2	142.9	270.4	204.3	30.3	0.0713	1.34440
465.0	266.8	4.591	26700.0	28220.0	308.1	144.3	274.0	193.6	27.6	0.0697	1.31649
470.0	246.7	4.244	27940.0	29590.0	311.1	145.4	271.7	187.3	25.4	0.0681	1.29023
472.0	239.1	4.114	28430.0	30130.0	312.2	145.8	269.4	185.8	24.6	0.0676	1.28045
474.0	231.8	3.989	28910.0	30670.0	313.4	146.2	266.6	184.8	23.9	0.0670	1.27115
476.0	224.9	3.870	29390.0	31200.0	314.5	146.5	263.2	184.3	23.3	0.0666	1.26235
478.0	218.4	3.757	29860.0	31720.0	315.6	146.8	259.5	184.1	22.7	0.0662	1.25405
480.0	212.2	3.651	30320.0	32230.0	316.6	147.1	255.6	184.2	22.2	0.0658	1.24626
482.0	206.4	3.551	30770.0	32740.0	317.7	147.3	251.5	184.6	21.8	0.0654	1.23896
484.0	201.0	3.457	31220.0	33240.0	318.7	147.6	247.4	185.3	21.4	0.0651	1.23213
486.0	195.8	3.369	31650.0	33730.0	319.7	147.8	243.4	186.2	21.0	0.0648	1.22574
488.0	191.0	3.286	32080.0	34210.0	320.7	148.0	239.4	187.2	20.7	0.0646	1.21977
490.0	186.5	3.209	32510.0	34690.0	321.7	148.2	235.6	188.4	20.4	0.0643	1.21419
492.0	182.3	3.136	32920.0	35160.0	322.7	148.5	232.0	189.7	20.2	0.0641	1.20896
494.0	178.3	3.067	33330.0	35620.0	323.6	148.7	228.6	191.1	19.9	0.0639	1.20407

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
496.0	174.5	3.003	33740.0	36070.0	324.5	148.9	225.4	192.6	19.7	0.0637	1.19949
498.0	171.0	2.942	34140.0	36520.0	325.4	149.1	222.3	194.1	19.5	0.0636	1.19518
500.0	167.7	2.885	34530.0	36960.0	326.3	149.3	219.5	195.7	19.3	0.0634	1.19113
505.0	160.2	2.755	35500.0	38040.0	328.4	149.9	213.3	199.7	19.0	0.0631	1.18199
510.0	153.6	2.642	36450.0	39100.0	330.5	150.5	208.2	203.8	18.7	0.0628	1.17404
515.0	147.7	2.542	37370.0	40130.0	332.5	151.1	204.0	207.9	18.5	0.0627	1.16705
520.0	142.6	2.453	38280.0	41140.0	334.5	151.8	200.6	212.0	18.3	0.0626	1.16084
525.0	137.9	2.372	39180.0	42130.0	336.4	152.5	197.7	215.9	18.1	0.0626	1.15529
530.0	133.7	2.300	40070.0	43120.0	338.3	153.2	195.4	219.8	18.0	0.0627	1.15029
535.0	129.8	2.234	40950.0	44090.0	340.1	153.9	193.5	223.5	18.0	0.0628	1.14574
540.0	126.3	2.173	41830.0	45050.0	341.9	154.6	191.9	227.2	17.9	0.0630	1.14159
545.0	123.1	2.117	42700.0	46010.0	343.6	155.4	190.7	230.7	17.8	0.0633	1.13777
550.0	120.1	2.066	43570.0	46960.0	345.4	156.1	189.6	234.1	17.8	0.0636	1.13425
555.0	117.3	2.018	44430.0	47900.0	347.1	156.9	188.8	237.5	17.8	0.0639	1.13098
560.0	114.7	1.973	45300.0	48850.0	348.8	157.7	188.2	240.7	17.8	0.0643	1.12794
570.0	109.9	1.891	47020.0	50720.0	352.1	159.3	187.3	246.9	17.8	0.0652	1.12243
580.0	105.7	1.819	48750.0	52590.0	355.3	160.9	187.0	252.8	17.8	0.0662	1.11756
590.0	102.0	1.754	50470.0	54460.0	358.5	162.5	186.9	258.4	17.9	0.0673	1.11321
600.0	98.58	1.696	52210.0	56330.0	361.7	164.2	187.2	263.8	17.9	0.0685	1.10929
					7.50 MPa isobar						
136.10[a]	737.6	12.69	-22570.0	-21980.0	134.0	83.08	110.0	1692.0	2360.0	0.208	2.04248
160.0	715.6	12.31	-19840.0	-19230.0	152.6	87.44	116.6	1594.0	1140.0	0.184	2.00434
200.0	679.0	11.68	-15200.0	-14560.0	178.6	85.81	117.9	1439.0	521.0	0.155	1.94137
250.0	632.2	10.88	-9150.0	-8460.0	205.8	91.82	127.0	1207.0	277.0	0.130	1.86240
300.0	582.3	10.02	-2544.0	-1795.0	230.1	101.6	140.0	965.6	172.0	0.111	1.78011
320.0	560.7	9.646	285.5	1063.0	239.3	106.0	145.9	869.5	145.0	0.104	1.74528
340.0	537.8	9.252	3235.0	4045.0	248.4	110.5	152.4	774.4	123.0	0.0973	1.70874
360.0	513.0	8.826	6314.0	7164.0	257.3	115.2	159.6	680.3	104.0	0.0909	1.66987
380.0	485.7	8.357	9541.0	10440.0	266.1	120.1	168.1	587.1	87.4	0.0850	1.62774
400.0	454.8	7.825	12940.0	13900.0	275.0	125.1	178.6	494.3	72.6	0.0795	1.58084
410.0	437.4	7.525	14720.0	15720.0	279.5	127.7	185.2	447.8	65.6	0.0770	1.55484
420.0	418.1	7.194	16570.0	17610.0	284.0	130.4	193.2	401.1	58.9	0.0746	1.52648
430.0	396.5	6.821	18490.0	19590.0	288.7	133.2	203.4	354.3	52.3	0.0727	1.49499
435.0	384.4	6.614	19490.0	20620.0	291.1	134.6	209.6	331.0	49.1	0.0720	1.47773
440.0	371.5	6.391	20510.0	21690.0	293.5	136.1	216.7	307.9	45.8	0.0718	1.45925
445.0	357.4	6.148	21570.0	22790.0	296.0	137.6	224.8	285.3	42.6	0.0720	1.43938
450.0	342.0	5.884	22660.0	23940.0	298.6	139.1	233.8	263.9	39.5	0.0724	1.41798
455.0	325.4	5.598	23790.0	25130.0	301.2	140.6	243.1	244.2	36.4	0.0728	1.39505
460.0	307.6	5.293	24950.0	26360.0	303.9	142.1	251.4	227.3	33.4	0.0726	1.37086
470.0	270.7	4.658	27320.0	28930.0	309.4	144.8	259.6	204.1	28.3	0.0705	1.32159
475.0	253.0	4.353	28500.0	30230.0	312.2	145.9	258.2	197.8	26.2	0.0692	1.29840
480.0	236.6	4.070	29670.0	31510.0	314.9	146.9	253.9	194.4	24.6	0.0681	1.27719
482.0	230.4	3.964	30120.0	32010.0	315.9	147.2	251.5	193.7	24.0	0.0677	1.26934
484.0	224.6	3.863	30570.0	32520.0	316.9	147.5	249.0	193.3	23.5	0.0673	1.26186
486.0	219.0	3.767	31020.0	33010.0	318.0	147.8	246.2	193.2	23.0	0.0670	1.25477
488.0	213.6	3.676	31460.0	33500.0	319.0	148.1	243.3	193.4	22.6	0.0668	1.24805
490.0	208.6	3.589	31890.0	33980.0	320.0	148.4	240.4	193.8	22.2	0.0665	1.24169
492.0	203.8	3.506	32320.0	34460.0	320.9	148.7	237.4	194.3	21.8	0.0663	1.23568
494.0	199.2	3.428	32750.0	34930.0	321.9	148.9	234.5	195.0	21.5	0.0661	1.23000
496.0	194.9	3.354	33160.0	35400.0	322.8	149.2	231.6	195.9	21.2	0.0659	1.22464
498.0	190.9	3.284	33580.0	35860.0	323.8	149.4	228.8	196.9	21.0	0.0657	1.21957
500.0	187.0	3.217	33980.0	36310.0	324.7	149.7	226.1	198.0	20.7	0.0656	1.21479
505.0	178.2	3.065	34980.0	37430.0	326.9	150.3	219.9	201.1	20.2	0.0652	1.20394
510.0	170.4	2.932	35960.0	38510.0	329.0	150.9	214.4	204.5	19.8	0.0650	1.19447
515.0	163.6	2.814	36910.0	39570.0	331.1	151.5	209.8	208.1	19.4	0.0648	1.18613
520.0	157.5	2.709	37850.0	40610.0	333.1	152.2	205.9	211.7	19.2	0.0647	1.17875
525.0	152.0	2.615	38770.0	41630.0	335.1	152.8	202.6	215.4	19.0	0.0647	1.17216
530.0	147.1	2.530	39680.0	42640.0	337.0	153.5	199.9	219.1	18.8	0.0647	1.16624
535.0	142.6	2.453	40580.0	43630.0	338.8	154.2	197.6	222.7	18.7	0.0648	1.16089
540.0	138.5	2.383	41470.0	44620.0	340.7	154.9	195.7	226.3	18.5	0.0649	1.15601

