UNITED STATES DEPARTMENT OF COMMERCE

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Molten Salts: Volume 1, Electrical Conductance, Density, and Viscosity Data

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NSRDS–NBS 15
National Standard Reference Data Series-
National Bureau of Standards 15

Issued October 1968

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 – Price $3.00

Foreword

The National Standard Reference Data System is a Government-wide effort to provide for the technical community of the United States effective access to the quantitative data of physical science, critically evaluated and compiled for convenience, and readily accessible through a variety of distribution channels. The System was established in 1963 by action of the President's Office of Science and Technology and the Federal Council for Science and Technology.

The responsibility to administer the System was assigned to the National Bureau of Standards and an Office of Standard Reference Data was set up at the Bureau for this purpose. Since 1963, this Office has developed systematic plans for meeting high-priority needs for reliable reference data. It has undertaken to coordinate and integrate existing data evaluation and compilation activities (primarily those under sponsorship of Federal agencies) into a comprehensive program, supplementing and expanding technical coverage when necessary, establishing and maintaining standards for the output of the participating groups, and providing mechanisms for the dissemination of the output as required.

The System now comprises a complex of data centers and other activities, carried on in Government agencies, academic institutions, and nongovernmental laboratories. The independent operational status of existing critical data projects is maintained and encouraged. Data centers that are components of the NSRDS produce compilations of critically evaluated data, critical reviews of the state of quantitative knowledge in specialized areas, and computations of useful functions derived from standard reference data. In addition, the centers and projects establish criteria for evaluation and compilation of data and make recommendations on needed modifications or extensions of experimental techniques.

Data publications of the NSRDS take a variety of physical forms, including books, pamphlets, loose-leaf sheets and computer tapes. While most of the compilations have been issued by the Government Printing Office, several have appeared in scientific journals. Under some circumstances, private publishing houses are regarded as appropriate primary dissemination mechanisms.

The technical scope of the NSRDS is indicated by the principal categories of data compilation projects now active or being planned: nuclear properties, atomic and molecular properties, solid state properties, thermodynamic and transport properties, chemical kinetics, colloid and surface properties, and mechanical properties.

An important aspect of the NSRDS is the advice and planning assistance which the National Research Council of the National Academy of Sciences-National Academy of Engineering provides. These services are organized under an overall Review Committee which considers the program as a whole and makes recommendations on policy, long-term planning, and international collaboration. Advisory Panels, each concerned with a single technical area, meet regularly to examine major portions of the program, assign relative priorities, and identify specific key problems in need of further attention. For selected specific topics, the Advisory Panels sponsor subpanels which make detailed studies of users' needs, the present state of knowledge, and existing data resources as a basis for recommending one or more data compilation activities. This assembly of advisory services contributed greatly to the guidance of NSRDS activities.

The NSRDS–NBS series of publications is intended primarily to include evaluated reference data and critical reviews of long-term interest to the scientific and technical community.

A. V. Astin, Director

Preface

This work was undertaken to meet the need for a critical assessment of the existing data for electrical conductance, density and viscosity of inorganic compounds in the molten state. The scope embraces the publications in the scientific literature to the current date (December, 1966); while care was taken to be comprehensive, it is clear that there will be omissions and that the task is therefore one to be continued and extended.

The results for some 174 compounds as single-salt melts are reported; no attempt was made in the present effort to embrace the results for molten salt mixtures. With the exception of quaternary ammonium salts, an anion classification has been used for the presentation of the data: i.e., Fluorides, Chlorides, Bromides, Iodides, Carbonates, Nitrites, Nitrates, Oxides, Sulfides, Sulfates, and Miscellaneous.

The authors will be pleased to have additional studies directed to their attention.

Acknowledgments

This work was made possible in large part by financial support received from the Office of Standard Reference Data, National Bureau of Standards, Washington, D.C., for the compilation and critical evaluation of published literature in the general field of molten salts. The participation of A. T. Ward and R. D. Reeves in the first stages of this work, and the assistance of A. G. Timidei, and C. G. M. Dijkhuis in the preparation of the final copy are acknowledged with pleasure.

Contents

Molten Salts: Volume 1, Electrical Conductance, Density, and Viscosity Data

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Data on the electrical conductance, density and viscosity of single-salt melts were compiled from a comprehensive search of the literature up to December 1966 and a critical assessment made of the compiled data. Recommended values were determined and are presented as functions of temperature in the form of equations and tables.

The results for some 174 compounds as single-salt melts are reported; no attempt was made in the present effort to embrace the results for molten salt mixtures. Data are presented for fluorides, chlorides, bromides, iodides, carbonates, nitrites, nitrates, oxides, sulfides, sulfates, and a miscellaneous group.

Key Words: Data compilation, density, electrical conductance, molten salts, standard reference data, viscosity.

1. Introduction

The critical assessment of the electrical conductance, viscosity, and density data of inorganic compounds in the molten state (i.e., "single-salt melts") was undertaken to meet the need for consistent sets of values for these properties.

With the exception of quaternary ammonium slats, an anion classification has been used in this compilation: i.e., Fluorides, Chlorides, Bromides, Iodides, Carbonates, Nitrites, Nitrates, Oxides, Sulfides, Sulfates, and additional salts given as Miscellaneous. The order within each anionic group is in the list of tables preceding section 6. Results are reported for some 174 compounds.

2. Symbols and Units

The equations used to express the temperature dependence of density, conductance, and viscosity are as follows:

Density:	*Equivalent conductance:*
$\rho = a - bT$	$\Lambda = A_\Lambda e^{-E_\Lambda/RT}$

Specific conductance:	*Viscosity:*
$\kappa = a + bT$	$\eta = A_\eta E_\nu/RT$
$\kappa = a + bT + cT^2$	$\eta = a + bT + cT^2$
$\kappa = a + bT + cT^2 + dT^3$	$\eta = a + bT + cT^2 + dT^3$

The symbols and units are:

J = joule

cal = thermochemical calorie = 4.1840J

T(°K) = temperature in degrees Kelvin, defined in the thermodynamic scale by assigning 273.16 °K to the triple point of water (freezing point, 273.15 °K = 0 °C).

R = gas constant = 1.98717 cal mol^{-1} deg^{-1} = 8.3143 J mol^{-1} deg^{-1}

Λ = equivalent conductance (ohm^{-1}cm^2 equiv^{-1})

A_Λ = in ohm^{-1} cm^2 equiv^{-1}

E_Λ = in cal mol^{-1}

κ = specific conductance (ohm^{-1} cm^{-1})

ρ = density (g cm^{-3})

η = viscosity (cp)

A_η = in cp

E_η = in cal mol^{-1}.

3. Preparation of Tables

The selection of the best values of the data for the calculations was based on consideration of different factors, such as: experimental techniques, the number of measurements, the temperature range, the deviations of the data from a fitted curve, and the reliability of previous work from any one center. In general the data of each investigation were evaluated by fitting linear, quadratic and exponential equations by the method of least squares; usually the equation with the smallest standard deviation was selected as the best equation. In some cases, however, the data from several laboratories have been combined for the preceding analysis (see: discussions of the individual salts (sec. 5)).

The literature references are given as footnotes in these tables. Where only one reference is underscored the data from that investigation has been used to gain the best values. Where more than one reference is underlined, the data from these sources were combined as reported in section 5, to gain the best values. The tabulated best-values of specific conductance, density, and viscosity, were calculated using the equations listed with each table (sec. 6).

Equivalent Conductance—The equivalent conductance of a single-salt melt is defined by the relation: $\Lambda = \kappa \dfrac{\text{(Equivalent Weight)}}{\rho}$. The tabulated

values of specific conductance and density were used to gain the values of Λ (sec. 6), and the latter, to develop the exponential equations for equivalent conductance.

Melting Points—The melting point reference is listed at the bottom of each table together with the references for density, conductance and viscosity (sec. 6). In some cases (e.g., MgI_2, GaI_2) the melting point could only be indicated as less than a certain temperature since the actual melting point was not stated in the investigation (the lowest temperature at which measurements were made on the liquid melt).

Extrapolation Beyond the Experimental Temperature Limits—To calculate equivalent conductance over the corresponding temperature range for which specific conductance data were reported, extrapolation of the density data was necessary in some cases. When this extrapolation exceeded a temperature range greater than 20°, the values are enclosed in brackets (sec. 6).

Estimation of Precision—

(i) Definitions: The standard deviation was computed by the expression:

$$s=\sqrt{\frac{\Sigma(X_e-X_c)^2}{n-p}}$$

where X_e and X_c are the experimental and calculated values (from least squares equations), respectively, for each temperature, n the number of data points, and p the number of coefficients. The standard deviation, s, is used as the index of precision (sec. 7).

The percent precision (P.P.) is defined by:

$$\text{P.P.}=\frac{s}{Z}\times 100$$

where Z is the value of the physical property at the "midpoint temperature" (i.e., the midpoint of the temperature range over which the physical property has been investigated). Thus, for LiCl the percent precision would be simply

$$[0.00074\times 10^2/6.215]=0.012 \text{ percent.}$$

Here 6.215 is the value of κ at 980 °K (temperature limits, 910 to 1050 °K; refer. Table 19, sec. 6). The percent precision values, stated in brackets, normally follow immediately the precision values e.g., $s=0.00074$ (0.012%) for LiCl. The units for precision are those of the physical property being considered.

(ii) Computations: All computations were effected with the digital computer facilities at Rensselaer Polytechnic Institute and Fortran IV programs. The calculations with the quadratic equations, in the majority of the cases, were taken to eight significant figures; the calculations with the exponential and cubic equations, similarly to 14 significant figures. The coefficients of these equations are stated to more significant figures than is justified by the accuracy in order that the equations may be used to gain values within the limits of the precision of the measurements.

4. Estimation of Uncertainty

Estimates of uncertainty were based primarily on comparisons of the departures of the experimental results from the best values. Where this was impossible, the estimate of uncertainty was guided by more qualitative factors. In all cases, consideration was also given to experimental techniques and previous results from the respective laboratories. The precision (i.e., the standard deviation was an important consideration throughout this part of the work.

The Percent Departure (P.D.) is defined by:

$$\text{P.D.}=\left[\frac{\text{Experimental Value}-\text{Tabulated Value}}{\text{Tabulated Value}}\right]100$$

and has been used to compare the results of different investigators with the best values (sec. 6). The Percent Departure analysis for three salts, KCl, $NaNO_3$, and KNO_3 is illustrated in figures 1 to 3 respectively (sec. 5).

Where an uncertainty statement is bracketed, the brackets indicate that the estimate has been based on minimal information.

5. Discussion

In this section the following information is given for each compound: precision, estimated uncertainty, source of the temperature dependent equation, and the departure values. For the data used to gain the best equation, the details given are as follows: literature reference, temperature range, number of data points, and (for viscosity only) the experimental technique. The maximum percent departure has also been given, where possible (e.g., KCl (fig. 1): the maximum percent departure between the values of van Artsdalen [79][1] and Winterhager [85] is 1.24 (1112 °K)).

The uncertainty statements in brackets, being based on minimal information, are more qualitative than the unbracketed values.

Lithium Fluoride

[Refer: Table 1, p. 42, for numerical values]

Four investigations of the specific conductance for molten LiF have been reported [42, 83, 86, 88]. Compared to the data of Winterhager and Werner [86] the results of van Artsdalen and Yaffe [83], and Yim and Feinleib [88] show maximum departures of 14.7 percent (1140 °K) and −4.1 percent (1173 °K) respectively; the results of Ryschkewitsch [42] show larger departures. It has been suggested [198] that some experimental factors (e.g., possibly

[1] Figures in brackets indicate the literature references on page 135.

a distortion of the potential probe arrangement) led to systematically high values in the van Artsdalen measurements. The work of Winterhager and Werner [86] appears the most thorough; their data (1148.2 to 1310 °K, 9 points) were selected. Using the quadratic equation for specific conductance the precision is $s = 0.0237$ (0.264%). The uncertainty of the specific conductance values is estimated to be about 12 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.303$ (0.23%).

Three density studies have been reported [25, 81, 83]. The estimated uncertainty of the density values, based on the van Artsdalen studies [83], is 0.5 percent. The maximum departure between the densities of van Artsdalen and Jaeger [25] is 0.5 percent (1141.7 °K). The studies of Schinke and Sauerwald [81] were to establish the volume change on fusion.

Sodium Fluoride

[Refer: Table 2, p. 42, for numerical values]

Five investigations of the specific conductance for molten NaF have been reported [31, 46, 67, 86, 88]. The tabulated values were calculated from the data of Winterhager and Werner [86] (1276.2 to 1411.2 °K, 8 points). Using the linear equation for specific conductance the precision is $s = 0.0089$ (0.17%). The maximum departure between the data of Winterhager [86] and Yim and Feinleib [88] is 3.1 percent (1270 °K). The uncertainty of the specific conductance values is estimated to be about 3.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.119$ (0.10%).

Of the two density investigations [25, 31], the results of Jaeger [25] were selected to generate the tabulated values; the information was insufficient for an estimate of accuracy.

Potassium Fluoride

[Refer: Table 3, p. 43, for numerical values]

Eight investigations of the specific conductance for molten KF have been reported [26, 31, 42, 73, 83, 86, 88, 198]. The tabulated values were calculated from the data of Winterhager and Werner [86] (1132.2 to 1285.2 °K, 12 points). Using the linear equation for specific conductance the precision is $s = 0.0201$ (0.526%). The study of specific conductance for KF by Bredig and Bronstein [198] was limited to one temperature (1178.2 °K). Comparison of this value (3.77 Ω^{-1} cm^{-1}) with that of Winterhager and Werner shows the departure to be 1.85 percent. The results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 12 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.188$ (0.16%).

Of the three density studies [26, 81, 83], the investigation of van Artsdalen [83] appears most thorough. The maximum departure between the density data of van Artsdalen and Jaeger and Kapma [26] is 0.9 percent (1140 °K). The study of Schinke and Sauerwald [81] were to establish the volume change on fusion. The uncertainty of the density values is judged to be about 0.6 percent.

Cesium Fluoride

[Refer: Table 4, p. 43, for numerical values]

Two investigations of the specific conductance for molten CsF have been reported [182, 83]. The tabulated values were calculated from the data of Bronstein, Dworkin, and Bredig [182] (1010.2 to 1125.2 °K, 6 points). Using the linear equation for specific conductance the precision is $s = 0.0456$ (1.73%). The maximum departure between the results of Bredig [182] and Yaffe and van Artsdalen [83] is 34 percent (1050 °K). The uncertainty of the specific conductance values is estimated to be about 5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.118$ (0.097%).

Of the two density studies [25, 83], the data of van Artsdalen [83] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger [25] and van Artsdalen [83] is 1.1 percent (1041.9 °K). The uncertainty of the density values is judged to be about 0.8 percent.

Beryllium Fluoride

[Refer: Table 5, p. 44, for numerical values]

The tabulated values of specific conductance for molten BeF_2 were obtained from the data of Mackenzie [143] (973 to 1173 °K, 6 points). Since the least squaring to quadratic, cubic and exponential equations was unsatisfactory, the values were gained graphically. No attempt to estimate the accuracy of the specific conductance values was made.

Two investigations of the viscosity have been reported [143, 225]. The tabulated values were calculated from the data of Moynihan and Cantor [225] (846.9 to 1252.2 °K, 25 points, rotating cylinder viscometer). The exponential equation expresses the data of Moynihan and Cantor with a precision $s = 3.08 \times 10^6$ (2.77%). The uncertainty of the viscosity values is judged to be about 3.0 percent.

The viscosities of the second study (Mackenzie [143], restricted falling ball technique), show departures of about 8.0 percent from those of Moynihan and Cantor.

Magnesium Fluoride, Calcium Fluoride, Strontium Fluoride, Barium Fluoride, Lanthanum (III) Fluoride, and Cerium (III) Fluoride

[Refer: Tables 6 to 11, pp. 44 to 45, for numerical values]

The tabulated values of density for molten MgF_2, CaF_2, SrF_2, BaF_2, LaF_3, and CeF_3 were calculated from the data of Kirshenbaum, Cahill, and Stokes [95]. The maximum departure between the density values of Mashovetz [197] and Kirshenbaum [95] is 0.4 percent for CaF_2. The uncertainty of density values is estimated to be about 0.5 percent for CaF_2 and (1.0%) for the other five fluorides.

Thorium (IV) Fluoride and Uranium (IV) Fluoride

[Refer: Tables 12 and 13, p. 46, for numerical values]

The tabulated values of density for molten ThF_4 and UF_4 were calculated from the data of Kirshenbaum and Cahill [167]. The uncertainty of the density values is estimated to be about (1%).

Manganese Fluoride, Copper (II) Fluoride, Silver Fluoride, Zinc Fluoride, and Lead Fluoride

[Refer: Tables 14 to 18, pp. 46 to 47]

The tabulated values of the specific conductances for molten MnF_2, CuF_2, AgF, ZnF_2, and PbF_2 were calculated from the graphical data of Winterhager and Werner [86]. The number of data points interpolated from the Winterhager graphs, the corresponding temperature ranges and the best equation are as follows:

MnF_2 4 points, 1223–1273 °K, linear equation
CuF_2 6 points, 1233–1370 °K, linear equation
AgF 6 points, 773–923 °K, linear equation
ZnF_2 4 points, 1173–1223 °K, linear equation
PbF_2 7 points, 1123–1273 °K, linear equation.

The uncertainty of the specific conductance values is estimated to be about (20%).

Lithium Chloride

[Refer: Table 19, p. 47, for numerical values]

Nine investigations of the specific conductance for molten LiCl have been reported [33, 42, 44, 45, 55, 62, 66, 79, 85]. The specific conductance values of van Artsdalen and Yaffe [79] (917.1 to 1056.5 °K; 7 of the 9 reported temperatures omitting 896.0 and 907.6 °K) and two values from Edwards [62] (920.2 and 940.2 °K) were used to develop the quadratic equation. Using the quadratic equation for specific conductance the precision is $s = 0.00074$ (0.012%). The maximum percent departures of the specific conductance values of various investigators from the combined data of van Artsdalen [79] and Edwards et al. [62], are as follows: Bloom et al. [66], 3.2 (910 °K); Biltz and Klemm [33], 0.8 (954.2 °K); Grothe [55], 0.3 (973.2 °K); Winterhager and Werner [85], −0.7 (961.2 °K) and Karpachev et al. [44], −3.0 (910 °K). The results of Ryschkewitsch [42] show larger departures. The uncertainty of the specific conductance values is estimated to be about 0.7 percent. Considerable corrosion of the cell (above 1056 °K) was noted by van Artsdalen.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0847$ (0.048%).