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
545.0	134.7	2.318	42360.0	45590.0	342.5	155.7	194.1	229.8	18.5	0.0651	1.15155
550.0	131.3	2.258	43240.0	46560.0	344.2	156.4	192.8	233.2	18.4	0.0653	1.14745
555.0	128.1	2.203	44120.0	47520.0	346.0	157.2	191.8	236.5	18.3	0.0656	1.14366
560.0	125.1	2.152	44990.0	48480.0	347.7	158.0	190.9	239.8	18.3	0.0659	1.14014
570.0	119.7	2.059	46740.0	50380.0	351.0	159.5	189.7	246.0	18.2	0.0667	1.13380
580.0	114.9	1.977	48480.0	52270.0	354.3	161.1	189.0	252.0	18.2	0.0676	1.12822
590.0	110.7	1.904	50220.0	54160.0	357.6	162.7	188.8	257.7	18.3	0.0686	1.12327
600.0	106.8	1.838	51970.0	56050.0	360.7	164.4	188.8	263.1	18.3	0.0697	1.11882
					8.00 MPa isobar						
136.20[a]	737.8	12.69	-22570.0	-21940.0	134.0	83.14	110.0	1694.0	2360.0	0.208	2.04271
160.0	715.9	12.32	-19850.0	-19200.0	152.5	87.44	116.5	1597.0	1140.0	0.184	2.00476
200.0	679.3	11.69	-15210.0	-14530.0	178.6	85.82	117.9	1441.0	523.0	0.155	1.94190
250.0	632.7	10.88	-9167.0	-8432.0	205.8	91.85	127.0	1211.0	278.0	0.130	1.86316
300.0	583.0	10.03	-2570.0	-1772.0	230.0	101.6	139.8	970.6	173.0	0.111	1.78128
320.0	561.6	9.662	254.2	1082.0	239.2	106.0	145.7	875.4	146.0	0.104	1.74671
340.0	538.9	9.271	3196.0	4059.0	248.2	110.5	152.1	781.3	124.0	0.0977	1.71053
360.0	514.5	8.851	6266.0	7170.0	257.1	115.2	159.1	688.5	105.0	0.0914	1.67216
380.0	487.7	8.391	9479.0	10430.0	265.9	120.0	167.3	596.9	88.5	0.0855	1.63078
400.0	457.6	7.874	12860.0	13870.0	274.8	125.0	177.2	506.4	73.9	0.0802	1.58510
410.0	440.9	7.585	14620.0	15670.0	279.2	127.6	183.2	461.4	67.0	0.0777	1.56002
420.0	422.5	7.270	16440.0	17540.0	283.7	130.2	190.4	416.5	60.5	0.0754	1.53293
430.0	402.2	6.920	18330.0	19490.0	288.3	132.9	199.1	371.8	54.1	0.0734	1.50327
435.0	391.1	6.728	19310.0	20490.0	290.6	134.3	204.2	349.6	51.0	0.0726	1.48724
440.0	379.2	6.524	20300.0	21530.0	293.0	135.7	210.0	327.8	47.9	0.0721	1.47028
445.0	366.5	6.306	21330.0	22600.0	295.4	137.1	216.3	306.4	44.8	0.0720	1.45228
450.0	352.9	6.072	22380.0	23690.0	297.9	138.6	223.3	285.9	41.8	0.0723	1.43314
455.0	338.3	5.821	23450.0	24830.0	300.4	140.0	230.5	266.7	38.9	0.0728	1.41286
460.0	322.8	5.554	24560.0	26000.0	302.9	141.4	237.5	249.3	36.1	0.0731	1.39153
470.0	290.0	4.990	26830.0	28430.0	308.1	144.2	247.4	222.6	31.0	0.0722	1.34722
475.0	273.6	4.707	27970.0	29670.0	310.8	145.4	248.9	213.8	28.8	0.0712	1.32540
480.0	257.8	4.435	29110.0	30920.0	313.4	146.5	247.9	207.8	27.0	0.0702	1.30464
485.0	242.9	4.180	30230.0	32150.0	315.9	147.5	244.9	204.2	25.4	0.0693	1.28541
490.0	229.3	3.945	31330.0	33360.0	318.4	148.3	240.5	202.4	24.1	0.0685	1.26794
495.0	217.0	3.733	32410.0	34550.0	320.8	149.1	235.2	202.2	23.1	0.0679	1.25230
500.0	206.0	3.544	33460.0	35710.0	323.2	149.8	229.7	203.1	22.2	0.0674	1.23841
505.0	196.1	3.375	34480.0	36850.0	325.4	150.5	224.2	204.9	21.6	0.0671	1.22615
510.0	187.4	3.224	35480.0	37960.0	327.6	151.1	219.2	207.3	21.0	0.0669	1.21531
515.0	179.6	3.090	36450.0	39040.0	329.7	151.8	214.6	210.1	20.6	0.0667	1.20571
520.0	172.6	2.970	37410.0	40100.0	331.8	152.5	210.5	213.1	20.2	0.0666	1.19718
525.0	166.4	2.863	38350.0	41150.0	333.8	153.1	207.0	216.4	19.9	0.0666	1.18955
530.0	160.7	2.765	39280.0	42170.0	335.7	153.8	204.0	219.7	19.6	0.0666	1.18269
535.0	155.6	2.677	40200.0	43190.0	337.6	154.5	201.4	223.1	19.4	0.0666	1.17650
540.0	150.9	2.597	41110.0	44190.0	339.5	155.2	199.3	226.4	19.3	0.0667	1.17088
545.0	146.6	2.523	42010.0	45180.0	341.3	156.0	197.4	229.8	19.1	0.0669	1.16574
550.0	142.7	2.455	42910.0	46160.0	343.1	156.7	195.9	233.1	19.0	0.0671	1.16102
555.0	139.0	2.392	43800.0	47140.0	344.9	157.5	194.6	236.3	18.9	0.0673	1.15668
560.0	135.7	2.334	44680.0	48110.0	346.6	158.2	193.6	239.5	18.9	0.0676	1.15266
565.0	132.5	2.280	45570.0	49080.0	348.3	159.0	192.7	242.7	18.8	0.0679	1.14892
570.0	129.6	2.229	46450.0	50040.0	350.0	159.8	192.0	245.7	18.8	0.0682	1.14544
580.0	124.2	2.137	48210.0	51950.0	353.4	161.3	191.1	251.7	18.7	0.0690	1.13912
590.0	119.4	2.055	49970.0	53860.0	356.6	162.9	190.6	257.4	18.7	0.0699	1.13353
600.0	115.2	1.981	51730.0	55770.0	359.8	164.6	190.4	262.8	18.7	0.0709	1.12853
					9.00 MPa isobar						
136.40[a]	738.1	12.70	-22560.0	-21850.0	134.1	83.26	110.2	1698.0	2370.0	0.208	2.04319
160.0	716.4	12.33	-19860.0	-19130.0	152.4	87.45	116.5	1601.0	1150.0	0.184	2.00561
200.0	680.0	11.70	-15240.0	-14470.0	178.5	85.85	117.8	1446.0	528.0	0.155	1.94297
250.0	633.6	10.90	-9200.0	-8374.0	205.6	91.90	126.8	1218.0	281.0	0.130	1.86468
300.0	584.4	10.05	-2621.0	-1726.0	229.8	101.7	139.5	980.3	175.0	0.112	1.78358
350.0	529.4	9.109	4631.0	5619.0	252.4	112.8	154.8	749.3	116.0	0.0953	1.69555