Of the seven sets of density data [3, 25, 55, 62, 66, 79, 81] the most thorough studies appear to be those of van Artsdalen [79] and Bloom [66]. The uncertainty of the tabulated densities, calculated from the van Artsdalen data [79] is estimated to be about 0.2 percent. Compared to the density data of van Artsdalen, the results of Bloom et al. [66], Brunner [3], Edwards et al. [62], Jaeger [25] and Grothe [55] show maximum departures of 0.2 percent (900 °K), −0.2 percent (1050 °K), −0.3 percent (1050 °K), −0.4 percent (913 °K) and −0.4 percent (1050 °K) respectively.

Four sets of viscosity data have been reported [12, 45, 47, 121]. The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [121] (902.9 to 1082.9 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0092$ (0.81%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The investigator, reference, experimental method, and the maximum percent deviation from the values of Murgulescu and Zuca are as follows: Fawsitt [12], oscillating disk, +21.7 percent; Karpachev [45], oscillating ball, 200 percent; and Karpachev [47], oscillating ball, 7.4 percent. No explanation for the two vastly different results was offered by Karpachev.

Sodium Chloride

[Refer: Table 20, p. 48, for numerical values]

Seventeen investigations of the specific conductance for molten NaCl have been reported [2, 4, 10, 27, 33, 42, 49, 52, 55, 62, 63, 71, 79, 82, 85, 199]. The specific conductance data of van Artsdalen and Yaffe [79] (1079.6 to 1294.6 °K, 24 of the 26 reported temperatures, omitting 1075.5 and 1077.8 °K) were used to develop the tabulated values. Using the quadratic equation for specific conductance the precision is $s = 0.00164$ (0.043%). Compared to the data of van Artsdalen the results of Ryschkewitsch [42], and Edwards et al. [62], show maximum departures of −0.6 percent (1093 °K) and 0.8 percent (1273 °K) respectively; the

results of the other investigators show larger departures. The estimated uncertainty of the specific conductance values is about 0.8 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0870$ (0.057%).

Of the eleven density studies [3, 11, 25, 55, 62, 66, 79, 80, 81, 96, 126] the most thorough appears to be that of van Artsdalen [79]. Compared to the density data of van Artsdalen [79] the results of Brunner [3], Edwards et al. [62] and Kirshenbaum [126] show departures of −0.2 percent (1080 °K), −0.4 percent (1111 °K) and 0.6 percent (1290 °K) respectively; the results of Bloom et al. [66] and Jaeger [25] show larger departures. The studies of Sauerwald et al. [80, 81] and Bockris et al. [96] were to establish the volume change on fusion. The uncertainty of the tabulated densities, calculated from van Artsdalen data is estimated to be about 0.4 percent.

Four investigations of the viscosity have been reported [12, 38, 57, 121]. The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [121] (1085.9 to 1243.2 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0057$ (0.55%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The investigator, reference, experimental method, and the maximum percent departure from the values of Murgulescu and Zuca are as follows: Fawsitt [12], oscillating disk, 4.30 percent; Dantuma [38], oscillating ball, 8.4 percent; Ogawa [57], restricted falling sphere, 7.2 percent.

Potassium Chloride

[Refer: Table 21, p. 48, for numerical values]

Nineteen investigations of the specific conductance for molten KCl have been reported [2, 4, 10, 26, 27, 42, 44, 49, 50, 55, 62, 63, 66, 79, 85, 123, 124, 125, 129]. The departures of recent determinations from the values of van Artsdalen [79] are illustrated in figure 1. The tabulated values were calculated from the data of van Artsdalen and Yaffe [79] (1063.2 to 1198.3 °K, 15 points). Using the quadratic equation for specific conductance the precision is $s = 0.003$ (0.14%). The departure between the data of van Artsdalen and Crook and Bockris [123] is about 0.4 percent over the range 1053.2 to 1198.2 °K. Van Artsdalen [79] and Crook [123] both used well established a-c conductance techniques (0.5 to 20 kc/sec); the results of Duke [124] were gained with a d-c technique. The results of Buckle and Tsaoussoglou [125a], gained with a new a-c technique (10 to 100 kc/sec) are lower than the van Artsdalen data by about 0.8 percent. The results of the other investigators show larger departures. The uncertainty of the specific

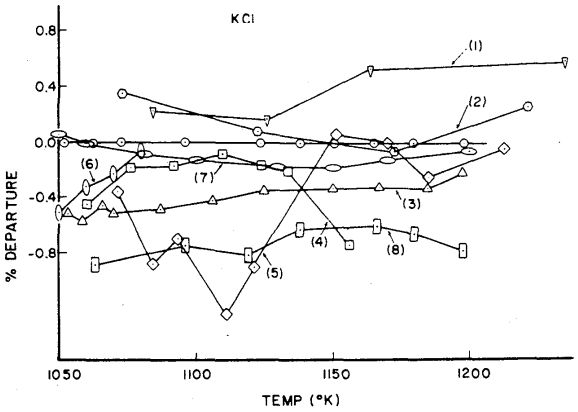

FIGURE 1. *Comparison of percent departure of the data of various investigators with the van Artsdalen specific conductance data for* KCl.

⊙ Base line—van Artsdalen and Yaffe	[79]
▽ Huber and Potter	[63]
⊙ Edwards and Taylor	[62]
△ Crook	[123]
□ Duke and Bissell	[124]
◇ Winterhager and Werner	[85]
⬯ Bloom and Knaggs	[66]
⬭ Murgulescu and Zuca	[129]
▯ Buckle and Tsaoussoglou	[125]

conductance values is estimated to be about 0.6 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.109$ (0.092%).

The density of molten KCl has been the subject of more than ten investigations [3, 11, 26, 62, 66, 70, 79, 80, 81, 126, 178]. The uncertainty of the tabulated density values, calculated from the van Artsdalen data [79] is estimated to be about 0.5 percent. The density data of Kirshenbaum [126], $\rho = 2.062 - 5.350 \cdot 10^{-4}\ T$ °K (1101 to 1607 °K), extends to higher temperatures than any of the other investigations; at 1100 °K, the Kirshenbaum data are about 1.45 percent lower than the van Artsdalen values. The maximum percent departure between the densities of van Artsdalen [79] and the other investigators are as follows: Brunner [3], −0.2 (1080 °K); Arndt and Gessler [11], −1.1 (1123 °K); Jaeger and Kapma [26], −0.14 (1130 °K); Edwards et al. [62], 0.4 (1060 °K); Bloom et al. [66], 0.5 (1063 °K); Peake and Bothwell [70], −0.7 (1170 °K); Neithamer and Peak [178], −0.6 (1178 °K). The studies of Vogel, Schinke, and Sauerwald [80] and Schinke and Sauerwald [81] were to establish the volume change on fusion.

Three investigations of the viscosity for molten KCl have been reported [12, 102, 111]. The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [102] (1056.5 to 1202.0 °K, 11 points, oscillating ball techinque). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0132$ (1.43%). The uncertainty of the viscosity values is estimated to be about 1.5 percent.

The investigator, references, experimental method, and the maximum percent departure from the values of Murgulescu and Zuca are as follows: Fawsitt [12], oscillating disk, 25 percent; and Karpachev and Stromberg [111], oscillating ball, 5.2 percent.

Rubidium Chloride

[Refer: Table 22, p. 49, for numerical values]

Three investigations of specific conductance for molten RbCl have been reported [33, 82, 129]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [82] (1003.0 to 1197.3 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s = 0.0026$ (0.15%). Compared to the data of van Artsdalen [82], the results of Murgulescu and Zuca [129] and Klemm [33] show departures of 3.18 percent (1140 °K) and 6.03 percent (1188.2 °K) respectively. The uncertainty of the specific conductance values is estimated to be about 3.5 percent.

The tabulated values of equivalent conductance are expressed by the exponential equation with a precision $s = 0.192$ (0.19%).

Of the four density studies [25, 35, 36, 82] the most thorough appears to be that of van Artsdalen [82]. Compared to the data of van Artsdalen the results of Klemm [36], and Biltz [35] show maximum departures of -0.8 percent (1055 °K), and 0.3 percent (1200 °K) respectively. The uncertainty of the tabulated density values calculated from the van Artsdalen data [82] is estimated to be about 0.4 percent.

Two investigations of viscosity have been reported [109, 121]. The tabulated values were calculated from the data of Murgulescu and Zuca [121] (1005.2 to 1148.2 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0058$ (0.50%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The viscosities of the second study (Janz and Reeves [109], oscillating hollow cylinder technique) are consistently higher than those of Murgulescu and Zuca (e.g., 53.5% at 1010 °K, 9.9% at 1140 °K).

Cesium Chloride

[Refer: Table 23, p. 49, for numerical values]

Four investigations of the specific conductance for molten CsCl have been reported [33, 82, 129, 199]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [82] (926.5 to 1170.0 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s = 0.00280$ (0.18%).

The maximum departure between the specific conductance values of van Artsdalen [82] and Biltz and Klemm [33] is 10.6 percent (1104.2 °K). The uncertainty of the tabulated specific conductance values is estimated to be about 5.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.2520$ (0.26%).

Five density studies have been reported [25, 59, 80, 81, 82]; of these the most thorough appears to be that of van Artsdalen [82]. The uncertainty of the density values calculated from the van Artsdalen data [82] is estimated to be about 0.1 percent.

The accuracy of the density measurements for CsCl is greater than the accuracies for any of the other molten salts; these data appear highly suitable for high temperature calibration reference standards. The maximum departure between the density data of Jaeger [25] and van Artsdalen [82] is 0.12 percent (1154.2 °K).

Two investigations of viscosity have been reported [109, 121]. The tabulated values were calculated from the data of Murgulescu and Zuca [121] (928.0 to 1110.2 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0067$ (0.82%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The viscosities of the second study (Janz and Reeves [109], oscillating hollow cylinder techinque) show a linear "cross-over" departure from those of Murgulescu and Zuca (e.g., 13.3% at 940 °K; 18.8% at 1110 °K).

Beryllium (II) Chloride

[Refer: Table 24, p. 50, for numerical values]

Two investigations of the specific conductance for molten $BeCl_2$ have been reported [32, 186]. The tabulated values were calculated from the data of Delimarskii, Sheiko, and Feshchenko [186] (718.2 to 761.2 °K, 5 points). Using the linear equation for specific conductance the precision is $s = 9.70 \cdot 10^{-5}$ (3.3%). Comparison of the data of Delimarskii [186] and Voigt and Biltz [32] shows that the values of Delimarskii are considerably lower, the mazimum departure being 180 percent (718.2 °K). The uncertainty of the specific conductance values is estimated to be about (50%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0169$ (21.6%).

The density data of Klemm [36] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Magnesium Chloride

[Refer: Table 25, p. 50, for numerical values]

Three investigations of the specific conductance for molten $MgCl_2$ have been reported [35, 63, 94]. The tabulated values were calculated from the data of Bockris et al. [94] (987.2 to 1252.1 °K, 27 points).

Using the quadratic equation for specific conductance the precision is $s = 0.00300$ (0.24%). Compared to the data of Bockris et al., the results of Biltz and Klemm [35] and Huber, Potter, and Clair [56] show maximum departures of −1.1 percent (1214 °K) and −1.6 percent (1111 °K) respectively. The uncertainty of the tabulated specific conductance values is estimated to be about 1 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.1053$ (0.28%).

Of the three density studies [36, 63, 91, 113] the data of Ellis and Smith [91] were selected to calculate the tabulated values. Compared to the data of Ellis et al. [91, 113] the maximum percent departures of the densities of Klemm [36] and Huber, Potter, and Clair [63] are 0.24 (1044.2 °K) and 0.6 (1000 °K) respectively. The uncertainty of the density values is judged to be about 0.2 percent.

An exponential equation, $\eta = 0.355 \exp(5250/RT)$, for the viscosity has been reported by Ukshe [223] without any mention of the temperature limits.

Calcium Chloride

[Refer: Table 26, p. 50, for numerical values]

Ten investigations of the specific conductance for molten $CaCl_2$ have been reported [2, 4, 11, 35, 42, 50, 71, 83, 85, 94]. The tabulated values were calculated from the data of Bockris et al. [94] (1046.3 to 1291.8 °K, 21 points). Using the exponential equation for specific conductance the precision is $s = 0.00587$ (0.25%). Compared to the data of Bockris et al., the results of Biltz and Klemm [35], Yaffe and van Artsdalen [83], and Lee and Pearson [50] show maximum departures of −6.4 percent (1061 °K), 4.4 percent (1223 °K), and 0.02 percent (1073 °K) respectively; the results of the other investigators show larger departures. The uncertainty of the specific conductance values is judged to be about 2.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.03441$ (0.05%).

Of the four density studies [11, 17, 63, 83] the most thorough appears to be that of van Artsdalen and Yaffe [83]. Compared to the density data of van Artsdalen the results of Arndt and Gessler [11], and Huber, Potter, and Clair [63] show maximum departures of −1.0 percent (1223 °K) and −0.9 percent (1060 °K) respectively. The uncertainty of the density values calculated from the van Artsdalen data [83] is estimated to be about 0.9 percent.

Two investigations of the viscosity have been reported [47, 109]. The tabulated values were calculated from the data of Janz and Reeves [109] (1058.7 to 1242.6 °K, 12 points, oscillating hollow cylinder technique). The cubic equation expresses the data of Janz and Reeves with a precision $s = 0.0738$ (3.64%) and the uncertainty of the data is judged to be about 4.0 percent.

The viscosities of the second study (Karpachev and Stromberg [47]; oscillating ball technique) are consistently higher than those of Janz and Reeves (e.g., 3.8% at 1073 °K; 18.7% at 1173 °K).

Strontium Chloride

[Refer: Table 27, p. 51, for numerical values]

Three investigations of the specific conductance for molten $SrCl_2$ have been reported [4, 83, 94]. The tabulated values were calculated from the data of Bockris et al. [94] (1145.7 to 1357.0 °K, 14 points). Using the exponential equation for specific conductance the precision is $s = 0.0012$ (0.05%). The departure between the values of van Artsdalen and Yaffe [83] and Bockris [94] is about 3.1 percent for the range, 1145.7 to 1289.9 °K. The uncertainty of the tabulated values is judged to be about 4.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.0247$ (0.036%).

Four density studies have been reported [11, 81, 83, 91]; of these the van Artsdalen and Yaffe [83] study appears the best. Compared to the data of van Artsdalen [83] the results of Arndt and Gessler [11] and Ellis et al. [91] show maximum departures of −1.2 percent (1170 °K) and −0.4 percent (1163 °K) respectively. The uncertainty of the density values, calculated from the van Artsdalen data [83], is judged to be about 0.7 percent.

The tabulated values of viscosity were calculated from the data of Janz and Reeves [109] (1150.5 to 1258.6 °K, 18 points, oscillating hollow cylinder technique). The exponential equation expresses the data of Janz and Reeves with a precision $s = 0.0706$ (2.88%) and the uncertainty of the data is judged to be about (4.0%).

Barium Chloride

[Refer: Table 28, p. 51, for numerical values]

Five investigations of the specific conductance for molten $BaCl_2$ have been reported [4, 63, 83, 85, 94]. The tabulated values were calculated from the data of Bockris et al. [94] (1232.6 to 1358.8 °K, 14 points). Using the exponential equation for specific conductance, the precision is $s = 0.00254$ (0.12%). Compared to the data of Bockris et al., the results of Winterhager and Werner [85], and Arndt [4] show maximum departures of 2.8 percent (1241 °K) and −4.4 percent (1273 °K) respectively. The uncertainty of the specific conductance values is judged to be about 9.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.01954$ (0.025%).

Five density studies have been reported [11, 63, 70, 81, 83]; of these the work of van Artsdalen and Yaffe [83] appears the most thorough. The maximum departure between the density data of Arndt and Gessler [11] and van Artsdalen [83] is −1.0 percent (1273 °K); the results of Peake and Bothwell [70] and Huber et al. [63], show larger departures. The uncertainty of the density values calculated from the van Artsdalen data [83] is estimated to be about 5.0 percent.

Two investigations of the viscosity for this salt have been reported [109, 210]. The tabulated values were calculated from the data of Janz and Reeves [109] (1261.4 to 1313.9 °K, 5 points, oscillating hollow cylinder technique). The cubic equation expresses the data of Janz and Reeves with a precision $s = 0.0651$ (1.60%) and the uncertainty of the data is considered to be about 4.0 percent.

The results of the second study (Slavyanskii [210]) are presented in graphical form only. The interpolated values are consistently higher than those of Janz and Reeves (e.g., 9.3% at 1274 °K; 28% at 1307 °K).

Scandium (III) Chloride

[Refer: Table 29, p. 51, for numerical values]

The tabulated values of specific conductance for molten $ScCl_3$ were calculated from the data of Biltz and Klemm [30] (1213 to 1264 °K, 5 points). The density data of Klemm [36] are limited to two temperatures (1213 and 1273 °K). The data for these properties are insufficient to establish the precision or to judge the accuracy.

Yttrium (III) Chloride

[Refer: Table 30, p. 52, for numerical values]

The tabulated values of specific conductance for molten YCl_3 were calculated from the data of Biltz and Klemm [35] (973.2 to 1148.2 °K, 6 points). Using the quadratic equation for specific conductance the precision is $s = 0.00428$ (0.69%) and the uncertainty of the data is judged to be about 10 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.276$ (1.8%).

The density values were calculated from the data of Klemm [36]; no estimate of accuracy was attempted owing to the limited information.

Lanthanum (III) Chloride

[Refer: Table 31, p. 52, for numerical values]

Three investigations of the specific conductance for molten $LaCl_3$ have been reported [35, 83, 118]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [83] (1146.2 to 1260.2 °K). Using the quadratic equation for specific conductance the precision is $s = 0.009$ (0.05%). The results of Dworkin, Bronstein and Bredig [118] ($\kappa = -1.640 + 2.564 \cdot 10^{-3}T$) covering a limited range, 1153.2 to 1193.2 °K, are consistently smaller than those of van Artsdalen (e.g., 10.7%, 1200 °K) The uncertainty of the specific conductance values is judged to be about 10 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision of $s = 0.277$ (0.63%).

The maximum departure between the density results of Klemm [36] and those of van Artsdalen and Yaffe [83] is 0.94 percent (1250 °K). The uncertainty of the tabulated density values, calculated from the data of van Artsdalen and Yaffe [83] is judged to be about 0.6 percent.