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
360.0	517.3	8.900	6173.0	7184.0	256.9	115.2	158.2	704.3	107.0	0.0923	1.67656
380.0	491.5	8.456	9359.0	10420.0	265.6	120.0	165.9	615.8	90.7	0.0866	1.63654
400.0	462.9	7.964	12700.0	13830.0	274.3	124.9	174.8	529.2	76.3	0.0814	1.59298
420.0	430.3	7.404	16220.0	17430.0	283.1	129.9	186.0	444.5	63.4	0.0768	1.54439
430.0	412.0	7.089	18050.0	19320.0	287.6	132.5	192.8	403.2	57.3	0.0748	1.51752
440.0	391.9	6.743	19960.0	21290.0	292.1	135.2	200.8	362.8	51.4	0.0732	1.48845
450.0	369.7	6.361	21930.0	23340.0	296.7	137.8	209.9	324.3	45.8	0.0726	1.45679
455.0	357.8	6.155	22940.0	24400.0	299.1	139.2	214.8	306.2	43.1	0.0728	1.43991
460.0	345.2	5.939	23980.0	25490.0	301.4	140.5	219.7	289.3	40.5	0.0732	1.42237
470.0	318.6	5.481	26090.0	27730.0	306.3	143.1	228.4	260.1	35.6	0.0738	1.38573
480.0	291.1	5.008	28250.0	30050.0	311.1	145.6	233.4	239.0	31.5	0.0733	1.34859
485.0	277.6	4.775	29330.0	31220.0	313.5	146.7	234.0	231.7	29.7	0.0727	1.33062
490.0	264.5	4.551	30410.0	32380.0	315.9	147.7	233.4	226.3	28.1	0.0720	1.31346
495.0	252.1	4.338	31470.0	33550.0	318.3	148.7	231.7	222.6	26.7	0.0714	1.29731
500.0	240.5	4.138	32530.0	34700.0	320.6	149.6	229.3	220.3	25.6	0.0708	1.28231
505.0	229.8	3.953	33560.0	35840.0	322.9	150.4	226.3	219.2	24.6	0.0704	1.26852
510.0	219.9	3.783	34580.0	36960.0	325.1	151.2	223.0	219.1	23.8	0.0701	1.25593
515.0	210.8	3.627	35590.0	38070.0	327.3	152.0	219.6	219.8	23.1	0.0699	1.24449
520.0	202.5	3.484	36580.0	39160.0	329.4	152.7	216.3	221.1	22.5	0.0698	1.23410
525.0	195.0	3.354	37550.0	40230.0	331.4	153.5	213.2	222.9	22.0	0.0697	1.22469
530.0	188.1	3.236	38510.0	41290.0	333.4	154.2	210.3	225.0	21.6	0.0697	1.21615
535.0	181.8	3.127	39460.0	42340.0	335.4	154.9	207.6	227.4	21.2	0.0698	1.20838
540.0	176.0	3.028	40400.0	43370.0	337.3	155.6	205.3	230.0	20.9	0.0699	1.20130
545.0	170.7	2.937	41320.0	44390.0	339.2	156.4	203.2	232.7	20.7	0.0700	1.19483
550.0	165.8	2.853	42250.0	45400.0	341.0	157.1	201.4	235.5	20.5	0.0701	1.18888
555.0	161.3	2.775	43160.0	46400.0	342.9	157.9	199.8	238.4	20.3	0.0703	1.18341
560.0	157.1	2.703	44070.0	47400.0	344.6	158.6	198.5	241.3	20.1	0.0706	1.17835
565.0	153.2	2.636	44980.0	48390.0	346.4	159.4	197.4	244.1	20.0	0.0708	1.17366
570.0	149.6	2.574	45880.0	49370.0	348.1	160.1	196.4	247.0	19.9	0.0711	1.16930
580.0	143.0	2.461	47670.0	51330.0	351.5	161.7	195.0	252.7	19.7	0.0718	1.16143
590.0	137.2	2.360	49460.0	53270.0	354.9	163.3	194.0	258.2	19.6	0.0725	1.15450
600.0	132.0	2.271	51250.0	55210.0	358.1	164.9	193.5	263.5	19.6	0.0734	1.14834
					10.00 MPa isobar						
136.50[a]	738.4	12.70	-22560.0	-21770.0	134.1	83.38	110.3	1701.0	2380.0	0.209	2.04366
160.0	716.9	12.33	-19880.0	-19070.0	152.3	87.45	116.5	1606.0	1160.0	0.184	2.00644
200.0	680.6	11.71	-15260.0	-14400.0	178.4	85.88	117.8	1451.0	532.0	0.155	1.94403
250.0	634.5	10.92	-9233.0	-8317.0	205.5	91.94	126.7	1224.0	284.0	0.131	1.86617
300.0	585.8	10.08	-2671.0	-1679.0	229.7	101.7	139.2	989.9	177.0	0.112	1.78584
350.0	531.8	9.150	4551.0	5644.0	252.2	112.8	154.1	763.2	118.0	0.0961	1.69929
360.0	520.0	8.947	6084.0	7201.0	256.6	115.2	157.4	719.4	109.0	0.0932	1.68076
380.0	495.0	8.517	9247.0	10420.0	265.3	119.9	164.6	633.6	92.9	0.0876	1.64195
400.0	467.7	8.046	12550.0	13790.0	273.9	124.8	172.9	550.3	78.7	0.0825	1.60018
420.0	437.1	7.521	16020.0	17350.0	282.6	129.7	182.6	469.9	66.0	0.0781	1.55441
440.0	402.2	6.919	19670.0	21110.0	291.4	134.7	194.7	393.2	54.5	0.0745	1.50321
450.0	382.6	6.583	21580.0	23100.0	295.8	137.3	201.6	357.3	49.2	0.0735	1.47507
460.0	361.5	6.219	23540.0	25150.0	300.3	139.8	209.0	324.0	44.2	0.0734	1.44510
470.0	338.8	5.829	25560.0	27270.0	304.9	142.3	216.0	294.9	39.5	0.0742	1.41353
480.0	315.2	5.423	27620.0	29460.0	309.5	144.8	221.4	271.3	35.4	0.0748	1.38114
490.0	291.6	5.016	29700.0	31690.0	314.1	147.0	224.1	254.1	31.9	0.0745	1.34924
500.0	269.0	4.627	31770.0	33940.0	318.6	149.1	223.9	243.1	29.0	0.0738	1.31929
505.0	258.4	4.445	32800.0	35050.0	320.9	150.1	222.8	239.6	27.8	0.0733	1.30539
510.0	248.3	4.272	33820.0	36160.0	323.1	151.0	221.3	237.2	26.7	0.0730	1.29233
515.0	238.8	4.109	34830.0	37270.0	325.2	151.8	219.5	235.7	25.8	0.0727	1.28013
520.0	230.0	3.957	35830.0	38360.0	327.3	152.7	217.4	235.1	25.0	0.0725	1.26880
525.0	221.7	3.815	36820.0	39440.0	329.4	153.5	215.3	235.1	24.3	0.0724	1.25830
530.0	214.1	3.683	37800.0	40510.0	331.4	154.3	213.1	235.7	23.8	0.0723	1.24862
535.0	207.0	3.561	38760.0	41570.0	333.4	155.0	211.0	236.7	23.3	0.0724	1.23968
540.0	200.4	3.448	39720.0	42620.0	335.4	155.8	209.0	238.2	22.8	0.0724	1.23144
545.0	194.3	3.342	40670.0	43660.0	337.3	156.6	207.1	239.9	22.4	0.0726	1.22384
550.0	188.6	3.245	41610.0	44690.0	339.2	157.3	205.4	241.8	22.1	0.0727	1.21681
555.0	183.3	3.154	42540.0	45720.0	341.0	158.1	203.8	244.0	21.8	0.0729	1.21031