The tabulated values of viscosity were calculated from the exponential equation of Smirnov, Khokhlov, and Stepanov [136] (1183 to 1276 °K, 18 points, oscillating ball viscometer). The uncertainty of the viscosity values is estimated to be about (1.0%).

Cerium (III) Chloride

[Refer: Table 32, p. 53, for numerical values]

Two investigations of the specific conductance for molten $CeCl_3$ have been reported [99, 119] The tabulated values were calculated from the data of Bronstein, Dworkin, and Bredig [119] (1101.2 to 1204.2 °K, 8 points). Using the quadratic equation for specific conductance the precision is $s = 0.00580$ (0.41%). The maximum departure between the data of Bredig [119] and Mellors and Senderoff [99] is 19.1 percent (1131.2 °K). The uncertainty of the specific conductance values is estimated to be about 15 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.188$ (0.58%).

The density data of Senderoff [99] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information

Praseodymium (III) Chloride

[Refer: Table 33, p. 53, for numerical values]

Two investigations of the specific conductance for molten $PrCl_3$ have been reported [32, 120]. The tabulated values were calculated from the data of Voigt and Biltz [32] (1097 to 1238 °K, 6 points). Using the exponential equation for specific conductance the precision is $s = 0.0032$ (0.32%). The maximum departure between the data of Voigt [32] and Dworkin, Bronstein, and Bredig [120] is 20 percent (1150 °K). The uncertainty of the specific conductance values is estimated to be about 15 percent.

Neodymium (III) Chloride

[Refer: Table 34, p. 53, for numerical values]

Two investigations of the specific conductance for molten $NdCl_3$ have been reported [32, 118]. The tabulated values were calculated from the data of Voigt and Biltz [32] (1048 to 1173 °K, 6 points). Using the linear equation for specific conductance the precision is $s = 0.0024$ (0.30%). The uncertainty of the specific conductance values is estimated to be about (12%).

Gadolinium (III) Chloride

[Refer: Table 35, p. 54, for numerical values]

The tabulated values of specific conductance for molten $GdCl_3$ were calculated from the data of Dworkin, Bronstein, and Bredig [171] (902.2 to 971.2 °K, 4 points). Using the exponential equation for specific conductance the precision is $s = 0.00525$ (1.17%). The uncertainty of the specific conductance values is estimated to be about (20%).

Dysprosium (III) Chloride, Holmium (III) Chloride, and Erbium (III) Chloride

[Refer: Tables 36 to 38, p. 54, for numerical values]

The tabulated values of specific conductance for molten $DyCl_3$, $HoCl_3$, and $ErCl_3$ were calculated from the data of Dworkin, Bronstein, and Bredig [171]. The number of data points, the temperature range, the precision, the estimated uncertainty and the best equation are as follows:

$DyCl_3$ — 3 points, 952–1003 °K,
$s = 0.00483$ (1.13%), (20%), linear equation.
$HoCl_3$ — 4 points, 1020–1092 °K,
$s = 0.00289$ (0.57%), (20%), linear equation.
$ErCl_3$ — 3 points, 1074–1112 °K,
$s = 0.000150$ (0.03%), (20%), linear equation.

Thorium (IV) Chloride

[Refer: Table 39, p. 55, for numerical values]

The tabulated values of specific conductance for molten $ThCl_4$ were calculated from the data of Voigt and Biltz [32] (1087.2 to 1195.2 °K, 5 points). Using the quadratic equation for specific conductance the precision is $s = 0.0140$ (1.96%), and the uncertainty of the specific conductance values is estimated to be about 15 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.273$ (1.2%).

The density results reported by Klemm [36] show little change with temperature; no estimate of accuracy was attempted.

Uranium (IV) Chloride

[Refer: Table 40, p. 55, for numerical values]

The tabulated values of specific conductance for molten UCl_4 were calculated from the data of Voigt and Biltz [32] (843 to 893 °K, 3 points). Using the linear equation for specific conductance the precision is $s = 0.0013$ (0.32%). The uncertainty of the tabulated specific conductance values is estimated to be about (9%). The melting point (840 °K) observed by Voigt [32] is lower than the established melting point (863 °K) [130].

Manganese (II) Chloride

[Refer: Table 41, p. 55, for numerical values]

Two investigations of the specific conductance for molten $MnCl_2$ have been reported [85, 192]. The tabulated values were calculated from the data of Murgulescu and Zuca [192] (923.2 to 1123.2 °K, 5 points). Using the quadratic equation for specific conductance the precision is $s = 3.66 \cdot 10^{-4}$ (0.022%). Comparison of the data of Murgulescu [192] and Winterhager and Werner [85] shows the maximum departure to be about 27 percent (1128.2 °K). The uncertainty of the specific conductance values is estimated to be about 20 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.265$ (0.59%).

The density data of Murgulescu [192] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Titanium (IV) Chloride

[Refer: Table 42, p. 55, for numerical values]

The tabulated values of viscosity for molten $TiCl_4$ have been calculated from the data of Toropov [204] (293 to 333 °K, 3 points, capillary viscometer). The exponential equation expresses the data of Toropov with a precision $s = 0.0095$ (1.39%). No estimate of accuracy was attempted owing to the limited information.

Copper (I) Chloride

[Refer: Table 43, p. 56, for numerical values]

Five investigations of the specific conductance for molten CuCl have been reported [33, 35, 85, 189, 212]. The tabulated values were calculated from the data of Grantham and Yosim [189] (746.2 to 1430.2 °K, 19 points). Using the cubic equation for specific conductance the precision is $s = 6.40 \cdot 10^{-3}$ (0.16%). This cubic equation can be used to gain values of specific conductance (within 6%) in the range 700 to

740 °K. Grantham [189] has reported a specific conductance maximum at 1123 °K. Compared to the data of Grantham the results of Klemm and Biltz [33], and Winterhager and Werner [85] show maximum departures of −5.5 percent (740 °K), and 5.1 percent (950 °K) respectively. The uncertainty of the specific conductance values is estimated to be about 5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.968$ (0.84%).

The data of Klemm [36] were used to calculate the densities; no estimate of accuracy was attempted owing to the limited information.

The tabulated values of viscosity were calculated from the data of Karpachev and Stromberg [47] (773.2 to 973.2 °K, 5 points, oscillating ball technique). The cubic equation expresses the data with a precision $s = 0.00069$ (0.037%). The uncertainty of the viscosity values is estimated to be about (2.0%).

Silver Chloride

[Refer: Table 44, p. 56, for numerical values]

Eight investigations of the specific conductance for molten AgCl have been reported [1, 10, 21, 23, 60, 72, 100, 166, 202, 212]. The tabulated values were calculated from the quadratic specific conductance equation of Bell and Flengas [166] (753 to 1013 °K). The precision reported by Flengas is $s = 0.0035$ (0.082%). The maximum percent departures between the specific conductance values of Bell and Flengas [166] and the other investigators are as follows: Spooner and Wetmore [60], 0.4 percent (773.2 °K); Doucet and Bizouard [100], 1.1 percent (873.2 °K); Arndt and Gessler [10], 4.4 percent (973 °K); Tubandt and Lorenz [21], −3.8 percent (873 °K); Lorenz and Höchberg [23], 2.6 percent (873 °K); and Harrap and Heymann [72], −2.7 percent (873 °K). The uncertainty of the specific conductance values is estimated to be about 0.7 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.279$ (0.21%).

Of the five density studies [22, 54, 60, 81, 166, 212] the data of Flengas [166] were selected to calculate the tabulated values. Compared to the density data of Flengas [166] the results of Spooner and Wetmore [60], Lorenz and Höchberg [22], and Boardman, Dorman, and Heymann [54], show maximum departures of 0.2 percent (743 °K), −0.8 percent (901 °K), and −1.1 percent (900 °K) respectively. The studies of Schinke and Sauerwald [81] were to establish the volume change on fusion. The estimated uncertainty of the density values is about 0.1 percent.

Two investigations of the viscosity have been reported [24, 72]. The tabulated values were calculated from the data of Harrap and Heymann [72] (723.2 to 973.2 °K, 10 points, vertical capillary viscometer). The cubic equation expresses the data of Harrap and Heymann with a precision $s = 0.003$ (0.19%). The uncertainty of the viscosity values is estimated to be about 1.5 percent.

The results of the second study (Lorenz and Höchberg [24], oscillating disk technique) are consistently lower than those of Harrap and Heymann (e.g., −2.7%, 876.2 °K; −6.4%, 942.2 °K)

Zinc Chloride

[Refer: Table 45, p. 57, for numerical values]

Five investigations of the specific conductance for molten $ZnCl_2$ have been reported [33, 87, 94, 98, 189]. The tabulated values were calculated from the data of Bockris et al. [94] (593.3 to 969.7 °K). To cover the entire range it was necessary to generate three quadratic equations: the temperature range, the number of data points, and the precision appropriate to this subdivision are as follows:

593.3 to 672.5 °K, 7 points, $s = 4.66 \times 10^{-4}$ (6.6%);
672.5 to 824.7 °K, 10 points, $s = 8.38 \times 10^{-4}$ (1.25%);
824.7 to 969.7 °K, 13 points, $s = 1.60 \times 10^{-3}$ (0.53%).

Comparison of the data of Bockris [94] and Grantham and Yosim [189] in the low temperature region (593.3 to 672.5 °K) shows the maximum departure to be 42 percent (633 °K). The uncertainty of the specific conductance values for this region is estimated to be about 30 percent. The maximum departure between the data of Bockris [94] and Duke and Fleming [87] (in the range 672.5 to 824.7 °K) is −5.6 percent (748 °K). In the high temperature range (824.7 to 969.7 °K) comparison of the results of Bockris [94] and Grantham [189] shows the maximum departure to be 3.94 percent (937.2 °K). The uncertainty of the specific conductance values in the region 672.5 to 969.7 °K is estimated to be about 5 percent.

For temperatures above 960 °K values of specific conductance may be gained from the following quadratic equation ($s = 0.011$ (1.8%)) based on the data of Grantham [189] (937.2 to 1136.2 °K, 5 points)
$\kappa = 1.50344 - 4.54126 \cdot 10^{-3}T + 3.55485 \cdot 10^{-6}T^2$.

The three exponential equations express the tabulated values of equivalent conductance with the precisions $s = 0.040$ (18%) (593.3 to 672.5 °K) $s = 0.062$ (3.3%) (672.5 to 824.7 °K); $s = 0.080$ (0.94%) (824.7 to 969.7 °K) respectively.

Of the seven investigations of density [36, 40, 56, 87, 91, 98, 113] the results of Mackenzie and Murphy [98] were selected to calculate the tabulated values. The density values of Mackenzie [98] are in agreement with those of Klemm [36] to within (0.3%). Compared to the data of Mackenzie, the results of Duke and Fleming [87], Wachter and Hildebrand [40] and Ellis and Smith [91] show maximum departures of −0.2 percent (866 °K

−0.5 percent (823.9 °K) and −1.6 percent (934 °K) respectively.

The tabulated values of viscosity were obtained from the data of Mackenzie and Murphy [98] (593.2 to 673.2 °K, 5 points, restricted falling ball technique). Since the least squaring to exponential, quadratic and cubic were poor, it became necessary to obtain the tabulated values from a smooth curve of the experimental data.

Cadmium Chloride

[Refer: Table 46, p. 57, for numerical values]

Six investigations of the specific conductance of molten $CdCl_2$ have been reported [19, 27, 33, 51, 66, 94]. The tabulated values were calculated from the data of Bockris et al. [94] (844.7 to 1082.4 °K, 25 points). Using the quadratic equation for specific conductance the precision is $s = 0.000149$ (0.007%). Compared to the data of Bockris, the results of Bloom and Heymann [51], Bloom and Knaggs [66] and Aten [19] show departures of −0.3 percent (873 °K), 0.8 percent (1000 °K) and −0.8 percent (853 °K) respectively; the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 0.6 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.02004$ (0.035%).

Of the three investigations of density [15, 54, 66], the data of Bloom et al. [66] and Boardman et al. [54] were selected to generate the linear equation to express the density values. The maximum percent departure between the density values of Bloom [66] and Boardman [54] is 0.3 percent (850 °K) while that between the tabulated values and the values of Lorenz, Frei, and Jabs [15] is 1.3 percent (870 °K). The uncertainty of the density values is estimated to be about 0.3 percent.

Two investigations of viscosity have been reported [47, 53]. The tabulated values of viscosity were calculated from the data of Bloom, Harrap, and Heymann [53] (863.2 to 963.2 °K, 10 points, vertical capillary viscometer). The exponential equation expresses the data of Bloom, Harrap, and Heymann with a precision $s = 0.0075$ (0.36%). The uncertainty of the viscosity values is estimated to be about 1.5 percent.

The viscosities of the second study (Karpachev and Stromberg [47], the oscillating ball technique) are consistently higher than those of Bloom, Harrap, and Heymann. The maximum departure from the tabulated values is 5.2 percent (873 °K).

Mercury (I) Chloride

[Refer: Table 47, p. 58, for numerical values]

The tabulated values of specific conductance for molten HgCl were calculated from the data of Biltz and Klemm [35] (802.2 to 819.2 °K, 4 points). Using the exponential equation for specific conductance the precision is $s = 0.00604$ (0.60%). The uncertainty of specific conductance values is estimated to be about (20%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.00732$ (0.017%).

The density data of Klemm [36] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Mercury (II) Chloride

[Refer: Table 48, p. 58, for numerical values]

Four investigations of the specific conductance for molten $HgCl_2$ have been reported [35, 94, 103, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (559.2 to 705.2 °K, 17 points). Using the cubic equation for specific conductance the precision is $s = 3.87 \cdot 10^{-7}$ (0.50%). Grantham's [189] results in the temperature range 559.2 to 802.2 °K exhibit a maximum value at 753 °K. The maximum departure between the data of Bockris et al. [94] and Grantham and Yosim [189] is 2.6 percent (579 °K); the results of Biltz and Klemm [35] and Janz and McIntyre [103] show larger departures. The uncertainty of the specific conductance values is estimated to be about 3 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 8.5 \cdot 10^{-5}$ (4.2%).

Of the three density studies [18, 103, 127], the data of Janz and McIntyre [103] were selected to calculate the tabulated values. Compared to the data of Janz, the results of Johnson, Silva, and Cubicciotti [127] and Prideaux [18] show maximum departures of 0.4 percent (550 °K) and 2.5 percent (630 °K) respectively. The uncertainty of the density values is judged to be about 0.5 percent.

The tabulated values of viscosity were calculated from the data of Janz and McIntyre [103] (554.0 to 579.3 °K, 5 points, oscillating hollow sphere technique). The cubic equation expresses the data with a precision $s = 0.0080$ (0.49%). The uncertainty of the viscosity values is estimated to be about (3.0%).

Aluminum (III) Chloride

[Refer: Table 49, p. 58, for numerical values]

The density data of Nisel'son and Sokolova [149] (480.1 to 623.2 °K, 18 points) for molten $AlCl_3$ were used to calculate the tabulated values. Using the quadratic equation for density the precision is $s = 0.0422$ (3.7%). No estimate of accuracy was attempted owing to the poor precision and limited information.

The tabulated values of viscosity were calculated from the data of Nisel'son and Sokolova [149]

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(461.5 to 549.2 °K, 12 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.00159$ (0.62%). The uncertainty of the viscosity values is estimated to be about (1.0%).

Gallium (III) Chloride

[Refer: Table 50, p. 59, for numerical values]

Of the two density studies [148, 149] for molten $GaCl_3$, the data of Greenwood and Wade [148] were selected to calculate the tabulated values. The maximum departure between the densities reported by Nisel'son and Sokolova [149] and Wade [148] is 0.77 percent (388.8 °K). The estimated uncertainty of the density values is about 0.4 percent.

Two investigations of the viscosity have been reported [148, 149]. The tabulated values were calculated from the data of Nisel'son and Sokolova [149] (355.9 to 519.7 °K, 12 points, capillary viscometer). The cubic equation expresses the data of Nisel'son and Sokolova with a precision $s = 0.0121$ (1.78%). The uncertainty of the viscosity values is estimated to be about 2.0 percent.

The results of the second study (Greenwood and Wade [148]; capillary viscometer) are in excellent agreement with those of Nisel'son and Sokolova (e.g., 0.63% at 360 °K).

Indium Chloride

[Refer: Table 51, p. 59, for numerical values]

The tabulated values of specific conductance for molten InCl were calculated from the data of Klemm [34] (498.2 to 624.2 °K, 5 points). Using the quadratic equation for specific conductance the precision is $s = 0.0176$ (1.5%). The estimated uncertainty of the tabulated specific conductance values is about (12%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.205$ (0.39%).

The density values were calculated from the data of Klemm [34]; no estimate of accuracy was attempted owing to the limited information.

Indium (II) Chloride

[Refer: Table 52, p. 60, for numerical values]

The tabulated values of specific conductance for molten $InCl_2$ were calculated from the data of Klemm [34] (508.2 to 780.2 °K, 8 points). Using the quadratic equation for specific conductance the precision is $s = 0.0074$ (1.5%). The uncertainty of the specific conductance values is estimated to be about (12%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.389$ (2.4%).

The density values were calculated from the data of Klemm [34]; no estimate of accuracy was attempted owing to the limited information.

Indium (III) Chloride

[Refer: Table 53, p. 60, for numerical values]

The tabulated values of specific conductance for molten $InCl_3$ were calculated from the data of Klemm [34] (859.2 to 967.2 °K, 6 points). Using the linear equation for specific conductance the precision is $s = 0.00235$ (0.61%). The uncertainty of the specific conductance values is estimated to be about (10%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0580$ (0.42%).

The density values were calculated from the data of Klemm [34]; no estimate of accuracy was attempted owing to the limited information.

Thallium (I) Chloride

[Refer: Table 54, p. 61, for numerical values]

Two investigations of the specific conductance for molten TlCl have been reported [21, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (720.2 to 1169.2 °K, 22 points). Using the cubic equation for specific conductance the precision is $s = 5.52 \cdot 10^{-3}$ (0.30%). The maximum departure between the data of Tubandt and Lorenz [21] and Grantham [189] is 0.7% (880 °K). The uncertainty of the specific conductance values is estimated to be about 0.7 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.363$ (0.43%).

The data of Klemm [36] were used to calculate the densities; no estimate of accuracy was attempted owing to the limited information.