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_V	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
560.0	178.4	3.070	43470.0	46730.0	342.8	158.9	202.4	246.2	21.6	0.0731	1.20429
565.0	173.9	2.991	44400.0	47740.0	344.6	159.6	201.2	248.6	21.4	0.0734	1.19869
570.0	169.6	2.918	45320.0	48740.0	346.4	160.4	200.1	251.0	21.2	0.0737	1.19348
580.0	161.8	2.784	47140.0	50730.0	349.9	162.0	198.4	256.0	20.9	0.0743	1.18406
590.0	155.0	2.667	48960.0	52710.0	353.2	163.5	197.2	261.0	20.7	0.0750	1.17579
600.0	148.9	2.561	50780.0	54680.0	356.5	165.1	196.4	266.0	20.5	0.0758	1.16844
					12.00 MPa isobar						
136.90[a]	739.0	12.71	-22540.0	-21600.0	134.2	83.61	110.5	1709.0	2400.0	0.209	2.04459
160.0	718.0	12.35	-19910.0	-18940.0	152.1	87.46	116.4	1615.0	1180.0	0.185	2.00810
200.0	681.9	11.73	-15300.0	-14280.0	178.1	85.94	117.6	1461.0	542.0	0.156	1.94612
300.0	588.6	10.13	-2767.0	-1582.0	229.3	101.8	138.7	1008.0	182.0	0.113	1.79021
350.0	536.3	9.227	4399.0	5700.0	251.7	112.9	152.9	789.7	122.0	0.0977	1.70634
360.0	525.1	9.034	5916.0	7244.0	256.1	115.2	156.0	747.9	113.0	0.0948	1.68861
380.0	501.5	8.628	9039.0	10430.0	264.7	119.8	162.6	666.6	96.9	0.0894	1.65185
400.0	476.2	8.192	12290.0	13750.0	273.2	124.6	169.8	588.7	83.0	0.0846	1.61298
420.0	448.6	7.718	15670.0	17230.0	281.7	129.3	177.9	514.5	70.7	0.0805	1.57145
440.0	418.3	7.197	19210.0	20870.0	290.2	134.2	186.9	445.1	59.9	0.0771	1.52666
450.0	402.0	6.916	21030.0	22770.0	294.4	136.6	191.8	412.7	54.9	0.0758	1.50287
460.0	384.8	6.620	22900.0	24710.0	298.7	139.0	196.8	382.3	50.2	0.0749	1.47814
470.0	366.8	6.310	24800.0	26700.0	303.0	141.3	201.7	354.6	45.9	0.0749	1.45257
480.0	348.1	5.989	26740.0	28740.0	307.3	143.7	206.1	330.1	41.9	0.0756	1.42641
500.0	310.1	5.336	30680.0	32930.0	315.8	148.1	212.0	293.4	35.2	0.0771	1.37424
510.0	291.7	5.019	32670.0	35060.0	320.0	150.1	213.0	281.3	32.5	0.0772	1.34947
520.0	274.3	4.719	34640.0	37190.0	324.2	152.1	212.7	273.0	30.3	0.0771	1.32632
530.0	258.1	4.441	36610.0	39310.0	328.2	153.9	211.6	267.9	28.5	0.0769	1.30512
540.0	243.4	4.188	38550.0	41420.0	332.2	155.7	210.0	265.2	27.0	0.0768	1.28600
550.0	230.1	3.959	40480.0	43510.0	336.0	157.3	208.1	264.5	25.8	0.0770	1.26893
560.0	218.2	3.753	42380.0	45580.0	339.7	159.0	206.2	265.3	24.9	0.0773	1.25376
570.0	207.5	3.570	44270.0	47630.0	343.4	160.6	204.5	267.2	24.2	0.0778	1.24032
580.0	197.9	3.405	46150.0	49670.0	346.9	162.2	203.0	269.9	23.6	0.0784	1.22840
590.0	189.4	3.258	48010.0	51690.0	350.4	163.8	201.7	273.1	23.1	0.0791	1.21779
600.0	181.7	3.126	49870.0	53710.0	353.7	165.4	200.8	276.7	22.8	0.0798	1.20831
					14.00 MPa isobar						
137.20[a]	739.6	12.72	-22530.0	-21430.0	134.3	83.82	110.7	1718.0	2420.0	0.209	2.04550
160.0	719.0	12.37	-19940.0	-18810.0	151.9	87.47	116.3	1624.0	1210.0	0.185	2.00973
200.0	683.2	11.75	-15340.0	-14150.0	177.9	86.00	117.5	1471.0	551.0	0.156	1.94818
300.0	591.2	10.17	-2860.0	-1483.0	229.0	101.9	138.2	1026.0	186.0	0.114	1.79441
350.0	540.5	9.300	4258.0	5763.0	251.3	112.9	151.9	814.5	126.0	0.0992	1.71291
360.0	529.7	9.114	5761.0	7297.0	255.6	115.2	154.8	774.4	117.0	0.0964	1.69586
380.0	507.3	8.728	8850.0	10450.0	264.2	119.8	161.0	696.8	101.0	0.0912	1.66079
400.0	483.5	8.319	12060.0	13740.0	272.6	124.4	167.5	623.0	87.0	0.0865	1.62418
420.0	458.2	7.883	15380.0	17160.0	280.9	129.1	174.5	553.5	75.0	0.0825	1.58573
440.0	430.9	7.414	18830.0	20720.0	289.2	133.8	182.0	488.9	64.4	0.0793	1.54516
460.0	401.6	6.910	22420.0	24440.0	297.5	138.4	189.9	430.6	55.2	0.0770	1.50237
480.0	370.4	6.373	26120.0	28320.0	305.7	143.0	197.4	380.5	47.1	0.0764	1.45772
500.0	338.1	5.818	29920.0	32330.0	313.9	147.3	203.4	341.4	40.4	0.0781	1.41255
520.0	306.5	5.273	33780.0	36430.0	322.0	151.4	206.5	314.8	35.2	0.0797	1.36926
530.0	291.5	5.015	35710.0	38500.0	325.9	153.4	207.1	305.9	33.0	0.0801	1.34910
540.0	277.3	4.771	37640.0	40570.0	329.8	155.2	207.1	299.5	31.3	0.0803	1.33024
550.0	264.0	4.542	39560.0	42640.0	333.6	157.0	206.7	295.2	29.7	0.0805	1.31278
560.0	251.7	4.331	41470.0	44700.0	337.3	158.8	206.0	292.6	28.5	0.0808	1.29676
570.0	240.4	4.136	43380.0	46760.0	340.9	160.5	205.3	291.5	27.5	0.0812	1.28214
580.0	230.0	3.957	45270.0	48810.0	344.5	162.1	204.5	291.5	26.6	0.0817	1.26884
590.0	220.5	3.794	47160.0	50850.0	348.0	163.8	203.8	292.5	25.9	0.0823	1.25676
600.0	211.8	3.645	49040.0	52880.0	351.4	165.4	203.2	294.1	25.3	0.0830	1.24580

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					16.00 MPa isobar						
137.50[a]	740.2	12.73	-22520.0	-21270.0	134.3	84.03	111.0	1726.0	2440.0	0.209	2.04641
160.0	720.0	12.39	-19970.0	-18680.0	151.7	87.47	116.3	1634.0	1230.0	0.186	2.01134
200.0	684.4	11.78	-15390.0	-14030.0	177.7	86.05	117.4	1481.0	560.0	0.157	1.95021
300.0	593.7	10.21	-2949.0	-1382.0	228.7	102.0	137.8	1043.0	189.0	0.115	1.79845
350.0	544.5	9.367	4124.0	5833.0	250.9	112.9	151.0	837.8	129.0	0.101	1.71907
400.0	490.1	8.432	11850.0	13740.0	272.0	124.3	165.7	654.2	90.7	0.0883	1.63418
420.0	466.4	8.024	15130.0	17120.0	280.2	128.9	172.0	588.3	78.9	0.0844	1.59810
440.0	441.4	7.594	18520.0	20630.0	288.4	133.5	178.6	527.3	68.5	0.0814	1.56059
460.0	415.0	7.139	22030.0	24270.0	296.5	138.1	185.4	472.2	59.5	0.0791	1.52169
480.0	387.3	6.663	25640.0	28040.0	304.5	142.5	191.9	424.2	51.6	0.0779	1.48167
500.0	358.8	6.174	29340.0	31940.0	312.5	146.8	197.4	384.8	45.0	0.0786	1.44135
520.0	330.6	5.687	33110.0	35930.0	320.3	150.9	201.4	355.2	39.5	0.0807	1.40209
540.0	303.7	5.224	36920.0	39980.0	327.9	154.8	203.5	335.3	35.3	0.0825	1.36546
550.0	291.0	5.007	38820.0	42020.0	331.7	156.6	204.0	328.5	33.5	0.0831	1.34852
560.0	279.1	4.801	40720.0	44060.0	335.3	158.5	204.2	323.4	32.1	0.0836	1.33261
570.0	267.8	4.608	42630.0	46100.0	339.0	160.2	204.2	319.9	30.8	0.0840	1.31778
580.0	257.3	4.427	44530.0	48140.0	342.5	162.0	204.1	317.6	29.7	0.0845	1.30401
590.0	247.5	4.258	46420.0	50180.0	346.0	163.7	204.0	316.4	28.8	0.0851	1.29128
600.0	238.4	4.101	48320.0	52220.0	349.4	165.3	203.8	316.1	28.0	0.0858	1.27952
					18.00 MPa isobar						
137.80[a]	740.8	12.74	-22510.0	-21100.0	134.4	84.22	111.2	1734.0	2450.0	0.209	2.04731
150.0	729.9	12.56	-21150.0	-19710.0	144.0	87.76	115.7	1680.0	1640.0	0.196	2.02837
200.0	685.7	11.80	-15430.0	-13900.0	177.5	86.10	117.3	1491.0	569.0	0.158	1.95220
300.0	596.2	10.26	-3034.0	-1279.0	228.4	102.0	137.4	1060.0	193.0	0.116	1.80235
350.0	548.2	9.431	3999.0	5907.0	250.5	112.9	150.3	859.8	133.0	0.102	1.72488
400.0	496.0	8.534	11660.0	13770.0	271.5	124.3	164.2	683.0	94.3	0.0900	1.64325
450.0	438.3	7.541	19960.0	22350.0	291.7	135.6	179.1	534.8	67.7	0.0820	1.55598
460.0	426.0	7.330	21700.0	24150.0	295.6	137.8	182.2	509.2	63.4	0.0810	1.53785
480.0	400.9	6.896	25250.0	27860.0	303.5	142.2	188.0	462.9	55.6	0.0796	1.50115
500.0	375.1	6.454	28880.0	31670.0	311.3	146.4	193.2	423.9	49.0	0.0795	1.46433
520.0	349.5	6.013	32580.0	35580.0	319.0	150.5	197.4	393.0	43.5	0.0812	1.42827
540.0	324.7	5.586	36330.0	39550.0	326.5	154.4	200.2	370.2	39.0	0.0835	1.39400
560.0	301.4	5.186	40110.0	43580.0	333.8	158.2	202.0	354.9	35.5	0.0854	1.36244
570.0	290.6	4.999	42000.0	45600.0	337.4	160.0	202.5	349.5	34.0	0.0862	1.34787
580.0	280.2	4.821	43890.0	47630.0	340.9	161.7	202.9	345.5	32.7	0.0868	1.33413
590.0	270.5	4.653	45790.0	49660.0	344.4	163.5	203.3	342.5	31.6	0.0875	1.32125
600.0	261.3	4.495	47690.0	51690.0	347.8	165.2	203.5	340.6	30.7	0.0882	1.30919
					20.00 MPa isobar						
138.20[a]	741.4	12.75	-22500.0	-20930.0	134.5	84.40	111.3	1743.0	2470.0	0.209	2.04819
200.0	686.9	11.82	-15470.0	-13770.0	177.3	86.14	117.2	1501.0	578.0	0.158	1.95417
300.0	598.5	10.30	-3117.0	-1175.0	228.1	102.1	137.0	1076.0	197.0	0.117	1.80612
350.0	551.7	9.491	3880.0	5987.0	250.1	113.0	149.6	880.8	136.0	0.103	1.73038
400.0	501.5	8.628	11480.0	13800.0	271.0	124.2	163.0	709.7	97.6	0.0916	1.65156
450.0	447.0	7.690	19700.0	22300.0	291.0	135.4	176.9	567.2	71.2	0.0837	1.56880
460.0	435.5	7.493	21410.0	24080.0	294.9	137.6	179.7	542.6	66.9	0.0827	1.55182
500.0	388.6	6.685	28490.0	31480.0	310.3	146.1	190.0	459.4	52.7	0.0808	1.48345
520.0	365.0	6.279	32140.0	35320.0	317.8	150.2	194.2	427.9	47.1	0.0818	1.44991
540.0	341.9	5.883	35840.0	39240.0	325.2	154.1	197.5	403.5	42.4	0.0840	1.41773
560.0	320.0	5.506	39590.0	43220.0	332.5	157.9	199.9	385.7	38.7	0.0864	1.38759
580.0	299.6	5.155	43350.0	47230.0	339.5	161.5	201.5	373.6	35.7	0.0885	1.35999
590.0	290.1	4.991	45250.0	49250.0	343.0	163.3	202.2	369.3	34.5	0.0893	1.34722
600.0	281.0	4.835	47140.0	51280.0	346.4	165.0	202.7	366.0	33.4	0.0901	1.33515