Tin (II) Chloride

[Refer: Table 55, p. 61, for numerical values]

Two investigations of the specific conductance for molten $SnCl_2$ have been reported [35, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (529.2 to 1235.2 °K, 21 points). Although the cubic equation expresses the data with a precision $s = 4.41 \cdot 10^{-3}$ (0.18%), it is not entirely satisfactory in the low temperature region (1.0% at 560.2 °K). Grantham's results exhibit a maximum value for specific conductance at 1148 °K. The maximum departure between the data of Biltz and Klemm [35] and Grantham [189] is 5.1 percent (520 °K). The uncertainty of the specific conductance values is estimated to be about 4 percent.

The exponential equation expresses the tabulated

values of equivalent conductance with a precision $s = 4.95$ (7.4%).

Of the two density studies [25, 36], the data of Jaeger [25] were selected to calculate the tabulated values. The maximum departure between the results of Jaeger [25] and Klemm [36] is 1.34 percent (638.2 °K). The uncertainty of the density values is judged to be about 1.3 percent.

Tin (IV) Chloride

[Refer: Table 56, p. 62, for numerical values]

The density data of Pugachevick, Nisel'son, Sokolova, and Anurov [147] for molten $SnCl_4$ were used to calculate the tabulated values. The estimated uncertainty of the density values is about (0.8%).

Two investigations of the viscosity have been reported [147, 204]. The tabulated values were calculated from the data of Pugachevick, Nisel'son, Sokolova, and Anurov [147] (273 to 423 °K, 20 points, capillary viscometer). The exponential equation expresses the data of Pugachevick [147] with a precision $s = 0.0059$ (1.15%). The uncertainty of the viscosity values is judged to be about 1.5 percent.

The results of the second study (Toropov [204]; capillary viscometer) are in good agreement with those of Pugachevick (e.g., −4.6%, 293 °K; 0.7%, 333 °K).

Lead (II) Chloride

[Refer: Table 57, p. 62, for numerical values]

Six investigations of the specific conductance for molten $PbCl_2$ have been reported [7, 51, 72, 85, 97, 151, 212]. The tabulated values were calculated from the data of Lantratov and Moiseeva [97] (773.2 to 923.2 °K, 7 points). Using the quadratic equation for specific conductance the precision is $s = 0.00802$ (0.44%). Compared to the data of Lantratov and Moiseeva the results of Lorenz and Kalmus [7] and Bloom and Heymann [51] show maximum departures of −1.0 percent (881 °K) and −0.5 percent (873 °K); the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.301$ (0.58%).

Of the four density studies [15, 40, 54, 150] the data of Boardman, Dorman, and Heymann [54] were selected to calculate the tabulated values. The maximum percent departures between the results of Boardman et al. [54], and those of Wachter and Hildebrand [40], Bell and Flengas [150], and Lorenz, Frei, and Jabs [15] are −0.3 percent (818.5 °K), 0.7 percent (920 °K) and −0.8 percent (800 °K) respectively. The uncertainty of the density values is estimated to be about 0.3 percent.

Two investigations of the viscosity have been reported [8, 72]. The tabulated values were calculated from the data of Harrap and Heymann [72] (773.2 to 973.2 °K, 6 points, vertical capillary viscometer). The exponential equation expresses the data of Harrap and Heymann with a precision $s = 0.0091$ (0.33%). The uncertainty of the viscosity data is estimated to be about 1.5 percent.

The viscosities of the second study (Lorenz and Kalmus [8]; horizontal capillary viscometer) are consistently higher than those of Harrap and Heyman. The maximum departure from the tabulated values is 15 percent (781 °K).

Bismuth (III) Chloride

[Refer: Table 58, p. 63, for numerical values]

The specific conductance of molten $BiCl_3$ has been determined by Voigt and Biltz [32] and Grantham [114]. The tabulated values were calculated from the data of Grantham [114] (502.2 to 898.2 °K, 11 points). Using the cubic equation for specific conductance the precision is $s = 10.7 \cdot 10^{-4}$ (0.18%). The maximum departure between the specific conductance values of Grantham [114] and Voigt [32] is 2.4 percent (519.2 °K). The uncertainty of the specific conductance values is estimated to be about 2.3 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 1.58$ (9.6%).

Of the two density investigations [25, 32], the data of Voigt and Biltz [32] were selected to generate the tabulated values. The maximum departure between the densities reported by Voigt [32] and Jaeger [25] is 0.34 percent (655.2 °K). The uncertainty of the density values is estimated to be about 0.4 percent.

The tabulated values of viscosity were calculated from the data of Aten [16] (553.2 to 613.2 °K, 9 points, Ubbelohde viscometer). The cubic equation expresses the data of Aten with a precision $s = 0.1592$ (0.70%). The uncertainty of the viscosity values is estimated to be about (1.5%).

Tellurium (II) Chloride

[Refer: Table 59, p. 63, for numerical values]

The tabulated values of specific conductance for molten $TeCl_2$ have been calculated from the data of Voigt and Biltz [32] (479 to 578 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s = 8.0 \cdot 10^{-4}$ (0.80%). The uncertainty of the specific conductance values is estimated to be about (10%).

Tellurium (IV) Chloride

[Refer: Table 60, p. 63, for numerical values]

The tabulated values of specific conductance

for molten $TeCl_4$ were calculated from the data of Voigt and Biltz [32] (509 to 589 °K, 5 points). Using the quadratic equation for specific conductance the precision is $s = 6.09 \cdot 10^{-4}$ (0.38%). The uncertainty of the specific conductance values is estimated to be about (9%).

Lithium Bromide

[Refer: Table 61, p. 64, for numerical values]

The tabulated values of specific conductance for molten LiBr were calculated from the data of van Artsdalen and Yaffe [82] (831.2 to 1022.2 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s = 0.00254$ (0.47%). The uncertainty of the specific conductance values is estimated to be about (1.5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.318$ (0.17%).

Of the three density studies [3, 81, 82] the data of van Artsdalen and Yaffe [82] were selected to calculate the tabulated values. The maximum departure between the density values of van Artsdalen [82] and Brunner [3] is 3.3 percent (880 °K). The studies of Schinke and Sauerwald [81] were to establish volume change on fusion. No estimate of accuracy was attempted owing to the limited information.

Two investigations of the viscosity have been reported [47, 102]. The tabulated values were calculated from the data of Murgulescu and Zuca [102] (862.2 to 1046.2 °K, 13 points, oscillating ball technique). The exponential equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0180$ (1.56%). The uncertainty of the viscosity values is estimated to be about 2.0 percent.

The viscosities of the second study (Karpachev and Stromberg [47], oscillating ball technique) are consistently higher than those of Murgulescu and Zuca. The maximum departure from the tabulated values is 51.6 percent (873 °K).

Sodium Bromide

[Refer: Table 62, p. 64, for numerical values]

Five investigations of the specific conductance for molten NaBr have been reported [10, 52, 82, 129, 199]. The tabulated values were calculated from the data of van Artsdalen [82] (1017.2 to 1229.0 °K, 15 points). Using the exponential equation for specific conductance the precision is $s = 0.00322$ (0.10%). The maximum percent departure between the data of van Artsdalen [82] and Arndt and Gessler [10] is −1.8 percent (1173 °K); the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 7 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.179$ (0.12%).

Of the four density investigations [3, 25, 81, 82], the data of van Artsdalen and Yaffe [82] were selected to calculate the tabulated values. The maximum departure between the density values of van Artsdalen [82] and Brunner [3] is −0.3 percent (1050 °K); the results of Jaeger [25] show larger departures. The studies of Schinke and Sauerwald [86] were to establish the volume change on fusion. The uncertainty of the density values is estimated to be about 1 percent.

Two investigations of the viscosity have been reported [12, 102]. The tabulated values were calculated from the data of Murgulescu and Zuca [102] (1053.7 to 1212.7 °K, 10 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0040$ (0.38%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The viscosities of the second study (Fawsitt [12], oscillating disk technique) show departures of −2.29 percent (1053 °K) and +5.83 percent (1153 °K) from those of Murgulescu and Zuca.

Potassium Bromide

[Refer: Table 63, p. 65, for numerical values]

Nine investigations of the specific conductance for molten KBr have been reported [10, 26, 33, 52, 66, 82, 100, 125, 129]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [82] (1011.0 to 1229.5 °K, 23 points). Using the quadratic equation for specific conductance the precision is $s = 0.00465$ (0.26%). The maximum departure between the results of van Artsdalen and Murgulescu and Zuca [129] is −0.8 percent (1140 °K); the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 1.3 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.578$ (0.53%).

Of the six investigations of density [3, 15, 26, 66, 81, 82], the most thorough appears to be that of van Artsdalen and Yaffe [82]. Compared to the data of van Artsdalen [82] the results of various investigators show the following maximum departures: Jaeger and Kapma [26], −0.4 percent (1018.4 °K); Brunner [3], −0.1 percent (1050 °K); Bloom et al. [66], 0.9 percent (1120 °K); and Lorenz, Frei, and Jabs [15], −4.6 percent (1073 °K). The studies of Schinke and Sauerwald [81] were to establish the volume change on fusion. The uncertainty of the density values is estimated to be about 0.4 percent.

Three investigations of the viscosity have been reported [12, 47, 102]. The tabulated values were calculated from the data of Murgulescu and Zuca [102] (1017.8 to 1181.2 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0056$ (0.59%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The investigator, reference, experimental method and the maximum departure from the values of Murgulescu and Zuca are as follows: Fawsitt [12], oscillating disk, +24.9 percent; and Karpachev and Stromberg [47], oscillating ball, −19.1 percent.

Rubidium Bromide

[Refer: Table 64, p. 65, for numerical values]

The tabulated values of specific conductance for molten RbBr were calculated from the data of van Artsdalen and Yaffe [82] (968.9 to 1178.6 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s=0.00248$ (0.18%). The uncertainty of the specific conductance values is estimated to be about 3.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.798$ (0.91%).

Of the two density investigations [25, 82], the data of van Artsdalen [82] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger [25] and van Artsdalen [82] is 0.53 percent (1104.2 °K). The uncertainty of the density values is estimated to be about 0.4 percent.

The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [102] (959.7 to 1139.5 °K, 11 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s=0.0046$ (0.38%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

Cesium Bromide

[Refer: Table 65, p. 66, for numerical values]

Two investigations of the specific conductance for molten CsBr have been reported [82, 199]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [82]. Using the quadratic equation for specific conductance the precision is $s=0.0025$ (0.22%). The specific conductance values of Markov and Prisyazhunyii [199] are lower than those of van Artsdalen (e.g., −9.1% 1123 °K). The uncertainty of specific conductance values is estimated to be about (5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.317$ (0.42%).

Of the three density investigations [25, 74, 82], the data of van Artsdalen [82] were selected to calculate the tabulated values. The maximum departure between the densities of Jaeger [25] and van Artsdalen is 0.7 percent (941 °K); the results of Johnson et al. [74] show larger departures. The uncertainty of the density values is estimated to be about 0.5 percent.

Magnesium Bromide

[Refer: Table 66, p. 66, for numerical values]

The tabulated values of specific conductance for molten $MgBr_2$ were calculated from the data of Bockris et al. [94] (987.5 to 1244.3 °K, 25 points). Using the quadratic equation for specific conductance the precision is $s=0.000232$ (0.021%). The uncertainty of the specific conductance values is estimated to be about (1.0%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.101$ (0.29%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Calcium Bromide

[Refer: Table 67, p. 67, for numerical values]

The tabulated values of specific conductance for molten $CaBr_2$ were calculated from the data of Bockris et al. [94] (1013 to 1290.8 °K, 36 points). Using the exponential equation for specific conductance the precision is $s=0.00397$ (0.22%). The uncertainty of the specific conductance values is estimated to be about (2.5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.0535$ (0.087%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Strontium Bromide

[Refer: Table 68, p. 67, for numerical values]

The tabulated values of specific conductance for molten $SrBr_2$ were calculated from the data of Bockris et al. [94] (928.8 to 1185.9 °K, 30 points). The quadratic equation expresses the data of Bockris with a precision $s=0.00196$ (0.14%). The uncertainty of the specific conductance values is estimated to be about (6%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.436$ (1.0%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Barium Bromide

[Refer: Table 69, p. 68, for numerical values]

The tabulated values of specific conductance for molten $BaBr_2$ were calculated from the data of Bockris et al. [94] (1126.3 to 1338.5 °K, 13 points). The quadratic equation expresses the data of Bockris with a precision $s = 0.00501$ (0.34%). The uncertainty of the specific conductance values is estimated to be about (10%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0390$ (0.07%).

Of the two density studies [66, 91], the data of Bloom et al. [66] were selected to calculate the tabulated values. The maximum departure between the densities reported by Bloom [66] and Ellis and Smith [91] is 1.06 percent (1160 °K). The uncertainty of the density values is estimated to be about 1 percent.

Lanthanum (III) Bromide

[Refer: Table 70, p. 68, for numerical values]

Two investigations of the specific conductance for molten $LaBr_3$ have been reported [83, 171]. The tabulated values were calculated from the quadratic equation of Yaffe and van Artsdalen [83] for the temperature range of 1050.2 to 1185.2 °K. The precision reported by Yaffe and van Artsdalen is $s = 0.003$ (0.3%). The maximum departures between the results of Dworkin, Bronstein, and Bredig [171] and van Artsdalen [83] is 23.3 percent (1100 °K). Similar disagreement between investigators is also observed for the conductance data of $NdBr_3$, $LaCl_3$, $PrCl_3$, and $CeCl_3$; hence van Artsdalen's results should be viewed with reservation. The uncertainty of the specific conductance values is estimated to be about 23 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0874$ (0.32%).

The density data of van Artsdalen [83] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Praseodymium (III) Bromide

[Refer: Table 71, p. 68, for numerical values]

The tabulated values of specific conductance for molten $PrBr_3$ were calculated from the data of Dworkin, Bronstein, and Bredig [171] (1000 to 1043 °K, 3 points). The linear equation for specific conductance expresses the data with a precision $s = 0.00228$ (0.40%). The uncertainty of the specific conductance values is estimated to be about 20 percent.

Neodymium (III) Bromide

[Refer: Table 72, p. 69, for numerical values]

Two investigations of the specific conductance for molten $NdBr_3$ have been reported [83, 171]. The tabulated values were calculated from the quadratic equation of Yaffe and van Artsdalen [83] for the temperature range of 963.2 to 1143.2 °K. The precision reported by Yaffe and van Artsdalen is $s = 0.0036$ (0.80%). The maximum departure between the results of Dworkin, Bronstein, and Bredig [171] and van Artsdalen [83] is 58 percent (1020 °K). Similar disagreement between these investigators is also observed for the conductance data of $LaBr_3$, $LaCl_3$, $PrCl_3$, and $CeCl_3$; hence, van Artsdalen's results should be viewed with reservation. The uncertainty of the specific conductance values is estimated to be about 50 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.101$ (0.67%).

The density data of van Artsdalen [83] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Gadolinium (III) Bromide

[Refer: Table 73, p. 69, for numerical values]

The tabulated values of specific conductance for molten $GdBr_3$ were calculated from the data of Dworkin, Bronstein, and Bredig [171] (1073 to 1115 °K, 3 points). The linear equation for specific conductance expresses the data with a precision $s = 0.00109$ (0.23%). The uncertainty of the specific conductance values is estimated to be about 2.0 percent.

Copper (I) Bromide

[Refer: Table 74, p. 69, for numerical values]

The tabulated values of specific conductance for molten CuBr were calculated from the data of Tubandt [41] (764 to 823 °K, 3 points). Using the exponential equation for specific conductance the precision is $s = 0.00533$ (0.20%). The uncertainty of the specific conductance values is estimated to be about (8%).

Silver Bromide

[Refer: Table 75, p. 70, for numerical values]

Six investigations of the specific conductance for molten AgBr have been reported [1, 10, 21, 23, 72, 100]. The tabulated values were calculated from the data of Doucet and Bizouard [100] (773.2 to 1073.2 °K, 7 points) and Harrap and Heymann [72] (one point at 723.2 °K). Using the quadratic equation for specific conductance the precision is $s = 0.00348$

(0.12%). The maximum departures between the tabulated values based on the results of Doucet [100] and Harrap [72], and the data of other investigators are as follows: Kohlrausch [1], 3.4 percent (723 °K); Arndt and Gessler [10], 1.0 percent (723 °K); Lorenz and Höchberg [23], −4.1 percent (873 °K). The uncertainty of the specific conductance values is estimated to be about 0.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.108$ (1.01%).

Of the four density studies [2, 22, 54, 81] the data of Boardman et al. [54] and Lorenz and Höchberg [22] were selected to calculate the tabulated values. The maximum departure between the densities reported by Boardman [54] and Lorenz [22] is 0.08 percent (930 °K). The uncertainty of the density values is judged to be about 0.08 percent.

The high accuracies and good reproducibilities obtained for both the specific conductance and density by several investigators indicate the possible use of AgBr as a calibration standard for specific conductance.

Two investigations of the viscosity have been reported [24, 72]. The tabulated values were calculated from the data of Harrap and Heymann [72] (713.2 to 873.2 °K, 9 points, vertical capillary viscometer). The cubic equation expresses the data of Harrap and Heymann with a precision $s = 0.0067$ (0.25%). The uncertainty of the viscosity data is estimated to be about 1.5 percent.

The viscosity study by Lorenz and Kalmus [24] (oscillating disk technique) was carried out at temperatures higher (882.2 to 1076.2 °K) than those of Harrap and Heymann. The extrapolated value at 860 °K is lower (16%) than the tabulated value.

Zinc Bromide

[Refer: Table 76, p. 70, for numerical values]

Two investigations of the specific conductance for molten $ZnBr_2$ have been reported [94, 98]. The tabulated values were calculated from the data of Bockris et al. [94] (671.2 to 912.8 °K, 23 points). Using the quadratic equation for specific conductance the precision is $s = 0.0012$ (1.48%). Mackenzie and Murphy [98] have determined the specific conductance at one temperature (673.2 °K) ($\kappa = 0.014$) which is 18 percent below the value found by Bockris. The uncertainty of the specific conductance values is estimated to be about (18%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.3248$ (21.0%).

Of the two density studies [43, 113] the data of Bockris, Pilla, and Barton [113] were selected to calculate the tabulated values. The maximum departure between the results of Salstrom [43] and Bockris [113] is 2.0 percent (712.1 °K). The uncertainty of the density values is judged to be about 1.7 percent.

The viscosity of $ZnBr_2$ was determined by Mackenzie and Murphy [98] at one temperature (673.2 °K) using the restricted falling ball technique. The uncertainty of the viscosity value is estimated to be about (8.0%).

Cadmium Bromide

[Refer: Table 77, p. 71, for numerical values]

The tabulated values of specific conductance for molten $CdBr_2$ were calculated from the data of Bockris et al. [94] (849.6 to 1055.6 °K, 23 points).