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					25.00 MPa isobar						
139.00[a]	742.8	12.78	-22470.0	-20520.0	134.7	84.80	111.8	1764.0	2520.0	0.209	2.05034
200.0	689.9	11.87	-15570.0	-13460.0	176.7	86.25	116.9	1525.0	601.0	0.160	1.95895
300.0	604.1	10.39	-3312.0	-906.3	227.4	102.3	136.2	1113.0	207.0	0.120	1.81503
350.0	559.7	9.630	3606.0	6202.0	249.2	113.1	148.2	929.1	144.0	0.106	1.74302
400.0	513.4	8.832	11090.0	13920.0	269.8	124.2	160.6	769.6	105.0	0.0953	1.66985
450.0	464.8	7.996	19140.0	22270.0	289.5	135.2	173.1	637.9	79.1	0.0877	1.59537
500.0	414.5	7.131	27720.0	31220.0	308.3	145.7	184.8	536.3	60.6	0.0844	1.52082
550.0	364.9	6.279	36730.0	40710.0	326.4	155.5	194.1	467.3	47.9	0.0862	1.44979
560.0	355.5	6.115	38570.0	42660.0	329.9	157.4	195.6	457.3	46.0	0.0874	1.43648
580.0	337.2	5.801	42290.0	46600.0	336.8	161.1	198.2	441.0	42.5	0.0900	1.41105
600.0	319.9	5.504	46040.0	50580.0	343.6	164.7	200.4	428.9	39.7	0.0928	1.38741
					30.00 MPa isobar						
139.80[a]	744.2	12.80	-22440.0	-20100.0	134.8	85.15	112.2	1787.0	2560.0	0.209	2.05243
200.0	692.7	11.92	-15660.0	-13140.0	176.2	86.35	116.7	1549.0	625.0	0.161	1.96356
300.0	609.3	10.48	-3492.0	-629.9	226.7	102.5	135.5	1149.0	216.0	0.122	1.82331
400.0	523.5	9.007	10760.0	14090.0	268.9	124.3	159.0	822.1	113.0	0.0988	1.68551
500.0	434.0	7.466	27120.0	31140.0	306.8	145.5	181.6	601.2	67.5	0.0877	1.54925
550.0	389.8	6.707	35990.0	40460.0	324.6	155.3	191.0	531.5	54.4	0.0882	1.48503
560.0	381.3	6.560	37810.0	42380.0	328.0	157.2	192.6	520.8	52.3	0.0889	1.47285
580.0	364.7	6.274	41480.0	46260.0	334.8	160.9	195.6	502.4	48.6	0.0908	1.44936
600.0	348.8	6.002	45200.0	50200.0	341.5	164.4	198.2	487.6	45.5	0.0934	1.42716
					35.00 MPa isobar						
140.60[a]	745.5	12.83	-22410.0	-19680.0	135.0	85.45	112.5	1809.0	2600.0	0.209	2.05444
200.0	695.5	11.97	-15750.0	-12820.0	175.7	86.43	116.5	1573.0	648.0	0.162	1.96800
300.0	614.1	10.57	-3659.0	-346.9	226.0	102.7	135.0	1182.0	225.0	0.124	1.83107
400.0	532.4	9.160	10460.0	14280.0	268.0	124.4	157.7	869.1	119.0	0.102	1.69930
500.0	449.6	7.736	26630.0	31160.0	305.5	145.4	179.4	657.7	73.6	0.0908	1.57236
550.0	409.3	7.042	35400.0	40370.0	323.1	155.2	188.7	588.5	60.2	0.0907	1.51305
560.0	401.5	6.908	37200.0	42260.0	326.5	157.0	190.4	577.4	58.1	0.0911	1.50175
580.0	386.3	6.645	40840.0	46100.0	333.2	160.7	193.6	557.8	54.1	0.0924	1.47983
600.0	371.5	6.392	44530.0	50000.0	339.8	164.3	196.5	541.5	50.8	0.0943	1.45891
					40.00 MPa isobar						
141.40[a]	746.8	12.85	-22380.0	-19270.0	135.2	85.71	112.8	1832.0	2630.0	0.210	2.05639
200.0	698.2	12.01	-15830.0	-12500.0	175.2	86.52	116.3	1597.0	672.0	0.163	1.97229
300.0	618.7	10.64	-3816.0	-58.4	225.4	102.9	134.5	1213.0	233.0	0.126	1.83837
400.0	540.4	9.297	10200.0	14500.0	267.2	124.5	156.7	911.9	126.0	0.105	1.71167
500.0	462.8	7.962	26220.0	31240.0	304.4	145.4	177.8	708.2	79.3	0.0937	1.59194
550.0	425.4	7.319	34900.0	40370.0	321.8	155.1	187.0	639.7	65.5	0.0932	1.53637
600.0	390.1	6.712	43970.0	49930.0	338.4	164.2	195.1	590.9	55.7	0.0958	1.48528
					50.00 MPa isobar						
143.00[a]	749.3	12.89	-22310.0	-18430.0	135.6	86.13	113.3	1878.0	2700.0	0.210	2.06008
200.0	703.3	12.10	-16000.0	-11860.0	174.3	86.67	116.0	1644.0	719.0	0.166	1.98045
300.0	627.1	10.79	-4102.0	531.9	224.3	103.3	133.7	1271.0	251.0	0.130	1.85182
400.0	554.2	9.536	9738.0	14980.0	265.7	124.8	155.2	988.0	138.0	0.112	1.73325
500.0	484.3	8.331	25540.0	31540.0	302.6	145.5	175.6	796.1	89.5	0.0996	1.62414
550.0	451.0	7.759	34110.0	40550.0	319.7	155.1	184.7	729.1	75.1	0.0980	1.57397
600.0	419.5	7.217	43070.0	50000.0	336.2	164.2	193.0	678.8	64.5	0.0996	1.52748

Thermophysical properties of normal butane - Continued

T	Density	Density	E	H	S	C_v	C_p	Sound	Visc.	Therm.	Diel.
K	kg/m^3	mol/dm^3	J/mol	J/mol	J/(mol·K)	J/(mol·K)		m/s	μPa·s	W/(m·K)	Const.
					60.00 MPa isobar						
144.50[a]	751.7	12.93	-22240.0	-17610.0	136.0	86.44	113.7	1924.0	2770.0	0.210	2.06353
200.0	708.1	12.18	-16150.0	-11220.0	173.4	86.81	115.8	1691.0	767.0	0.168	1.98808
300.0	634.8	10.92	-4358.0	1136.0	223.2	103.6	133.2	1325.0	267.0	0.134	1.86401
400.0	566.1	9.740	9347.0	15510.0	264.4	125.1	154.2	1055.0	149.0	0.118	1.75178
500.0	501.5	8.629	24990.0	31940.0	301.0	145.7	174.1	871.5	98.7	0.106	1.65027
550.0	471.1	8.105	33480.0	40880.0	318.0	155.3	183.2	806.1	83.6	0.103	1.60386
600.0	442.3	7.609	42370.0	50250.0	334.4	164.4	191.6	755.3	72.4	0.103	1.56071
					70.00 MPa isobar						
146.00[a]	753.9	12.97	-22170.0	-16780.0	136.4	86.67	114.0	1970.0	2820.0	0.210	2.06675
200.0	712.6	12.26	-16290.0	-10580.0	172.5	86.95	115.6	1736.0	816.0	0.170	1.99525
250.0	676.4	11.64	-10650.0	-4635.0	199.0	93.94	122.9	1544.0	434.0	0.150	1.93337
300.0	641.8	11.04	-4589.0	1750.0	222.2	104.0	132.7	1375.0	284.0	0.138	1.87518
400.0	576.6	9.919	9007.0	16060.0	263.3	125.4	153.5	1115.0	159.0	0.124	1.76811
500.0	516.1	8.879	24530.0	32410.0	299.7	145.9	173.1	938.0	107.0	0.113	1.67240
550.0	487.8	8.392	32950.0	41290.0	316.6	155.5	182.2	874.0	91.4	0.109	1.62882
600.0	460.9	7.930	41790.0	50620.0	332.8	164.5	190.6	823.3	79.6	0.108	1.58822