Using the quadratic equation for specific conductance the precision is $s = 0.00161$ (0.13%). The uncertainty of the specific conductance values is estimated to be about (1.5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0263$ (0.06%).

The tabulated values of density were calculated from the data of Boardman et al. [54]; no estimate of accuracy was attempted owing to the limited information.

The tabulated values of viscosity were calculated from the data of Bloom, Harrap, and Heymann [53] (853.2 to 949.2 °K, 7 points, vertical capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0072$ (0.30%). The uncertainty of the viscosity values is judged to be about (1.5%).

Mercury (II) Bromide

[Refer: Table 78, p. 71, for numerical values]

Three investigations of the specific conductance for molten $HgBr_2$ have been reported [94, 103, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (528.2 to 729.2 °K, 9 points). Using the cubic equation for specific conductance the precision is $s = 8.65 \cdot 10^{-7}$ (0.21%). Grantham's [189] results in the temperature range 528.2 to 853.2 °K exhibit a maximum value at 723 °K. Compared to the data of Grantham [189] the results of Bockris et al. [94] and Janz and McIntyre [103] show maximum departures of 1.0 percent (560 °K) and 0.8 percent (563 °K) respectively. The uncertainty of the specific conductance values is estimated to be about 1.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 8.6 \cdot 10^{-4}$ (7.0%).

Of the two density studies [18, 103], the data of Janz and McIntyre [103] were selected to calculate the tabulated values. The maximum departure between the results of Prideaux [18] and Janz [103] is 0.1 percent. The uncertainty of the density values is judged to be about 0.1 percent.

Two investigations of the viscosity have been reported [6, 58]. The tabulated values were calcu-

lated from the data of Jander and Broderson [58] (528.2 to 548.2 °K, 3 points, vertical capillary viscometer). The exponential equation expresses the data of Jander [58] with a precision $s = 0.0078$ (0.39%). The uncertainty of the viscosity values is considered to be about 1.5 percent.

The viscosities of the second study (Beck [6] vertical capillary method) show considerable departure from those of Jander [58] (e.g., 15.5%, 528 °K: −47.0%, 548 °K).

Aluminum Bromide

[Refer: Table 79, p. 72, for numerical values]

Two investigations of the viscosity for molten $AlBr_3$ have been reported [138, 203]. The tabulated values were calculated from the data of Grothe and Kleinschmit [138] (373 to 523 °K, 4 points, oscillating hollow cylinder technique (with modification)). The exponential equation expresses the data of Grothe and Kleinschmit with a precision $s = 0.0152$ (1.32%). The uncertainty of the viscosity values is estimated to be about 1.5 percent.

The results of the second study (Gorenbein [203]; capillary viscometer technique) are in good agreement with those of Grothe and Kleinschmit (e.g., 3.0% at 383 °K; 1.4% at 423 °K).

Indium (III) Bromide

[Refer: Table 80, p. 72, for numerical values]

The tabulated values of specific conductance for molten $InBr_3$ were calculated from the data of Klemm [34] (709.2 to 813.2 °K, 6 points). Using the quadratic equation for specific conductance the precision is $s = 0.00178$ (1.07%). The uncertainty of the specific conductance values is estimated to be about (12%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0260$ (0.38%).

The density data of Klemm [34] were used to calculate the tabulated values: no estimate of accuracy was attempted owing to the limited information.

Thallium (I) Bromide

[Refer: Table 81, p. 73, for numerical values]

Two investigations of the specific conductance for molten TlBr have been reported [21, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (745.2 to 1127.2 °K, 20 points). Using the quadratic equation for specific conductance the precision is $s = 4.87 \cdot 10^{-3}$ (0.38%). The maximum departure between the data of Tubandt and Lorenz [21] and Grantham [189] is 0.96 percent (740 °K). The uncertainty of the specific conductance values is estimated to be about 1 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0982$ (0.1[illegible]%).

The data of Buckle, Tsaoussoglou, and Ubbelohde [196] were used to calculate the densities; no estimate of accuracy was attempted owing to the limited information.

Lead (II) Bromide

[Refer: Table 82, p. 74, for numerical values]

The specific conductance of molten $PbBr_2$ has been determined by Lorenz and Kalmus [7] and Harrap and Heymann [72]. The tabulated values were calculated from the data of Lorenz [7] (655 to 765 °K, 12 points). Using the quadratic equation for specific conductance the precision is $s = 0.0016$ (0.19%). The maximum departure between the specific conductance values of Harrap [72] and Lorenz [7] is 2.6 percent (773.2 °K). The uncertainty of the specific conductance values is estimated to be about 2.7 percent.

At high temperatures the following quadratic equation for specific conductance based on the data of Harrap [72] (698.2 to 823.2 °K, 6 points) is recommended:

$$\kappa = -1.90813 + 4.23738 \cdot 10^{-3}T - 5.70634 \cdot 10^{-7}T^2$$

The precision is $s = 0.0132$ (1.7%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.265$ (1.0%).

Of the two density studies [15, 54], the data of Boardman, Dorman and Heymann [54] were selected to calculate the tabulated values. The density reported by Boardman [54] is 0.80 percent (873.2 °K) higher than the value of Lorenz, Frei, and Jahs [15]. The uncertainty of the density values is judged to be about 0.8 percent for the temperature range 778.2 to 873.2 °K.

Three investigations of the viscosity have been reported [8, 72, 142]. The tabulated values were calculated from the data of Murgulescu and Zuca [142] (698 to 1023 °K, 14 points, oscillating bob technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.01$[illegible] (0.71%). The uncertainty of the viscosity values estimated to be about 1.0 percent.

The investigator, reference, experimental method and the maximum percent departure from the value of Murgulescu and Zuca are as follows: Lorenz and Kalmus [8], capillary viscometer, 11.5 percent 705 °K; Harrap and Heymann [72], capillary viscometer, 3.9 percent at 823 °K.

Bismuth (III) Bromide

[Refer: Table 83, p. 75, for numerical values]

The tabulated values of specific conductance for molten $BiBr_3$ were calculated from the data Grantham [114] (496.2 to 998.2 °K, 17 point

Using the quadratic equation for specific conductance the precision is $s = 0.00132$ (0.38%). The specific conductance increases with temperature until a maximum is reached near 710 °K and then decreases with further increasing temperature. The uncertainty of the tabulated specific conductance values is estimated to be about (3.0%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 1.30$ (10%).

The density data of Jaeger [25] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Lithium Iodide

[Refer: Table 84, p. 75, for numerical values]

Three investigations of the specific conductance of molten LiI have been reported [82, 108, 227]. The recent results of Johnson [227] (756.2 to 876.5 °K, 15 points) were selected to generate the best equation. Using the quadratic equation for specific conductance the precision is $s = 0.0026$ (0.61%). The specific conductance values of Karl and Klemm [108] extends to very high temperatures (767 to 1163 °K). Compared to the data of Johnson, the results of Karl and Klemm and Yaffe and van Artsdalen [82] are lower by 5.6 to 5.0 percent and 7.2 to 10.6 percent respectively. The uncertainty is estimated to be about 5.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0659$ (0.04%).

The density data of van Artsdalen [82] were used to calculate the tabulated values. The values should be considered with reservation due to partial decomposition of LiI, as reported by the authors, at higher temperatures.

The tabulated values of viscosity were calculated from the data of Karpachev and Stromberg [47] (723.2 to 923.2 °K, 5 points, oscillating ball technique). The cubic equation expresses the data with a precision $s = 0.0095$ (0.57%). The uncertainty is judged to be about (5.0%).

Murgulescu and Zuca [122] attempted to determine the viscosity of molten LiI but could not obtain reproducible results due to decomposition of the melt; no experimental data were reported.

Sodium Iodide

[Refer: Table 85, p. 76, for numerical values]

Five investigations of the specific conductance for molten NaI have been reported [2, 10, 66, 82, 129]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [82] (936.2 to 1187.3 °K, 15 points). Using the quadratic equation for specific conductance the precision is $s = 0.00263$ (0.10%). Compared to the specific conductance data of Bloom et al. [66] the results of Murgulescu and Zuca [129] show departures of +5.2 percent to −3.2 percent over a temperature range of 940 to 1140 °K while that of van Artsdalen [82] shows a maximum departure of 3.5 percent at 940 °K. The uncertainty of the specific conductance values is estimated to be about 3.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0127$ (0.0084%).

Of the three density studies [25, 66, 82], the data of van Artsdalen [82] were selected to calculate the tabulated values. The maximum percent departure between the density data of van Artsdalen [82] and Bloom et al. [66] is 0.4 percent (940 °K) while that between van Artsdalen and Jaeger [25] is 1.0 percent (1133 °K). The uncertainty of the density values is judged to be about (0.4%).

Two investigations of the viscosity have been reported [47, 122]. The tabulated values were calculated from the data of Murgulescu and Zuca [122] (946.4 to 1107.8 °K, 13 points, oscillating ball technique). The exponential equation expresses the data of Murgulescu and Zuca with a precision $s = 0.00847$ (0.72%) and the estimated uncertainty is about 1.0 percent.

The viscosities of the second study (Karpachev and Stromberg [47], oscillating ball technique) are consistently higher than those of Murgulescu and Zuca (e.g., 16.0%, 946.4 °K; 4.7%, 1107.8 °K).

Potassium Iodide

[Refer: Table 86, p. 76, for numerical values]

Seven investigations of the specific conductance for molten KI have been reported [10, 26, 33, 66, 79, 125a, 129]. The tabulated values were calculated from the data of van Artsdalen and Yaffe [79] (958.6 to 1183.9 °K, 21 points). Using the quadratic equation the precision is $s = 0.0075$ (0.48%). Compared to the data of van Artsdalen the results of Murgulescu and Zuca [129], Buckle and Tsaoussoglou [125a] and Bloom et al. [66] show departures of 0.5 percent (1000 °K), 0.9 percent (1000 °K), and 1.3 percent (1000 °K); the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 0.9 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.758$ (0.68%).

Of the four density studies [26, 66, 79, 81], the most thorough appears to be that of van Artsdalen and Yaffe [79]. The maximum departure between the densities of van Artsdalen [79] and Bloom et al. [66] is 0.3 percent (1080 °K) while that between van Artsdalen and Jaeger and Kapma [26] is −0.8 percent (1070 °K). The studies of Schinke and Sauerwald [81] were to establish the volume change on fusion. The uncertainty of the density values is judged to be about 0.25 percent.

Two investigations of the viscosity have been reported [47, 122]. The tabulated values were

calculated from the data of Murgulescu and Zuca [122] (975.1 to 1165.2 °K, 13 points, oscillating ball technique). The exponential equation expresses the data of Murgulescu and Zuca with a precision $s = 0.00851$ (0.70%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The viscosities of the second study (Karpachev and Stromberg [47], oscillating ball technique) are consistently higher than those of Murgulescu and Zuca (e.g., 27.2%, 1034.4 °K; 3.9%, 1165.2 °K).

Rubidium Iodide

[Refer: Table 87, p. 77, for numerical values]

The tabulated values of specific conductance for molten RbI were calculated from the data of van Artsdalen and Yaffe [82] (929.5 to 1158.2 °K, 17 points). Using the quadratic equations for specific conductance the precision is $s = 0.00169$ (0.16%). The uncertainty of the specific conductance values is estimated to be about (3.5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.378$ (0.45%).

Of the two density studies [25, 82], the data of van Artsdalen [82] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger [25] and van Artsdalen [82] is 1.4 percent (950 °K). The estimated uncertainty of the density values is about 0.7 percent.

The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [122] (922.2 to 1126.4 °K, 16 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.0037$ (0.34%). The uncertainty of the viscosity values is judged to be about (1.0%).

Cesium Iodide

[Refer: Table 88, p. 77, for numerical values]

The tabulated values of specific conductance for molten CsI were calculated from the data of van Artsdalen and Yaffe [82] (932.0 to 1137.2 °K, 14 points). Using the quadratic equation for specific conductance the precision is $s = 1.40 \cdot 10^{-4}$ (0.16%). The uncertainty of the specific conductance values is estimated to be about (5.0%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.378$ (0.48%).

Of the three density studies [25, 74, 82], the data of van Artsdalen [82] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger [25] and van Artsdalen [82] is 0.42 percent (950 °K). The data of Johnson et al. [74] are insufficient to calculate departure values. The estimated uncertainty of the density values is about 0.4 percent.

The tabulated values of viscosity were calculated from the data of Murgulescu and Zuca [122] (910.2 to 1126.9 °K, 14 points, oscillating ball technique). The cubic equation expresses the data of Murgulescu and Zuca with a precision $s = 0.016$ (1.24%). The estimated uncertainty of the viscosity values is judged to be about (1.5%).

Magnesium Iodide

[Refer: Table 89, p. 78, for numerical values]

The tabulated values of specific conductance for molten MgI_2 were calculated from the data of Bockris et al. [94] (910.2 to 1176.5 °K, 21 points). Using the quadratic equation for specific conductance the precision is $s = 0.00110$ (0.18%). The uncertainty of the specific conductance values is estimated to be about (1.3%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0810$ (0.29%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Calcium Iodide

[Refer: Table 90, p. 78, for numerical values]

The tabulated values of specific conductance for molten CaI_2 were calculated from the data of Bockris et al. [94] (1058.7 to 1286.6 °K, 26 points). Using the quadratic equation for specific conductance the precision is $s = 0.00055$ (0.041%). The uncertainty of the specific conductance values is estimated to be about (2.0%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.422$ (0.69%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Strontium Iodide

[Refer: Table 91, p. 79, for numerical values]

The tabulated values for specific conductance for molten SrI_2 were calculated from the data of Bockris et al. [94] (821.6 to 1270.4 °K, 28 points). Using the quadratic equation for specific conductance, the precision is $s = 0.00139$ (0.13%). The uncertainty of the specific conductance values is estimated to be about (6.0%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.571$ (1.28%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91],

was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Barium Iodide

[Refer: Table 92, p. 79, for numerical values]

The tabulated values of specific conductance for molten BaI_2 were calculated from the data of Bockris et al. [94] (991.7 to 1292.3 °K, 26 points). Using the quadratic equation for specific conductance the precision is $s=0.0035$ (0.35%). The uncertainty of the specific conductance values is estimated to be about (10%). It should be noted that the specific conductance values are reported at temperatures below the established melting point (mp 1013 °K) [130, 131].

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.250$ (0.5%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Aluminum (III) Iodide

[Refer: Table 93, p. 79, for numerical values]

The tabulated values of specific conductance for molten AlI_3 were calculated from the data of Biltz and Klemm [35] (464.2 to 543.2 °K, 9 points). Using the quadratic equation for specific conductance the precision is $s=1.25\cdot10^{-7}$ (3.2%). The uncertainty of the specific conductance values is estimated to be about (20%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.121$ (7.2%).

The density data of Biltz and Klemm [35] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Lanthanum (III) Iodide, Cerium (III) Iodide, Praseodymium (III) Iodide, and Neodymium (III) Iodide

[Refer: Tables 94 to 97, p. 80, for numerical values]

The tabulated values of specific conductance for molten LaI_3, CeI_3, PrI_3, and NdI_3 were calculated from the data of Dworkin, Sallach, and Bronstein [106]. The number of data points, the temperature range, the precision (s) and the estimated uncertainty of the specific conductance values are as follows:

LaI_3—4 points, 1069 to 1144 °K, $s=0.0003$ (0.06%), (10%).

CeI_3—4 points, 1069 to 1133 °K, $s=0.0003$ (0.06%), (18%).

PrI_3—3 points, 1036 to 1082 °K, $s=0.0003$ (0.07%), (15%).

NdI_3—3 points, 1072 to 1115 °K, $s=0.0003$ (0.07%), (15%).

Silver Iodide

[Refer: Table 98, p. 81, for numerical values]

Six investigations of the specific conductance for molten AgI have been reported [1, 10, 11, 21, 23, 35]. The tabulated values were calculated from the data of Biltz and Klemm [35] (825.2 to 923.2 °K, 4 points), Gessler and Arndt [11] (823.2 to 1073.2 °K, 5 points) and Kohlrausch [1] (823.2 to 973.2 °K, 4 points). Using the exponential equation for specific conductance the precision is $s=0.111$ (4.3%). Compared to the data of Biltz the results of Gessler [11] and Kohlrausch [1] show departures of +5 percent and −6.5 percent respectively for the temperature range 825 to 923 °K. The maximum departure between the tabulated values based on the results of Biltz [35], Gessler [11], Kohlrausch [1], and the values of Tubandt and Lorenz [21] is −1.2 percent (923 °K); the results of Lorenz and Höchberg [23], and Arndt and Gessler [10], show larger departures. It should be noted that specific conductance values are reported at temperatures below the established melting point (mp 831 °K) [130]. The uncertainty of the specific conductance values is estimated to be about 12 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.122$ (0.10%).

The density data of Lorenz and Höchberg [22] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to limited information.

The tabulated values of viscosity were calculated from the data of Lorenz and Höchberg [24] (878.2 to 1100.2 °K, 8 points, oscillating disk technique). The cubic equation expresses the data of Lorenz with a precision $s=0.058$ (2.6%). The uncertainty of the viscosity values is judged to be about (3.0%).

Zinc Iodide

[Refer: Table 99, p. 81, for numerical values]

Two investigations of the specific conductance for molten ZnI_2 have been reported [94, 189]. The tabulated values were calculated from the data of Bockris et al. [94] (717.7 to 870.6 °K, 28 points). Using the quadratic equation for specific conductance the precision is $s=1.10\cdot10^{-3}$ (0.78%). The maximum departure between the data of Bockris [94] and Grantham and Yosim [189] is 1.2 percent (753.2 °K). The uncertainty of the specific

conductance values is estimated to be about 1.5 percent.

For temperatures above 870 °K values of specific conductance can be gained from the following cubic equation ($s = 0.00271$ (0.54%)) based on the data of Grantham [189] (724.2 to 1262.2 °K, 27 points):

$$\kappa = 2.09556 - 9.20558 \cdot 10^{-3}T + 1.218344 \cdot 10^{-5}T^2 - 4.631264 \cdot 10^{-6}T^3.$$

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.222$ (3.37%).

The density equation of Bockris, Pilla, and Barton [113], based on the data of Ellis and Smith [91], was used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Cadmium Iodide

[Refer: Table 100, p. 82, for numerical values]

The specific conductance of molten CdI_2 has been investigated by Bloom et al. [66] and Bockris et al. [94]. The tabulated values were calculated from the data of Bockris [94] (674.9 to 912.8 °K, 32 points). Using the quadratic equation for specific conductance the precision is $s = 0.0020$ (0.47%). The maximum departure between the specific conductance values of Bockris [94] and Bloom [66] is 6 percent (730 °K). The uncertainty of the tabulated specific conductance values is estimated to be about 4.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.450$ (2.27%).

The density data of Bloom et al. [66] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Mercury (II) Iodide

[Refer: Table 101, p. 82, for numerical values]

Four investigations of the specific conductance for molten HgI_2 have been reported [29, 94, 103, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (532.2 to 724.2 °K, 13 points). Using the cubic equation for specific conductance the precision is $s = 1.61 \cdot 10^{-4}$ (0.89%). Grantham's [189] investigation of specific conductance extends up to 905.2 °K and the negative temperature coefficient persists at the highest temperatures. The maximum departure between the data of Grantham [189] and Bockris et al. [96] is 2.3 percent; the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 2.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precis $s = 0.0313$ (3.3%).

Of the three density studies [18, 78, 103], data of Janz and McIntyre [103] were selected calculate the tabulated values. Compared to data of Janz and McIntyre [103] the results Prideaux [18] and Polyakov [78] show maxim departures of 0.4 percent (596 °K) and 1.0 perc (573 °K) respectively. The uncertainty of the d sity values is judged to be about 0.1 percent.

Three investigations of viscosity have been ported [6, 78, 103]. The tabulated values w calculated from the data of Janz and McInt [103] (541.6 to 631.3 °K, 5 points, oscillating l low sphere method). The exponential equation presses the data of Janz with a precision $s = 0.0$ (1.02%). The uncertainty of the viscosity value estimated to be about 3.0 percent.

Beck [6] and Polyakov [78] measured the cosity of molten HgI_2 at 531.2 and 533.2 °K spectively. These two values differ markedly fr each other.

Gallium (II) Iodide

[Refer: Table 102, p. 83, for numerical values

The tabulated values of specific conductance molten GaI_2 were generated from the data Riebling and Erickson [105] (423.2 to 623.2 9 points). Riebling [105] has reported three ponential equations for specific conductance the temperature ranges (423 to 484 °K), (484 to °K) and (552 to 623 °K) respectively. Using th equations the specific conductance values w gained at 423.2, 453.2, 483.2, 493.2, 518.2, 54 563.2, 593.2, and 623.2 °K. These data were le squared to develop a linear equation and the p cision is $s = 0.0050$ (3.6%). The uncertainty of specific conductance values is estimated to about (15%).

The exponential equation expresses the tabula values of equivalent conductance with a precis $s = 0.453$ (7.7%).

The density data of Riebling [105] were use calculate the tabulated values; no estimate of curacy was attempted owing to the limited in mation.

Indium (III) Iodide

[Refer: Table 103, p. 83, for numerical values

Two investigations of the specific conducta for molten InI_3 have been reported [34, 189]. T tabulated values were calculated from the data Grantham and Yosim [189] (504.2 to 880.2 °K, points). Using the cubic equation for specific c ductance the precision is $s = 6.3 \cdot 10^{-4}$ (0.60 The maximum departure between the data Klemm [34] and Grantham [189] is 8 perc (560 °K). The uncertainty of the specific condu ance values is estimated to be about 6 perce

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.233$ (4.6%).

The data of Klemm [34] were used to calculate the densitites; no estimate of accuracy was attempted owing to the limited information.

Thallium (I) Iodide

[Refer: Table 104, p. 84, for numerical values]

Three investigations of the specific conductance for molten TlI have been reported [21, 125c, 189]. The tabulated values were calculated from the data of Grantham and Yosim [189] (721.2 to 1333.2 °K, 23 points). Using the quadratic equation for specific conductance the precision is $s = 2.65 \cdot 10^{-3}$ (0.35%). The maximum departure between the results of Ubbelohde [125c] and Grantham [189] is 1.5 percent (760 °K); the results of Tubandt and Lorenz [21] show larger departures. The uncertainty of the specific conductance values is estimated to be about 1.5 percent.

Lead (II) Iodide

[Refer: Table 105, p. 84, for numerical values]

The tabulated values of specific conductance for molten PbI_2 were calculated from the data of Karl and Klemm [108] (676 to 873 °K, 5 points). The quadratic equation expresses the data with a precision $s = 0.0018$ (0.32%). The uncertainty of the specific conductance values is estimated to be about (5%).

Bismuth (III) Iodide

[Refer: Table 106, p. 85, for numerical values]

The tabulated values of the specific conductance for molten BiI_3 were calculated from the data of Grantham and Yosim [104] (686.2 to 775.2 °K, 5 points). The quadratic equation expresses the data of Grantham with a precision $s = 2.13 \cdot 10^{-3}$ (0.71%). The uncertainty of the specific conductance values is estimated to be about (3%).

Lithium Carbonate

[Refer: Table 107, p. 85, for numerical values]

The tabulated values of specific conductance for molten Li_2CO_3 were calculated from the data of Janz and Lorenz [101] (1017.9 to 1117.7 °K, 7 points, omitting the value at 1017.4 °K). Using the quadractic equation for specific conductance the precision is $s = 3.00 \cdot 10^{-4}$ (0.0066%). The uncertainty of the specific conductance values is estimated to be about (1.5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.140$ (0.15%).

Of the two density studies [3, 101], the data of Janz [101] were selected to calculate the tabulated values. The maximum departure between the densities reported by Janz [101] and Brunner [3] is 0.3 percent (1012 °K). The uncertainty of the density values is judged to be about 0.2 percent.

Two investigations of the viscosity have been reported [107, 128]. The tabulated values of viscosity were calculated from the data of Janz and Saegusa [107] (1046.2 to 1122.2 °K, 7 points, oscillating hollow cylinder technique). The cubic equation expresses the data of Janz and Saegusa with a precision $s = 0.1022$ (2.90%). The estimated uncertainty of the viscosity values is about (3.0%).

The viscosities of the second study (Karpachev et al. [128], oscillating ball technique) are consistently higher than those obtained by Janz and Saegusa (e.g., 27.7%, 1050 °K; 64.7%, 1120 °K).

Sodium Carbonate

[Refer: Table 108, p. 85, for numerical values]

Two investigations of the specific conductance for molten Na_2CO_3 have been reported [4, 101]. The tabulated values were calculated from the data of Janz and Lorenz [101] (1138.0 to 1239.7 °K, 10 points). Using the exponential equation for specific conductance the precision is $s = 0.00420$ (0.13%). The departure between the specific conductance values of Janz [101] and Arndt [4] is 2.3 percent (1173.2 °K). The uncertainty of the specific conductance values is estimated to be about 1.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.035$ (0.040%).

Of the two density studies [3, 101], the data of Janz [101] were selected to calculate the tabulated values. The maximum departure between the densities reported by Janz [101] and Brunner [3] is 0.41 percent (1170 °K). The uncertainty of the density values is judged to be about 0.2 percent.

Two investigations of the viscosity have been reported [107, 128]. The tabulated values were calculated from the data of Janz and Saegusa [107] (1152.2 to 1245.2 °K, 6 points, oscillating hollow cylinder technique). The exponential equation expresses the data of Janz and Saegusa with a precision $s = 0.0112$ (0.49%). The estimated uncertainty of the viscosity values is about 3.0 percent.

The viscosities of the second study (Karpachev et al. [128], 1123.2 to 1173.2 °K, 2 points, oscillating ball technique) show departures of about 25 percent from those of Janz and Saegusa.

Potassium Carbonate

[Refer: Table 109, p. 86, for numerical values]

Two investigations of the specific conductance for molten K_2CO_3 have been reported [4, 101]. The tabulated values were calculated from the data of Janz and Lorenz [101] (1183.7 to 1279.1 °K, 14

points). Using the exponential equation for specific conductance the precision is $s = 0.00173$ (0.12%). The maximum departure between the specific conductance values of Janz [101] and Arndt [4] is 3.9 percent (1173.2 °K). The uncertainty of the specific conductance values is estimated to be about 1.5 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0175$ (0.021%).

Of the two density studies [3, 101] the data of Janz and Lorenz [101] were selected to calculate the tabulated values. The maximum departure between the densities reported by Janz [101] and Brunner [3] is 0.43 percent (1240 °K). The uncertainty of the density values is judged to be about 0.2 percent.

Two investigations of the viscosity have been reported [107, 128]. The tabulated values of viscosity were calculated from the exponential equation using the data of Janz and Saegusa [107] (1186.2 to 1257.2 °K, 5 points, oscillating hollow cylinder technique). The precision is $s = 0.0272$ (1.23%). The estimated uncertainty of the viscosity values is about 3.0 percent. Karpachev et al. [128], using the oscillating ball technique, reports one viscosity point at a temperature (1173.2 °K) which is lower than the measurement of Janz and Saegusa.

Lithium Nitrite

[Refer: Table 110, p. 86, for numerical values]

The tabulated values of specific conductance for molten $LiNO_2$ were calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (502.7 to 727.2 °K, 6 points). Using the quadratic equation for specific conductance the precision is $s = 4.14 \cdot 10^{-4}$ (0.056%). The maximum departure between the data of Protsenko [207] and Bloom, Knaggs, Molloy, and Welch [66] is 5.6 percent (570 °K). The uncertainty of the specific conductance values is estimated to be about (6%).

The tabulated values of viscosity have been calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (502.7 to 527.2 °K, 6 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0354$ (0.39%). The uncertainty of the viscosity values is considered to be about (1.0%).

Sodium Nitrite

[Refer: Table 111, p. 86, for numerical values]

Three investigations of the specific conductance for molten $NaNO_2$ have been reported [66, 110, 125c, 207]. The tabulated values were calculated from the exponential specific conductance equation reported by Bloom et al. [66] for the temperature range 554 to 723 °K. Neither the precision nor the experimental data were given. Compared to the data of Bloom et al. [66] the results of Ubbelohde [125c and Protsenko et al. [207] show maximum depa tures of −1.6 percent (572.2 °K) and 5.6 perce (570 °K) respectively. The uncertainty of the sp cific conductance values is estimated to be abo 1.6 percent.

The exponential equation expresses the tab lated values of equivalent conductance with a pr cision $s = 0.108$ (0.15%).

Of the two density studies [66, 110] the data Bloom et al. [66] were selected to calculate th tabulated values. The maximum departure betwe the densities reported by Bloom [66] and Ubbeloh [110] is 0.99 percent (720 °K). The uncertainty the density values is judged to be about 1.0 perce

Two investigations of the viscosity for this s have been reported [110, 125c, 207]. The tabulat values were calculated from the data of Protsenk Protsenko, and Razumovskaya [207] (563 to 6 °K, 6 points, capillary viscometer). The cubic equ tion expresses the data with a precision $s = 0.01$ (0.70%). The uncertainty of viscosity values is co sidered to be about 1.0 percent.

The results of the second study (Frame, Rhode Ubbelohde [110, 125c] capillary viscometer) a consistently lower than those of Protsenko (e. 4.0%, 572.7 °K; 1.4%, 583.5 °K).

Potassium Nitrite

[Refer: Table 112, p. 87, for numerical values]

The tabulated values of specific conductance molten KNO_2 were calculated from the data Protsenko, Protsenko, and Razumovskaya [20 (713 to 743 °K, 4 points). Using the quadratic equ tion for specific conductance the precision $s = 4.70 \cdot 10^{-4}$ (0.058%). The uncertainty of the s cific conductance values is estimated to be abo (6%).

The exponential equation expresses the tabulat values of equivalent conductance with a precisi $s = 0.0617$ (0.075%).

The data of Protsenko and Malakhova [173] we used to calculate the densities; no estimate of curacy was attempted owing to the limited inf mation.

Two investigations of the viscosity have be reported [110, 125c, 207, 208]. The tabulated valu were calculated from the data of Frame, Rhod and Ubbelohde [110, 125c] (686.8 °K to 725.4 9 points, capillary viscometer). The cubic equat expresses the data of Ubbelohde with a precis $s = 0.0055$ (0.30%). The uncertainty of the viscos values is judged to be about 1.5 percent.

The viscosities of the second study (Protsen Protsenko, and Razumovskaya [207] and Protse and Shokina [208], capillary viscometer), are c sistently lower than those of Ubbelohde (e.g., 5.7 713 °K).

Rubidium Nitrite

[Refer: Table 113, p. 87, for numerical values]

The tabulated values of specific conductance for molten $RbNO_2$ were calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (712 to 758 °K, 7 points). Using the quadratic equation for specific conductance the precision is $s=0.0025$ (0.25%). The uncertainty of the specific conductance values is estimated to be about (6%).

The tabulated values of viscosity have been calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (712 to 758 °K, 7 points, capillary viscometer). The exponential equation expresses the data with a precision $s=0.0054$ (0.28%). The uncertainty of the viscosity values is considered to be about (1.0%).

Cesium Nitrite

[Refer: Table 114, p. 87, for numerical values]

The tabulated values of specific conductance for molten $CsNO_2$ were calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (688 to 739 °K, 9 points). Using the linear equation for specific conductance the precision is $s=7.41\cdot10^{-4}$ (0.096%). The uncertainty of the specific conductance values is estimated to be about (6%).

The tabulated values of viscosity have been calculated from the data of Protsenko, Protsenko, and Razumovskaya [207] (688 to 739 °K, 9 points, capillary viscometer). The cubic equation expresses the data with a precision $s=0.0080$ (0.39%). The uncertainty of the viscosity values is considered to be about (1.0%).

Barium Nitrite

[Refer: Table 115, p. 87, for numerical values]

The tabulated values of specific conductance for molten $Ba(NO_2)_2$ were calculated from the data of Protsenko and Shokina [185] (553.2 and 573.2 °K, 2 points). Only a linear equation for specific conductance was used to calculate the values. The uncertainty of the specific conductance values is estimated to be about (6%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.0601$ (0.80%).

The data of Protsenko and Malakhova [173] were used to calculate the densities; no estimate of accuracy was attempted owing to the limited information.

Lithium Nitrate

[Refer: Table 116, p. 88, for numerical values]

Five investigations of the specific conductance for molten $LiNO_3$ have been reported [26, 93, 116, 194, 224]. The tabulated values were calculated from the quadratic equation reported by King and Duke [116] (558 to 653 °K). Using the quadratic equation the precision is $s=0.001$ (0.083%). Compared to the data of King and Duke [116], the results of de Nooijer and Ketelaar [224], Doucet and Bizouard [93], Cowen and Axon [194] and Jaeger and Kapma [26] show maximum departures of 0.4 percent (631 °K), −0.9 percent (579.8 °K), −0.8 percent (573 °K) and 0.9 percent (640 °K) respectively. The uncertainty of the specific conductance values is estimated to be about 0.4 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.326$ (0.60%).

Three density studies have been reported [26, 180, 224]. The density data of Jaeger and Kapma [26] were selected to generate the tabulated values. The more recent results of Smith and Petersen [180] and de Nooijer and Ketelaar [224] are in good agreement with the data of Jaeger, the agreement being better than 0.1 percent over the entire temperature range.

Four investigations of the viscosity have been reported [5, 38, 139, 228]. The results of Dantuma [38] (533.2 to 702.2 °K, 37 points, oscillating ball technique) appear to be the most thorough. The more recent investigation of Murgulescu and Zuca [139] lacks details on the preparation, purity and melting point of the salt. Protsenko and Razumovskaya [228] reported a higher (5 degrees) melting point for $LiNO_3$ and lower melting points for the other alkali nitrates (except KNO_3), silver nitrate and thallous nitrate than the generally accepted values; this may imply an error in thermometry and/or impurities in the salts. Goodwin and Mailey [5] reported a lower melting point for $LiNO_3$.

Judging from the above considerations and in view of the most precise work for the other nitrates ($NaNO_3$ and KNO_3) the data of Dantuma were selected to calculate the tabulated values. Using the cubic equation for viscosity the precision is $s=0.1143$ (3.12%). The uncertainty of the viscosity values is estimated to be about 3.5 percent.

The investigator, reference, experimental method and the maximum percent departure are as follows: Goodwin and Mailey [5], vertical capillary, −24 percent; Murgulescu and Zuca [139], oscillating ball, −14 percent; and Protsenko and Razumovskaya [228], vertical capillary, −23 percent.

Sodium Nitrate

[Refer: Table 117, p. 88, for numerical values]

Ten investigations of the specific conductance for molten $NaNO_3$ have been reported [7, 26, 27, 61, 66, 71, 75, 93, 192, 224]. The tabulated values were calculated from the data of Byrne et al. [61] (583.2 to 643.2 °K, 7 points) and Lorenz and Kalmus [7] (591.2 to 691.2 °K, 11 points). Using the linear

equation for specific conductance the precision is $s = 7.83 \cdot 10^{-4}$ (0.06%). Compared to the data of Lorenz [7] the results of Byrne [61], de Nooijer and Ketelaar [224] and Sandonnini [27] show maximum departures of 0.4 percent (633 °K), 0.6 percent (694 °K) and 0.9 percent (623 °K) respectively; the results of the other investigators show larger departures. The uncertainty of the specific conductance values is estimated to be about 1.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0160$ (0.028%).

Of the four density studies [15, 26, 61, 66], the data of Bloom et al. [66] and Byrne [61] were selected to generate the tabulated values. The density equation has been calculated from the average of the coefficients of the linear density equations reported by Bloom [66] and Byrne [61]. Compared to the combined data of Bloom [66] and Byrne [61] the results of Jaeger [26] and Lorenz, Frei, and Jabs [15] show maximum departures of 0.7 percent (700 °K) and 0.1 percent (673 °K) respectively. The uncertainty of the density values is judged to be about 1 percent.

Six investigations of the viscosity have been reported [5, 8, 12, 38, 102, 228]. The tabulated values were calculated from the data of Dantuma [38] (589.2 to 731.2 °K, 33 points, oscillating ball technique). The exponential equation expresses the data of Dantuma with a precision $s = 0.0284$ (1.41%). The departures of various viscosity determinations of $NaNO_3$ from the values of Dantuma are presented in figure 2. The estimated uncertainty of the viscosity values is about 1.5 percent.