[a]At melting line
[b]At liquid-vapor boundary

Appendix J: Coefficients for Equations for Computing Thermophysical Properties

Coefficients for Methane

Methane Coefficients for MBWR Equation

$G(1) = 0.9898937956 \times 10^{-5}$
$G(2) = 0.2199608275 \times 10^{-1}$
$G(3) = -0.5322788000$
$G(4) = 0.2021657962 \times 10^{2}$
$G(5) = -0.2234398926 \times 10^{4}$
$G(6) = 0.1067940280 \times 10^{-4}$
$G(7) = 0.1457922469 \times 10^{-3}$
$G(8) = -0.9265816666$
$G(9) = 0.2915364732 \times 10^{3}$
$G(10) = 0.2313546209 \times 10^{-6}$
$G(11) = 0.1387214274 \times 10^{-3}$
$G(12) = 0.4780467451 \times 10^{-2}$
$G(13) = 0.1176103833 \times 10^{-4}$
$G(14) = -0.1982096730 \times 10^{-3}$
$G(15) = -0.2512887756 \times 10^{-1}$
$G(16) = 0.9748899826 \times 10^{-5}$
$G(17) = -0.1202192137 \times 10^{-6}$
$G(18) = 0.4128353939 \times 10^{-4}$
$G(19) = -0.7215842918 \times 10^{-6}$
$G(20) = 0.5081738255 \times 10^{3}$
$G(21) = -0.9198903192 \times 10^{5}$
$G(22) = -0.2732264677 \times 10^{1}$
$G(23) = 0.7499024351 \times 10^{5}$
$G(24) = 0.1114060908 \times 10^{-2}$
$G(25) = 0.1083955159 \times 10^{1}$
$G(26) = -0.4490960312 \times 10^{-4}$
$G(27) = -0.1380337847 \times 10^{1}$
$G(28) = -0.2371902232 \times 10^{-7}$
$G(29) = 0.3761652197 \times 10^{-4}$
$G(30) = -0.2375166954 \times 10^{-9}$
$G(31) = -0.1237640790 \times 10^{-7}$
$G(32) = 0.6766926453 \times 10^{-6}$

Methane Coefficients for Vapor Pressure

$V_p(1) = 4.77939953$
$V_p(2) = 1.757393941$
$V_p(3) = -0.566507391$
$V_p(4) = 0.0$
$V_p(5) = 1.326326855$
$V_p(6) = 1.5$

Methane Coefficients for Saturated Liquid and Vapor Density

$A(1) = 0.443665861406$
$A(2) = 0.617291265585$
$A(3) = -0.171409203886 \times 10^{1}$
$A(4) = 0.266489175667 \times 10^{1}$
$A(5) = -0.200679872265 \times 10^{1}$
$A(6) = 0.505451397635$
$A(7) = -0.125599048715 \times 10^{1}$
$A(8) = 0.137455296591 \times 10^{-2}$
$A(9) = -0.664353410971 \times 10^{-1}$
$A(10) = 0.127713713607 \times 10^{1}$
$A(11) = -0.843864296359 \times 10^{1}$
$A(12) = 0.310111528861 \times 10^{1}$
$A(13) = -0.575363272738$
$E_g = 0.52$

Methane Coefficients for Ideal Gas C_p

$G_t(1) = -1.8044750507 \times 10^{6}$
$G_t(2) = 7.7426666393 \times 10^{4}$
$G_t(3) = -1.3241658754 \times 10^{3}$
$G_t(4) = 1.5438149595 \times 10^{1}$
$G_t(5) = -5.1479005257 \times 10^{-2}$
$G_t(6) = 1.0809172196 \times 10^{-4}$
$G_t(7) = -6.5501783437 \times 10^{-8}$
$G_t(8) = -6.7490056171$
$G_t(9) = 3000.$

Methane Coefficients for Viscosity

$F_v(1) = 0.16969859271$
$F_v(2) = -0.13337234608 \times 10^{-1}$
$F_v(3) = 1.4$
$F_v(4) = 168.$

$E_v(1) = -0.1620427429 \times 10^{2}$
$E_v(2) = 0.4270589027 \times 10^{3}$
$E_v(3) = 0.1402596278 \times 10^{2}$
$E_v(4) = -0.3916837745 \times 10^{4}$
$E_v(5) = -0.3477099090 \times 10^{-1}$
$E_v(6) = 0.2136542674 \times 10^{2}$
$E_v(7) = 0.1436802482 \times 10^{4}$

Methane Coefficients for Thermal Conductivity

$G_t(1) = 1.346953698$
$G_t(2) = -0.3254677753$

$E_t(1) = 0.2325800819 \times 10^{-2}$
$E_t(2) = -0.2477927999$
$E_t(3) = 0.3880593713 \times 10^{2}$
$E_t(4) = -0.1579519146 \times 10^{-6}$
$E_t(5) = 0.3717991328 \times 10^{-2}$
$E_t(6) = -0.9616989434$
$E_t(7) = -0.3017352774 \times 10^{-1}$
$E_t(8) = 0.4298153386$

Methane Coefficients for Melting Pressure

$A = -190.926942$
$B = 0.045655976$
$C = 1.85$

Methane Coefficients for Dielectric Constant

$A = 0.65701018 \times 10^{-2}$
$B = 0.63835013 \times 10^{-5}$
$C = -0.18718728 \times 10^{-6}$
$D = -0.53134820 \times 10^{-4}$
$E = -0.94711735 \times 10^{-6}$

Coefficients for Ethane

Ethane Coefficients for MBWR Equation

$G(1) = -0.3204748852 \times 10^{-3}$
$G(2) = 0.6529792241 \times 10^{-1}$
$G(3) = -0.1669704591 \times 10^{1}$
$G(4) = 0.1147983381 \times 10^{3}$
$G(5) = -0.1854721998 \times 10^{5}$
$G(6) = 0.4994149431 \times 10^{-4}$
$G(7) = -0.4858871291 \times 10^{-1}$
$G(8) = 0.1225345776 \times 10^{2}$
$G(9) = 0.8622615988 \times 10^{4}$
$G(10) = -0.1081290283 \times 10^{-5}$
$G(11) = 0.6279096996 \times 10^{-2}$
$G(12) = -0.1716912675 \times 10^{1}$
$G(13) = -0.1640779401 \times 10^{-4}$
$G(14) = -0.4356516111 \times 10^{-2}$
$G(15) = -0.1966649699 \times 10^{1}$
$G(16) = 0.4026724698 \times 10^{-3}$
$G(17) = -0.6498241861 \times 10^{-5}$
$G(18) = 0.5111594139 \times 10^{-2}$
$G(19) = -0.1113010349 \times 10^{-3}$
$G(20) = -0.7157747547 \times 10^{3}$
$G(21) = -0.1848571024 \times 10^{7}$
$G(22) = -0.2137365569 \times 10^{3}$
$G(23) = 0.6275079986 \times 10^{7}$
$G(24) = -0.9974911056$
$G(25) = 0.1129115014 \times 10^{3}$
$G(26) = -0.1026469558 \times 10^{-1}$
$G(27) = -0.5660525915 \times 10^{3}$
$G(28) = -0.4209846430 \times 10^{-4}$
$G(29) = 0.2374523553 \times 10^{-1}$
$G(30) = -0.1289637823 \times 10^{-6}$
$G(31) = -0.5423801068 \times 10^{-4}$
$G(32) = 0.2239717230 \times 10^{-2}$

Ethane Coefficients for Vapor Pressure

$V_p(1) = 8.900377023$
$V_p(2) = 11.559508931$
$V_p(3) = -4.009244950$
$V_p(4) = -1.175263997$
$V_p(5) = 7.918066027$
$V_p(6) = 1.6$

Ethane Coefficients for Saturated Liquid and Vapor Density

$A(1) = 0.355707408198$
$A(2) = 0.109983965987$
$A(3) = 0.137141863662$
$A(4) = -0.980122523507$
$A(5) = 0.133848943606 \times 10^{1}$
$A(6) = -0.807601731280$
$A(7) = -0.188452743198 \times 10^{1}$
$A(8) = 0.448663193008 \times 10^{-2}$
$A(9) = -0.124890376919$
$A(10) = 0.179738077093 \times 10^{1}$
$A(11) = -0.137530492258 \times 10^{2}$
$A(12) = 0.694137704575 \times 10^{1}$
$A(13) = -0.193296831271 \times 10^{1}$
$E_g = 0.35$