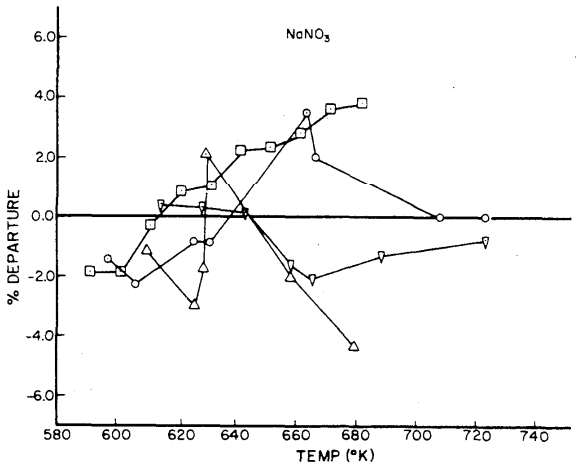

FIGURE 2. *Comparison of percent departure of the data of various investigators with the Dantuma viscosity data for* $NaNO_3$

Base line-Dantuma	[38]
△ Goodwin and Mailey	[5]
□ Lorenz and Kalmus	[8]
○ Fawsitt	[12]
▽ Murgulescu and Zuca	[102]

The results of Protsenko and Razumovskaya [228] show departures of up to −0.4 percent from the base line.

The investigator, reference, experimental method, and the maximum percent departure from the values of Dantuma are as follows: Goodwin and Mailey [5], vertical capillary, −4.3 percent; Lorenz and Kalmus [8], horizontal capillary, +3.9 percent; Fawsitt [12], oscillating disk, +3.6 percent; Murgulescu and Zuca [102], oscillating ball, −2.1 percent; and Protsenko and Razumovskaya [228], vertical capillary, −0.4 percent.

The uncertainty of the viscosity of $NaNO_3$ could be greater than 3.0 percent at higher temperatures due to partial decomposition of the melt. All the investigations of $NaNO_3$ were carried out in a normal atmosphere; the agreement was good between the different methods. If decomposition occurred in the melt it does not appear significantly greater in any one method. While molten $NaNO_3$ undergoes decomposition at elevated temperature (> 660 °K) it has been generally used as a calibration fluid for high temperature viscosity studies.

Potassium Nitrate

[Refer: Table 118, p. 89, for numerical values]

Twelve investigations of the specific conductance for molten KNO_3 have been reported [7, 20, 26, 27, 66, 84, 92, 116, 192, 193, 194, 224]. The tabulated values were calculated from the data of Aten [20] (613.2 to 773.2 °K, 9 points) and Bloom et al. [66] (800 to 880 °K, 5 points, gained from Bloom's exponential equation at 20 deg intervals). Using the quadratic equation for specific conductance the precision is $s = 0.00369$ (0.37%). Compared to the data of Aten [20] and Bloom et al. [66], the results of King and Duke [116], Sandonnini [27], and Lorenz and Kalmus [7] show maximum departures of 0.3 percent (620 °K), −0.2 percent (673 °K) and −1.6 percent (686 °K) respectively. The departures of the various specific conductance determinations of KNO_3 from the tabulated values are in figure 3A. The uncertainty of the tabulated specific conductance values is estimated to be about 0.8 percent.

Values of specific conductance ($s = 8.10^{-4}$, 0.1% for the temperature range 623 to 698 °K should be calculated from the following equation reported by Duke [116]: $\kappa = -2.4566 + 6.72893 \cdot 10^{-} - 2.7583 \cdot 10^{-6}T^2$. The uncertainty of the specific conductance values calculated from the equation of Duke [116] is estimated to be about 0.3 percent. The data of Duke [116] appears highly suitable for a high temperature calibration reference standard.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0832$ (0.14%).

Of the ten density studies [15, 26, 38, 66, 8 173, 177, 184, 192, 210] the data of Bloom et al. [66] were selected to calculate the tabulated values. Compared to the density data of Bloom et al. [66] the results of other investigators are as follows: Dantuma [38], −0.2 percent (660 °K); Smith a

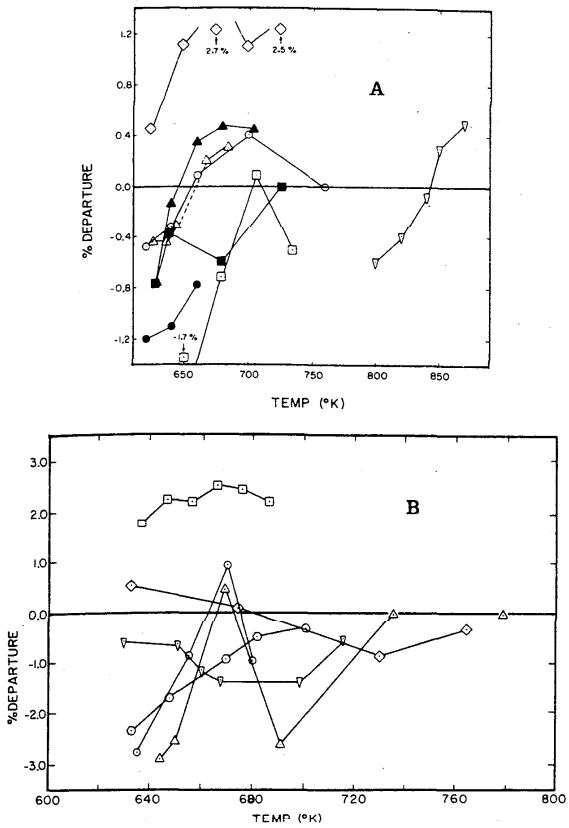

FIGURE 3. *Comparison of percent departures of the data for KNO_3*

A. Specific Conductance:
Base Line—Aten [20] and Bloom [66]
△ Angell [193]
⊡ de Nooijer and Ketelaar [224]
■ Jaeger and Kapma [26]
▲ King and Duke [116]
○ Aten [20]
▽ Bloom, Knaggs, Molloy and Welch [66]
◇ Murgulescu and Zuca [192]
• Smith and van Artsdalen [84]

B. Viscosity:
Base Line—Dantuma [38]
△ Goodwin and Mailey [5]
⊡ Lorenz and Kalmus [8]
⊙ Fawsitt [12]
○ Ogawa [57]
▽ Murgulescu and Zuca [102]
◇ Janz and Saegusa [107]
The results of Protsenko and Razumovskaya [228] show departures of up to +0.5 percent from the base line.

van Artsdalen [84], 0.2 percent (620 °K); Protsenko and Malakhova [173], −0.3 percent (673 °K); Murgulescu and Zuca [192], −0.2 percent (673 °K); and Polyakov and Berul [184], −0.4 percent (713 to 773 °K). The uncertainty of the density values is judged to be about 0.2 percent.

Eight investigations of the viscosity have been reported [5, 8, 12, 38, 57, 102, 107, 228]. The tabulated values of viscosity were calculated from the data of Dantuma [38] (671.2 to 815.2 °K, 35 points, oscillating ball technique). The cubic equation expresses the data with a precision $s=0.0234$ (1.38%). The departures of the various viscosity determinations of KNO_3 from the values of Dantuma are presented in figure 3B. The uncertainty of the viscosity data is estimated to be about 1.5 percent.

The investigator, reference, experimental method, and the maximum percent departure from the values of Dantuma are as follows: Goodwin and Mailey [5], vertical capillary, −2.9 percent; Lorenz and Kalmus [8], horizontal capillary, +2.5 percent; Fawsitt [12], oscillating disk, −2.8 percent; Ogawa [57], restricted falling sphere, −2.4 percent; Murgulescu and Zuca [102], oscillating ball, −1.4 percent; Janz and Saegusa [107], oscillating hollow sphere, −0.9 percent; and Protsenko and Razumovskaya [228], vertical capillary, +0.5 percent.

The uncertainty of the viscosity of KNO_3 could be greater than 2.7 percent at higher temperatures due to partial decomposition of the melt. All the investigations of KNO_3 were carried out in a normal atmosphere; the agreement was good between the different methods. Hence if decomposition occurred in the melt, it does not appear significantly greater in any one method. While molten KNO_3 decomposes at elevated temperature (> 780 °K), it has been used as a high temperature viscosity calibration fluid.

Rubidium Nitrate

[Refer: Table 119, p. 89, for numerical values]

Two investigations of the specific conductance for molten $RbNO_3$ have been reported [26, 224]. The tabulated values were calculated from the data of Jaeger and Kapma [26] (592.0 to 766.2 °K, 12 points). Using the quadratic equation for specific conductance the precision is $s=0.00153$ (0.25%). The uncertainty of the specific conductance values is estimated to be about 6 percent.

De Nooijer and Ketelaar [224] report results for the specific conductance for the temperature range 588.6 to 724.0 °K (10 points) which fall within the limits of the above accuracy estimate.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.226$ (0.57%).

The density data of Jaeger and Kapma [26] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Two investigations of the viscosity have been reported [139, 228]. The tabulated values were calculated from the data of Murgulescu and Zuca [139] (623 to 698 °K, 5 points, oscillating ball technique). The cubic equation expresses the data with a precision $s=0.00717$ (0.25%). The uncertainty of the viscosity values is estimated to be about 1.0 percent.

The results of the second study (Protsenko and Razumovskaya [228], vertical capillary viscometer), are consistently lower (about 7%) than those of Murgulescu and Zuca. Protsenko reported a lower melting point (158 °K) for $RbNO_3$ than the generally accepted value (589 °K).

Cesium Nitrate

[Refer: Table 120, p. 90, for numerical values]

Three investigations of the specific conductance for molten $CsNO_3$ have been reported [26, 84, 224]. The tabulated values were calculated from the linear equation reported by van Artsdalen [84] for the temperature range of 688.2 to 764.2 °K. No precision was reported. Compared to the data of van Artsdalen the results of de Nooijer and Ketelaar [224] and Jaeger and Kapma [26] show maximum departures of 0.5 percent (735 °K) and −2.0 percent (745.9 °K) respectively. The uncertainty of the specific conductance values is estimated to be about 0.6 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.00503$ (0.019%).

Of the two density studies [26, 84] the data of van Artsdalen [84] were selected to calculate the tabulated values. The maximum departure between the densities reported by van Artsdalen [84] and Jaeger [26] is 0.15 percent (780 °K). The uncertainty of the density values is judged to be about 0.15 percent.

Two investigations of the viscosity have been reported [139, 228]. The tabulated values were calculated from the data of Protsenko and Razumovskaya [228] (698.2 to 776.2 °K, 15 points, vertical capillary viscometer). Using the cubic equation for viscosity the precision is $s = 0.0033$ (0.18%). The uncertainty of the viscosity values is judged to be about 4.5 percent.

The study of Murgulescu and Zuca [138] (oscillating ball method) is limited to one temperature; their value (2.43 cp, at 698 °K) is higher (12.5%) than those of Protsenko and Razumovskaya.

Silver Nitrate

[Refer: Table 121, p. 90, for numerical values]

Eight investigations of the specific conductance for molten $AgNO_3$ have been reported [5, 60, 78, 135, 181, 194, 219, 224]. The tabulated values were calculated from the data of Spooner and Wetmore [60] (483.2 to 603.2 °K, 13 points). Using the quadratic equation for specific conductance the precision is $s = 1.11 \cdot 10^{-3}$ (0.12%). Compared to the data of Spooner and Wetmore the results of other investigators show the following maximum departures: Goodwin and Mailey [5] −1.0 percent (526 °K); de Nooijer and Ketelaar [226], −1.0 percent (523 °K); Polyakov [78], −1.7 percent (513 °K); Bizouard [181], 0.2 percent (573 °K); Duke and Fleming [135], −1.6 percent (598 °K); the results of Sundheim and Berlin [219], and Cowen and Axon [194] show larger departures. The uncertainty of the specific conductance values is estimated to be about 1 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.178$ (0.45%).

Of the five density studies [25, 36, 54, 60, 224] the data of Jaeger [25] were selected to calculate the tabulated values. Compared to the density data of Jaeger [25] the results of Klemm [36], Spooner and Wetmore [60], Boardman et al. [54] and de Nooijer and Ketelaar [224] show maximum departures of −0.1 percent (600 °K), −0.4 percent (500 °K), −0.4 percent (600 °K), and 1.5 percent (548 °K) respectively. The uncertainty of the density values is judged to be about 0.3 percent.

Five investigations of the viscosity have been reported [5, 65, 69, 219, 228]. The tabulated values were calculated from the data of Pugsley and Wetmore [69] (530.0 to 593.4 °K, 13 points, Ostwald viscometer). The cubic equation for viscosity expresses the data with a precision $s = 0.0054$ (0.18%). The uncertainty of the viscosity data is estimated to be about 1.0 percent.

The investigator, reference, experimental method and the maximum percent departure from the values of Pugsley and Wetmore are as follows: Goodwin and Mailey [5], vertical capillary viscometer, −5 percent; and Davis, Rogers, and Ubbelohde [65] Ostwald type viscometer, −30 percent; Sundheim and Berlin [219], Ostwald type viscometer, 8 percent; and Protsenko and Razumovskaya [228] vertical capillary, +3.4 percent.

Thallium (I) Nitrate

[Refer: Table 122, p. 91, for numerical values]

Seven investigations of the specific conductance for molten $TlNO_3$ have been reported [110, 125, 191, 215, 216, 217, 219, 224]. The tabulated values were calculated from the data of Janz and Timidei [191] (485.5 to 554.5 °K, 17 points). Using the linear equation for specific conductance the precision $s = 9.59 \cdot 10^{-4}$ (0.212%). Compared to the data of Janz and Timidei [191] the results of other investigators show the following maximum departures: Frame, Rhodes and Ubbelohde [110, 125c], 1.0 percent (524.4 °K); Sundheim and Berlin [219], 0.7 percent (491.9 °K); Bergman and Chagin [215], 4 percent (498 °K); and Bokhovkin [216], −4.6 percent (523 °K, 548 °K). Brillant [217] claims agreement with Ubbelohde but the results are insufficient reported for a critical evaluation. The uncertainty of the specific conductance values is estimated to be about 0.7 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0843$ (0.35%).

Of the two density studies [25, 191], the data of Janz [191] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger [25] and Janz [191] is 0.4 percent (552.6 °K). The estimated uncertainty of the density values is about 0.15 percent.

Four investigations of the viscosity have been reported [110, 191, 219, 228]. The tabulated values were calculated from the data of Janz and Timidei [191] (492.5 to 553.7 °K, 16 points, modified Martin vsicometer). The cubic equation expresses the data of Janz and Timidei with a precision $s = 0.00876$ (0.31%). The uncertainty of the data is judged to be about 1.0 percent.

The investigator, reference, experimental method and the maximum percent deviation from the values of Janz and Timidei are as follows: Frame, Rhodes, and Ubbelohde [110], Ubbelohde viscometer, 5.3 percent; Sundheim and Berlin [219], Ostwald viscometer, 7.1 percent; and Protsenko and Razumovskaya [228], vertical capillary viscometer, +12.0 percent.

Vanadium Pentoxide and Chromium Trioxide

[Refer: Tables 123 to 124, p. 91, for numerical values]

The tabulated values of specific conductance for molten V_2O_5 and CrO_3 were calculated from the data of van Arkel, Flood and Bright [68]. The number of data points, the temperature range, the precision and the best equation are as follows:

V_2O_5 – 8 points, 1140–1237 °K,
$s = 0.00575$ (2.87%), linear equation.

CrO_3 – 7 points, 491–535 °K,
$s = 3.31 \cdot 10^{-7}$ (0.007%), quadratic equation.

Molybdenum Trioxide

[Refer: Table 125, p. 91, for numerical values]

Two investigations of the specific conductance for molten MoO_3 have been reported [68, 76]. The tabulated values were calculated from the data of Morris et al. [76] (1096 to 1187 °K, 5 points). The exponential equation for specific conductance expresses the data of Morris with a precision $s = 0.00208$ (0.22%). The maximum departure between the specific conductance values of Morris [76] and van Arkel [68] is 58 percent (1168 °K). The uncertainty of the specific conductance values is estimated to be about 60 percent.

Wüstite ($Fe_{0.95}O$)

[Refer: Table 126, p. 92, for numerical values]

The tabulated values of specific conductance for molten FeO were calculated from the data of Inouye, Tomlinson and Chipman [159] (1648 to 1773 °K). To cover the entire range it became necessary to generate two equations; the number of data points, the temperature range, the precision appropriate to this sub-division are as follows:

quadratic equation; 5 points, 1648–1713 °K,
$s = 16.1$ (6.0%)
linear equation; 5 points, 1713–1773 °K,
$s = 1.18$ (0.37%)

Liquid wüstite is a nonstoichiometric melt since an increase in temperature above the melting point results in an increase in the Fe/O ratio although the latter remains less than unity. Chipman [159] has estimated an overall error of less than 8 percent for his results. No estimate of the accuracy was attempted owing to the limited information.

Boron Oxide

[Refer: Table 127, p. 92, for numerical values]

Two investigations of the density for molten B_2O_3 have been reported [144, 201]. The density data of Reibling [144] (1410 to 1890 °K, 14 points) were selected to calculate the tabulated values. Using the quadratic equation for density the precision is $s = 1.11 \cdot 10^{-3}$ (0.074%). The maximum departure between the densities reported by Riebling [144] and Napolitano, Macedo and Hawkins [201] is 0.82 percent (1473 °K). The estimated uncertainty of the density values is about 0.8 percent. Densities ($s = 4.52 \cdot 10^{-3}$ (0.28%)) in the range 723 to 1400 °K can be gained from the following quadratic equation based on the data of Napolitano [201] (723 to 1673 °K, 12 points):

$$\rho = 2.03833 - 6.67971 \cdot 10^{-4}T - 2.08005 \cdot 10^{-7}T^2.$$

Six investigations of the viscosity have been reported [137, 144, 145, 200, 201, 209, 222]. The tabulated values were calculated from the data of Riebling [137] (1410 to 1893 °K, 14 points, restricted falling ball viscometer). The cubic equation expresses the data of Riebling with a precision $s = 70.8$ (3.27%). The uncertainty of the viscosity values is estimated to be about 5.0 percent.

The investigator, reference, temperature range studied, experimental method and the departure from the values of Riebling [137] are as follows: Riebling [222] 1303 to 1583 °K, restricted falling ball, +20 percent at 1550 °K; Arndt [200], 1023 to 1388 °K, restricted falling ball, −30 percent at 1410 °K (extrapolated); Napolitano, Macedo, and Hawkins [201], 730 to 1677 °K, concentric cylinder technique, −90 percent at 1677 °K; Li, Ghose, and Su [209], 784 to 1516 °K, concentric cylinder technique, −8 percent at 1516 °K; Mackenzie [145], 786 to 1309 °K, restricted falling ball viscometer, extrapolated values of Mackenzie agree with those of Riebling [137] (1% at 1410 °K).