Ethane Coefficients for Ideal Gas C_p

$G_i(1) = -6.9341406909 \times 10^{5}$
$G_i(2) = 3.1534834135 \times 10^{4}$
$G_i(3) = -6.1033752870 \times 10^{2}$
$G_i(4) = 9.9507922459$
$G_i(5) = -2.8657877948 \times 10^{-2}$
$G_i(6) = 9.0922897821 \times 10^{-5}$
$G_i(7) = -5.2750109915 \times 10^{-8}$
$G_i(8) = -1.4243593411 \times 10^{1}$
$G_i(9) = 3000.$

Ethane Coefficients for Viscosity

$F_v(1) = 0.2102436247 \times 10^{1}$
$F_v(2) = -0.1065920192 \times 10^{1}$
$F_v(3) = 1.4$
$F_v(4) = 305.33$

$E_v(1) = -0.1903481042 \times 10^{2}$
$E_v(2) = 0.1799260494 \times 10^{4}$
$E_v(3) = 0.1561316986 \times 10^{2}$
$E_v(4) = -0.1497221136 \times 10^{5}$
$E_v(5) = 0.1130374601$
$E_v(6) = -0.2186440756 \times 10^{2}$
$E_v(7) = 0.8235954037 \times 10^{4}$

Ethane Coefficients for Thermal Conductivity

$G_t(1) = 0.1545691277 \times 10^{1}$
$G_t(2) = -0.5086287855$

$E_t(1) = 0.2863803648 \times 10^{-2}$
$E_t(2) = -0.4598580030$
$E_t(3) = 0.7772750057 \times 10^{2}$
$E_t(4) = 0.1384605940 \times 10^{-5}$
$E_t(5) = 0.1874040714 \times 10^{-1}$
$E_t(6) = -0.3009947821 \times 10^{1}$
$E_t(7) = -0.4225741011 \times 10^{-1}$
$E_t(8) = 0.1028764297 \times 10^{1}$

Ethane Coefficients for Melting Pressure

$A = -255.965$
$B = 0.01400342$
$C = 2.179$

Ethane Coefficients for Dielectric Constant

$A = 0.111421 \times 10^{-1}$
$B = 0.206622 \times 10^{-4}$
$C = -0.135982 \times 10^{-5}$
$D = 0.630432 \times 10^{-4}$
$E = -0.145683 \times 10^{-6}$

Coefficients for Propane

Propane Coefficients for MBWR Equation

$G(1) = -0.2804337729 \times 10^{-3}$
$G(2) = 0.1180666107$
$G(3) = -0.3756325860 \times 10^{1}$
$G(4) = 0.5624374521 \times 10^{3}$
$G(5) = -0.9354759605 \times 10^{5}$
$G(6) = -0.4557405505 \times 10^{-4}$
$G(7) = 0.1530044332$
$G(8) = -0.1078107476 \times 10^{3}$
$G(9) = 0.2218072099 \times 10^{5}$
$G(10) = 0.6629473971 \times 10^{-5}$
$G(11) = -0.6199354447 \times 10^{-2}$
$G(12) = 0.6754207966 \times 10^{1}$
$G(13) = 0.6472837570 \times 10^{-3}$
$G(14) = -0.6804325262 \times 10^{-1}$
$G(15) = -0.9726162355 \times 10^{1}$
$G(16) = 0.5097956459 \times 10^{-2}$
$G(17) = -0.1004655900 \times 10^{-3}$
$G(18) = 0.4363693352 \times 10^{-1}$
$G(19) = -0.1249351947 \times 10^{-2}$
$G(20) = 0.2644755879 \times 10^{5}$
$G(21) = -0.7944237270 \times 10^{7}$
$G(22) = -0.7299920845 \times 10^{3}$
$G(23) = 0.5381095003 \times 10^{8}$
$G(24) = 0.3450217377 \times 10^{1}$
$G(25) = 0.9936666689 \times 10^{3}$
$G(26) = -0.2166699036$
$G(27) = -0.1612103424 \times 10^{5}$
$G(28) = -0.3633126990 \times 10^{-3}$
$G(29) = 0.1108612343 \times 10^{1}$
$G(30) = -0.1330932838 \times 10^{-4}$
$G(31) = -0.3157701101 \times 10^{-2}$
$G(32) = 0.1423083811$

Propane Coefficients for Vapor Pressure

$V_p(1) = 15.410153272$
$V_p(2) = 11.870733615$
$V_p(3) = -0.874958355$
$V_p(4) = -2.448971934$
$V_p(5) = 11.400962259$
$V_p(6) = 1.2$

Propane Coefficients for Saturated Liquid and Vapor Density

$A(1) = 0.277609660772$
$A(2) = 0.996316211526 \times 10^{-1}$
$A(3) = -0.935103011479 \times 10^{-1}$
$A(4) = -0.393181193381$
$A(5) = 0.780393332334$
$A(6) = -0.594672655236$
$A(7) = -0.170353717858 \times 10^{2}$
$A(8) = 0.850718580945 \times 10^{-1}$
$A(9) = -0.169899508271 \times 10^{1}$
$A(10) = 0.184206833899 \times 10^{2}$
$A(11) = -0.815334435591 \times 10^{2}$
$A(12) = 0.330612340278 \times 10^{2}$
$A(13) = -0.737636511031 \times 10^{1}$
$E_q = 0.39$

Propane Coefficients for Ideal Gas C_p

$G_i(1) = 3.1252450099 \times 10^{6}$
$G_i(2) = -1.1415253638 \times 10^{5}$
$G_i(3) = 1.4971650720 \times 10^{3}$
$G_i(4) = -5.4041204338$
$G_i(5) = 3.9215452897 \times 10^{-2}$
$G_i(6) = -2.1738913926 \times 10^{-5}$
$G_i(7) = 4.8274541303 \times 10^{-9}$
$G_i(8) = 3.1907016349$
$G_i(9) = 1500.$

Propane Coefficients for Viscosity

$F_v(1) = 0.0$
$F_v(2) = 0.0$
$F_v(3) = 1.12$
$F_v(4) = 359.$

$E_v(1) = -14.113294896$
$E_v(2) = 968.22940153$
$E_v(3) = 13.686545032$
$E_v(4) = -12511.628378$
$E_v(5) = 0.0168910864$
$E_v(6) = 43.527109444$
$E_v(7) = 7659.4543472$

Propane Coefficients for Thermal Conductivity

$G_t(1) = 0.1422605 \times 10^{1}$
$G_t(2) = -0.179749$

$E_t(1) = 0.3113890422 \times 10^{-2}$
$E_t(2) = -0.2257559730$
$E_t(3) = 0.5674370999 \times 10^{2}$
$E_t(4) = -0.7840963643 \times 10^{-4}$
$E_t(5) = 0.2291785465 \times 10^{-1}$
$E_t(6) = -0.2527939890 \times 10^{1}$
$E_t(7) = -0.6265334654 \times 10^{-1}$
$E_t(8) = 0.2518064809 \times 10^{1}$

Propane Coefficients for Melting Pressure

$A = -718.$
$B = 2.38565$
$C = 1.283$

Propane Coefficients for Dielectric Constant

$A = 0.15562631 \times 10^{-1}$
$B = 0.77162820 \times 10^{-4}$
$C = -0.60399084 \times 10^{-5}$
$D = 0.51074051 \times 10^{-3}$
$E = -0.45141181 \times 10^{-6}$

Coefficients for Isobutane

Isobutane Coefficients for MBWR Equation

$G(1) = 0.1307325972 \times 10^{-2}$
$G(2) = 0.3927802742 \times 10^{-1}$
$G(3) = -0.3185427394 \times 10^{1}$
$G(4) = 0.7608825192 \times 10^{3}$
$G(5) = -0.1753919859 \times 10^{6}$
$G(6) = -0.2090019755 \times 10^{-3}$
$G(7) = 0.8959557971$
$G(8) = -0.6816710130 \times 10^{3}$
$G(9) = -0.1111271045 \times 10^{6}$
$G(10) = 0.3248737572 \times 10^{-4}$
$G(11) = -0.1046526456$
$G(12) = 0.6536598969 \times 10^{2}$
$G(13) = 0.3726503734 \times 10^{-2}$
$G(14) = 0.8553649395$
$G(15) = 0.2109987236 \times 10^{3}$
$G(16) = -0.1401267363$
$G(17) = 0.5213089327 \times 10^{-2}$
$G(18) = -0.1925026382 \times 10^{1}$
$G(19) = 0.7640067895 \times 10^{-1}$
$G(20) = 0.3425854273 \times 10^{6}$
$G(21) = -0.3373475924 \times 10^{8}$
$G(22) = 0.1180683444 \times 10^{5}$
$G(23) = 0.1529683738 \times 10^{9}$
$G(24) = 0.3323837416 \times 10^{3}$
$G(25) = 0.6423169487 \times 10^{4}$
$G(26) = 0.3891706042 \times 10^{1}$
$G(27) = -0.1494755736 \times 10^{6}$
$G(28) = -0.1720240173 \times 10^{-2}$
$G(29) = 0.2894195375 \times 10^{2}$
$G(30) = 0.2005086329 \times 10^{-3}$
$G(31) = -0.4448393005 \times 10^{-1}$
$G(32) = 0.8028488415 \times 10^{1}$

Isobutane Coefficients for Vapor Pressure

$V_p(1) = 12.64889651$
$V_p(2) = 10.74641516$
$V_p(3) = -2.191129109$
$V_p(4) = -2.155822575$
$V_p(5) = 8.832766439$
$V_p(6) = 1.4$

Isobutane Coefficients for Saturated Liquid and Vapor Density

$A(1) = 0.343251228673$
$A(2) = 0.482857776261 \times 10^{-1}$
$A(3) = 0.548432461053$
$A(4) = -0.188426399834 \times 10^{1}$
$A(5) = 0.202812406578 \times 10^{1}$
$A(6) = -0.973482370332$
$A(7) = -0.958720583960 \times 10^{1}$
$A(8) = 0.391295587075 \times 10^{-1}$
$A(9) = -0.848276379865$
$A(10) = 0.988301812135 \times 10^{1}$
$A(11) = -0.493025047411 \times 10^{2}$
$A(12) = 0.209773074305 \times 10^{2}$
$A(13) = -0.492188663343 \times 10^{1}$
$E_g = 0.25$

Isobutane Coefficients for Ideal Gas C_p

$G_i(1) = 1.7027919006 \times 10^{7}$
$G_i(2) = -4.7269724737 \times 10^{5}$
$G_i(3) = 4.7301406581 \times 10^{3}$
$G_i(4) = -1.7231723278 \times 10^{1}$
$G_i(5) = 5.8491344291 \times 10^{-2}$
$G_i(6) = 8.9440351886 \times 10^{-6}$
$G_i(7) = -1.8274599197 \times 10^{-8}$
$G_i(8) = -1.9283021962 \times 10^{1}$
$G_i(9) = 3000.$

Isobutane Coefficient for Viscosity

$F_v(1) = 1.6878386520$
$F_v(2) = 0.0$
$F_v(3) = 1.4$
$F_v(4) = 407.85$

$E_v(1) = -0.2055498053 \times 10^{2}$
$E_v(2) = 0.1357076181 \times 10^{4}$
$E_v(3) = 0.1893774336 \times 10^{2}$
$E_v(4) = -0.1822277344 \times 10^{5}$
$E_v(5) = -0.4599387773 \times 10^{-2}$
$E_v(6) = 0.6305247065 \times 10^{2}$
$E_v(7) = 0.1282253921 \times 10^{5}$

Isobutane Coefficients for Thermal Conductivity

$G_t(1) = 0.1449797353 \times 10^{1}$
$G_t(2) = -0.1685643887$

$E_t(1) = 0.4307008989 \times 10^{-2}$
$E_t(2) = -0.1509010974 \times 10^{1}$
$E_t(3) = 0.4693712392 \times 10^{3}$
$E_t(4) = -0.3554280979 \times 10^{-3}$
$E_t(5) = 0.1841552874$
$E_t(6) = -0.3892338766 \times 10^{2}$
$E_t(7) = -0.9354624917 \times 10^{-1}$
$E_t(8) = 0.7114330590 \times 10^{1}$

Isobutane Coefficients for Melting Pressure

$A = -43.$
$B = 0.137382 \times 10^{-10}$
$C = 6.08$

Isobutane Coefficients for Dielectric Constant

$A = 0.19867026 \times 10^{-1}$
$B = 0.17600053 \times 10^{-3}$
$C = -0.15267372 \times 10^{-4}$
$D = 0.99472904 \times 10^{-3}$
$E = -0.56375024 \times 10^{-6}$

Coefficients for Normal Butane

Normal Butane Coefficients for MBWR Equation

$G(1) = 0.153740104603 \times 10^{-2}$
$G(2) = -0.160980034611 \times 10^{-1}$
$G(3) = -0.979782459010$
$G(4) = 0.499660674504 \times 10^{2}$
$G(5) = -0.102115607687 \times 10^{6}$
$G(6) = 0.236032147756 \times 10^{-3}$
$G(7) = -0.137475757093$
$G(8) = -0.907038733865 \times 10^{2}$
$G(9) = 0.385421748213 \times 10^{5}$
$G(10) = -0.349453710700 \times 10^{-5}$
$G(11) = 0.157361122714 \times 10^{-1}$
$G(12) = 0.102301474068 \times 10^{2}$
$G(13) = 0.182335737331 \times 10^{-2}$
$G(14) = -0.404114307787$
$G(15) = 0.187979855783$
$G(16) = 0.362088795040 \times 10^{-1}$
$G(17) = -0.738762248266 \times 10^{-3}$
$G(18) = -0.218618590563$
$G(19) = 0.118802729027 \times 10^{-1}$
$G(20) = 0.706854198713 \times 10^{5}$
$G(21) = -0.219469885796 \times 10^{8}$
$G(22) = -0.182454361268 \times 10^{4}$
$G(23) = 0.206790377277 \times 10^{9}$
$G(24) = 0.111757550145 \times 10^{2}$
$G(25) = 0.558779925986 \times 10^{4}$
$G(26) = -0.159579054026 \times 10^{1}$
$G(27) = -0.148034214622 \times 10^{6}$
$G(28) = -0.245206328201 \times 10^{-1}$
$G(29) = 0.218305259309 \times 10^{2}$
$G(30) = -0.923990627338 \times 10^{-5}$
$G(31) = -0.205267776639$
$G(32) = 0.387639044820 \times 10^{1}$

Normal Butane Coefficients for Vapor Pressure

$V_p(1) = -7.645674906$
$V_p(2) = 24.578459427$
$V_p(3) = -1.096617182$
$V_p(4) = -0.289083373$
$V_p(5) = 25.161929277$
$V_p(6) = 1.03$

Normal Butane Coefficients for Saturated Liquid and Vapor Density

$A(1) = 0.404162149907$
$A(2) = 0.960764086732 \times 10^{-1}$
$A(3) = 0.340471522665$
$A(4) = -0.172959247223 \times 10^{1}$
$A(5) = 0.221450959133 \times 10^{1}$
$A(6) = -0.119565463680 \times 10^{1}$
$A(7) = -0.500738753322 \times 10^{1}$
$A(8) = 0.959327839487 \times 10^{-2}$
$A(9) = -0.299522444054$
$A(10) = 0.445748956849 \times 10^{1}$
$A(11) = -0.304185455099 \times 10^{2}$
$A(12) = 0.142477112265 \times 10^{2}$
$A(13) = -0.360862729356 \times 10^{1}$
$E_g = 0.32$

Normal Butane Coefficients for Ideal Gas C_p

$G_i(1) = 3.8802310194 \times 10^{5}$
$G_i(2) = -1.5444296890 \times 10^{5}$
$G_i(3) = 2.8455082239 \times 10^{3}$
$G_i(4) = -1.3491511376 \times 10^{1}$
$G_i(5) = 6.6142595353 \times 10^{-2}$
$G_i(6) = -2.4307965028 \times 10^{-5}$
$G_i(7) = 1.5044248429 \times 10^{-10}$
$G_i(8) = -8.3933423467$
$G_i(9) = 3000.$

Normal Butane Coefficients for Viscosity

$F_v(1) = 0.1630521851 \times 10^{1}$
$F_v(2) = 0.0$
$F_v(3) = 1.4$
$F_v(4) = 425.16$

$E_v(1) = -0.2724386845 \times 10^{2}$
$E_v(2) = 0.8012766611 \times 10^{3}$
$E_v(3) = 0.2503978646 \times 10^{2}$
$E_v(4) = -0.1309704275 \times 10^{5}$
$E_v(5) = -0.8313305258 \times 10^{-1}$
$E_v(6) = 0.6636975027 \times 10^{2}$
$E_v(7) = 0.9849317662 \times 10^{4}$

Normal Butane Coefficients for Thermal Conductivity

$G_t(1) = 1.530992335$
$G_t(2) = -0.2114511021$

$E_t(1) = 0.4024170074 \times 10^{-2}$
$E_t(2) = 0.1561435847 \times 10^{1}$
$E_t(3) = -0.6004381127 \times 10^{3}$
$E_t(4) = -0.7547260841 \times 10^{-3}$
$E_t(5) = -0.2069676662 \times 10^{-1}$
$E_t(6) = 0.9382534978 \times 10^{2}$
$E_t(7) = -0.1711371457$
$E_t(8) = 0.3647724935 \times 10^{2}$

Normal Butane Coefficients for Melting Pressure

$A = -363.4$
$B = 0.00713417$
$C = 2.21$

Normal Butane Coefficients for Dielectric Constant

$A = 0.20697631 \times 10^{-1}$
$B = 0.67345731 \times 10^{-4}$
$C = -0.66111785 \times 10^{-5}$
$D = -0.11151933 \times 10^{-3}$
$E = -0.12029820 \times 10^{-5}$