Silicon Dioxide

[Refer: Table 128, p. 93, for numerical values]

Two investigations of the viscosity for molten

SiO_2 have been reported [205, 206]. The tabulated values were calculated from the data of Bacon, Hasapis, and Wholley [205] (2208 to 2595 °K, 12 points, restricted falling ball viscometer). The cubic equation expresses the data of Bacon, Hasapis, and Wholley with a precision $s = 55{,}900$ (49.3%). The uncertainty of the viscosity values is estimated to be about 60 percent.

The viscosities of the second study (Bockris, Mackenzie, and Kitchener [206]; torque viscometer) are consistently lower than those of Bacon, Hasapis, and Wholley (e.g., 84% at 2210 °K; 90% at 2330 °K).

Germanium Dioxide

[Refer: Table 129, p. 93, for numerical values]

Two investigations of the specific conductance for molten GeO_2 have been reported [146, 163]. The tabulated values were calculated from the exponential equation reported by Riebling and Gabelnick [163] (1389 to 1623 °K). No precision was given. Comparison of the data of Riebling [163] and Mackenzie [146] shows the maximum departure to be 60 percent (1523 °K). The uncertainty of the specific conductance values is estimated to be about 20 percent.

Three investigations of the viscosity have been reported [137, 140, 141, 146]. The tabulated values were calculated from the combined data of Kurkjian and Douglas [140] (1423 to 1773 °K, 8 points, concentric cylinder viscometer) and Riebling [137] (1745 to 1991 °K, 28 points, restricted falling ball viscometer). The exponential equation generated from the data of Kurkjian and Douglas expresses the viscosity values in the range 1430 to 1750 °K with a precision $s = 7.61 \cdot 10^5$ (41.6%) and the uncertainty of the data is considered to be about 50 percent, while the exponential equation from the data of Riebling expresses the viscosities in the range 1760 to 1990 °K with a precision $s = 8376$ (10.4%) and the uncertainty of the data is estimated to be about 15 percent. The values generated from Riebling's data are higher than those of Kurkjian and Douglas in the region of overlap (e.g., 7.6%, 1750 °K, 10.7%, 1770 °K).

The results of the third study (Mackenzie [146]; counter balance viscometer) are consistently higher than those of Kurkjian and Douglas, and Riebling (e.g., 100%, 1623 °K; 123%, 1823 °K).

Lead Oxide

[Refer: Table 130, p. 94, for numerical values]

The tabulated values of specific conductance for molten PbO were calculated from the data of van Arkel, Flood and Bright [68] (1164 to 1260 °K, 9 points). The exponential equation for specific conductance expresses the data with a precision $s = 0.010$ (0.55%). No estimate of accuracy was attempted owing to the limited information.

Arsenic Trioxide

[Refer: Table 131, p. 94, for numerical values]

The tabulated values of viscosity for molten As_2(were calculated from the data of Karutz and Stra ski [202] (601.1 to 702.9 °K, 6 points, restricte falling ball viscometer). The exponential equati expresses the data with a precision $s = 7{,}681$ (1.76%). No estimate of accuracy was attempt owing to the limited information.

Antimony Sesquioxide, Bismuth Sesquioxid and Tellurium Dioxide

[Refer: Tables 132 to 134, pp. 94 to 95, for numeri values]

The tabulated values of specific conductance molten Sb_2O_3, Bi_2O_3 and TeO_2 were calculated fr the data of van Arkel, Flood and Bright [68]. T number of data points, the temperature range, precision and the best equation are as follo

Sb_2O_3 – 6 points, 1101–1161 °K,
$s = 0.0038$ (3.0%), linear equati
Bi_2O_3 – 18 points, 1102–1228 °K,
$s = 0.0816$ (11.5%), linear equati
TeO_2 – 18 points, 1023–1233 °K,
$s = 0.0384$ (2.0%), exponential equati

Iron (II) Sulfide

[Refer: Table 135, p. 95, for numerical values

Two investigations of the specific conductance molten FeS have been reported [153, 154, 1 The tabulated values were calculated from quadratic specific conductance equation repo by Velikanov [154, 155] for the temperature ra 1469.2 to 1493.2 °K. Neither the precision nor experimental data were given. Argyriades, De and Pound [153] reported a value of 400 Ω^{-1}c (1473.2 °K) for the specific conductance of iron fide; this value is 72 percent lower than tha Velikanov [155]. The uncertainty of the spe conductance values is estimated to be about percent.

Cobalt (II) Sulfide

[Refer: Table 136, p. 95, for numerical value

The tabulated values of specific conductanc molten CoS were calculated from the grap data of Velikanov [155] (1461.2 to 1497.2 ° points). The data points, interpolated from Ve nov's graph, were least squared to develop exponential equation. The uncertainty of the spe conductance values is estimated to be about (5

Nickel (II) Sulfide

[Refer: Table 137, p. 95, for numerical values]

The tabulated values of specific conductance for molten NiS were calculated from the quadratic equation reported by Velikanov [154] for the temperature range 1153.2 to 1398.2 °K. Neither the precision nor the experimental data were given. The uncertainty of the specific conductance values is estimated to be about (50%).

Copper (I) Sulfide

[Refer: Table 138, p. 96, for numerical values]

Two investigations of the specific conductance for molten Cu_2S have been reported [155, 152]. The tabulated values were calculated from the data of Velikanov [155] (1402.2 to 1523.3 °K, 10 points). Using the quadratic equation for specific conductance the precision is $s=1.44$ (2.3%). The maximum departure between the results of Velikanov [155] and Bourgon, Derge and Pound [152] is 33 percent. The uncertainty of the specific conductance values is estimated to be about 40 percent.

Silver Sulfide

[Refer: Table 139, p. 96, for numerical values]

Two investigations of the specific conductance for molten Ag_2S have been reported [156, 166]. The tabulated values were calculated from the data of Velikanov [156] (1105.2 to 1352.2 °K, 12 points). Using the exponential equation for specific conductance the precision is $s=0.783$ (0.66%). The maximum departure between the results of Velikanov [155] and Bell and Flengas [166] is 70 percent (1233 °K). The uncertainty of the specific conductance values is estimated to be about 50 percent.

Germanium (II) Sulfide

[Refer: Table 140, p. 96, for numerical values]

The tabulated values of specific conductance for molten GeS were calculated from the data of Velikanov [155] (873.2 to 1073.2 °K, 3 points). The quadratic equation expresses the data with an exact fit. The uncertainty of the specific conductance values is estimated to be about (50%).

Tin (II) Sulfide

[Refer: Table 141, p. 97, for numerical values]

The tabulated values of specific conductance for molten SnS were calculated from the data of Velikanov [155] (1158.2 to 1411.2 °K, 13 points). Using the quadratic equation for specific conductance the precision is $s=0.363$ (1%). The uncertainty of the specific conductance values is estimated to be about (50%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=18.2$ (1.4%).

The density data of Velikanov [158] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Lead Sulfide

[Refer: Table 142, p. 97, for numerical values]

Two investigations of the specific conductance for molten PbS have been reported [151, 154, 155]. The tabulated values were calculated from the quadratic equation reported by Velikanov [154, 155] for the temperature range 1388.2 to 1490.2 °K. Neither the precision nor the experimental data were given. The maximum departure between the results of Velikanov [154] and Bell and Flengas [151] is 22 percent (1420 °K). The uncertainty of the specific conductance values is estimated to be about 20 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=12.3$ (0.66%).

The data of Bell and Flengas [150] were used to calculate the densities; no estimate of accuracy was attempted owing to the limited information.

Antimony (III) Sulfide

[Refer: Table 143, p. 98, for numerical values]

The tabulated values of the specific conductance for molten Sb_2S_3 were calculated from the data of Velikanov [155] (830.2 to 1076.2 °K, 13 points). Using the quadratic equation for specific conductance the precision is $s=0.00901$ (1.7%). The uncertainty of the specific conductance values is estimated to be about (50%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s=0.247$ (1.4%).

The density data of Velikanov [158] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Bismuth (III) Sulfide

[Refer: Table 144, p. 98, for numerical values]

The tabulated values of the specific conductance for molten Bi_2S_3 were calculated from the data of Velikanov [157] (973.2 to 1198.2 °K, 10 points). Using the linear equation for specific conductance the precision is $s=4.87$ (0.12%). The accuracy of the specific conductance values has not been estimated due to unreliability of the data. Since the measure-

ments were carried out in an atmosphere of air, the decomposition of sulfides may have resulted in the formation of metal molten sulfide solutions; a small increase in the metal content of many sulfide melts, in which electronic as well as ionic conduction is known to occur, causes a large increase in the electrical conductance.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 10.6$ (0.012%).

The density data of Velikanov [158] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Lithium Sulfate

[Refer: Table 145, p. 99, for numerical values]

The tabulated values of specific conductance for molten Li_2SO_4 were calculated from the quadratic specific conductance equation (converted to absolute temperature scale) reported by Kvist and Lunden [115] for the temperature range of 848.3 to 1243.2 °K. No precision was given by Kvist and Lunden. The uncertainty of the specific conductance values is estimated to be about (5%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.482$ (0.42%).

The density data of Jaeger [25] were used to calculate the tabulated values. The uncertainty of the density values is judged to be about (1%).

Sodium Sulfate

[Refer: Table 146, p. 99, for numerical values]

Two investigations of the specific conductance for molten Na_2SO_4 have been reported [4, 226]. The tabulated values were calculated from the data of Kvist [226] (1189.2 to 1232.0 °K, 4 points). Using the exponential equation for specific conductance the precision is $s = 0.00119$ (0.05%). The specific conductance values of Arndt [4] are all lower than those of Kvist; the maximum departure between their values is 4.5 percent (1220 °K). The uncertainty of the specific conductance values is estimated to be 2 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0077$ (0.0092%).

The density data of Jaeger [25] were used to calculate the tabulated values. The uncertainty of the density values is judged to be about (1%).

Potassium Sulfate

[Refer: Table 147, p. 99, for numerical values]

Two investigations of the specific conductance for molten K_2SO_4 have been reported [4, 161]. The tabulated values were calculated from the data of Kvist [161] (1341.5 to 1359.6 °K, 7 points). Using the quadratic equation for specific conductance the precision is $s = 0.00259$ (0.13%). The specific conductance value of Arndt [4] (1373.2 °K) is lower (5.6%, 1372.2 °K) than that of Kvist [161]. The uncertainty of the specific conductance values is estimated to be about 3 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.070$ (0.05%).

Of the two density studies [25, 178] the data of Neithamer and Peake [178] were selected to calculate the tabulated values. The maximum departure between the density data of Jaeger [25] and Peake [178] is 0.96 percent (1350 °K). The uncertainty of the density values is judged to be about 0.4 percent. For temperatures above 1450 °K densities may be calculated using the following equation based on the data of Jaeger [25] (1343 to 1929 °K, 15 points)

$$\rho = -0.900 + 2.00 \cdot 10^{-3} T.$$

Rubidium Sulfate

[Refer: Table 148, p. 99, for numerical values]

The tabulated values of specific conductance f molten Rb_2SO_4 were calculated from the data Kvist [226] (1340.2 to 1395.2 °K, 8 points). T exponential equation for specific conductan expresses the data with a precision $s = 0.001$ (0.13%). The uncertainty of the specific conductan values is estimated to be (3%).

The exponential equation expresses the tabulat values of equivalent conductance with a precisi $s = 0.00709$ (0.0093%).

The tabulated values of density were calculat from the density equation reported by Jaeger [2 The uncertainty of the density values is estimat to be about (1%).

Cesium Sulfate

[Refer: Table 149a, p. 100, for numerical value

The tabulated values of specific conductance molten Cs_2SO_4 were calculated from the data Kvist [226] (1286.7 to 1354.7 °K, 6 points). linear equation for specific conductance expres the data with a precision $s = 0.0035$ (0.30%). uncertainty of the specific conductance value estimated to be (3%).

The exponential equation expresses the tabul values of equivalent conductance with a preci $s = 0.0223$ (0.032%).

The tabulated values of density were calcul from the density equation reported by Jaeger [The uncertainty of the density values is estim to be about (1%).

Silver Sulfate

[Refer: Table 149b, p. 100, for numerical values]

The tabulated values of specific conductance for molten Ag_2SO_4 were calculated from the data of Kvist [226] (942.0 to 1017.4 °K, 6 points). The exponential equation for specific conductance expresses the data with a precision $s = 0.00203$ (0.11%). The uncertainty of the specific conductance values is estimated to be (3%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0067$ (0.018%).

The tabulated values of density were calculated from the density equation reported by Kvist [226]. The uncertainty of the density values is estimated to be about (0.8%).

Tetrapropylammonium Tetrafluoroborate

[Refer: Table 150, p. 100, for numerical values]

The tabulated values of specific conductance for molten Pr_4NBF_4 were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (522.73 to 554.58 °K, 16 points). Using the exponential equation for specific conductance the precision is $s = 1.88 \cdot 10^{-3}$ (1.7%). The uncertainty of the specific conductance values is estimated to be about (10%) (see discussion for Bu_4NI).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0108$ (0.035%).

The density data of Lind [190, 221] (525.6 to 547.3 °K, 14 points) were used to calculate the tabulated values. The uncertainty of the density values is judged to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (522.8 to 546.7 °K, 5 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.00032$ (0.017%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrapropylammonium Hexafluorophosphate

[Refer: Table 151, p. 100, for numerical values]

The tabulated values of specific conductance for molten $Pr_4 NPF_6$ were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (511.03 to 545.15 °K, 15 points). Using the exponential equation for specific conductance the precision is $s = 8.86 \cdot 10^{-5}$ (0.11%). The uncertainty of the specific conductance values is estimated to be about (6%) (see discussion for Bu_4NI).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 3.24 \cdot 10^{-3}$ (0.013%).

The density data of Lind [190, 221] were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim, and Rudich [190, 221] (517.5 to 541.9 °K, 5 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.00031$ (0.012%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrapropylammonium Tetraphenylborate

[Refer: Table 152, p. 101, for numerical values]

The density data of Lind, Abdel-Rehim and Rudich [190, 221] for molten Pr_4NBPh_4 were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim, and Rudich [190, 221] (483.5 to 529.2 °K, 11 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0166$ (0.28%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrabutylammonium Bromide

[Refer: Table 153, p. 101, for numerical values]

The tabulated values of specific conductance for molten Bu_4NBr were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (390.3 to 407.7 °K, 7 points). Using the exponential equation for specific conductance the precision is $s = 9.42 \cdot 10^{-6}$ (0.35%). The uncertainty of the specific conductance values is estimated to be about (7%) (see discussion for Bu_4NI).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 1.29 \cdot 10^{-4}$ (0.017%).

The density data of Lind [190, 221] were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

Tetrabutylammonium Iodide

[Refer: Table 154, p. 101, for numerical values]

Two investigations of the specific conductance for molten Bu_4NI have been reported [190, 220, 221]. The tabulated values were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (420.70 to 440.13 °K, 13 points). Comparison of the data of Walden and Birr [220] and Lind [190, 221] shows the maximum departure to be 2.4 percent (423 °K). Although the linear equation for specific conductance expresses the data with a precision $s = 2.43 \cdot 10^{-4}$ (3.6%), the reproducibility is particularly poor near 428 °K (3.0% at 428.13 °K and −7.6% at 428.66 °K). Lind attributes this poor

reproducibility to the decomposition of the salt. The tetrafluoroborates are the most stable and the halides are the least stable of the quaternary ammonium salts. The uncertainty of the specific conductance values is estimated to be about 10 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.047$ (2.0%).

Of the two density studies [190, 220, 221], the data of Lind [190, 221] were selected to calculate the tabulated values. The maximum departure between the densities reported by Lind [190, 221] and Walden [220] is 1.0 percent (423.2 °K). The estimated uncertainty of the density values is 1 percent.

Tetrabutylammonium Tetrafluoroborate

[Refer: Table 155, p. 101, for numerical values]

The tabulated values of density for molten Bu_4NBF_4 were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221]. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (435.4 to 539.1 °K, 17 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0446$ (1.22%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrabutylammonium Hexafluorophosphate

[Refer: Table 156, p. 102, for numerical values]

The tabulated values of specific conductance for molten Bu_4NPF_6 were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (529.5 to 548.5 °K, 5 points). Using the linear equation for specific conductance the precision is $s = 1.06 \cdot 10^{-4}$ (0.010%). The uncertainty of the specific conductance values is estimated to be about (6%) (see discussion for Bu_4NI).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.041$ (0.22%).

The density data of Lind [190, 221] were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim, and Rudich [190, 221] (529.4 to 554.1 °K, 5 points, capillary viscometer). The exponential equation expresses the data with a precision $s = 0.0035$ (0.14%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrabutylammonium Tetraphenylborate

[Refer: Table 157, p. 102, for numerical values]

The tabulated values of specific conductance for molten Bu_4NBPh_4 were calculated from the data of Lind, Abdel-Rehim and Rudich [190, 221] (514.3 to 540.4 °K, 12 points). Using the exponential equation for specific conductance the precision is $s = 1.95 \cdot 10^{-5}$ (0.14%). The uncertainty of the specific conductance values is estimated to be about (6%) (see discussion for Bu_4NI).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 1.62 \cdot 10^{-3}$ (0.010%).

The density data of Lind [190, 221] were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim, and Rudich [190, 221] (516.8 to 541.8 °K, 5 points, capillary viscometer). The exponential equation expresses the data with a precision $s = 0.0064$ (0.16%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetrahexylammonium Tetrafluoroborate

[Refer: Table 158, p. 102, for numerical values]

The density data of Lind, Abdel-Rehim and Rudich [190, 221] for molten Hex_4NBF_4 were used to calculate the tabulated values. The uncertainty of the density values is estimated to be about (1%).

The tabulated values of viscosity were calculated from the data of Lind, Abdel-Rehim, and Rudich [190, 221] (376.0 to 502.8 °K, 27 points, capillary viscometer). The exponential equation expresses the data with a precision $s = 2.90$ (20.7%). While the information is insufficient to estimate the accuracy, the data can be considered reliable.

Tetra-*n*-amylammonium Thiocyanate

[Refer: Table 159, p. 102, for numerical values]

The tabulated values of specific conductance for molten $(n\text{-amyl})_4NSCN$ were calculated from the data of Kenausis, Evers and Kraus [172] (325 to 383.2, 7 points). The specific conductance values gained from the equivalent conductance and density data of Kraus [172] were least squared to generate the quadratic equation. The precision $s = 2.77 \cdot 10^{-5}$ (2.4%). No attempt to estimate the accuracy was made owing to insufficient information; however, judging the experimental technique the results can be considered reliable.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0532$ (13%).

The density data of Kraus [172] (325.2 to 383.2, 7 points) were used to calculate the tabulated values. No estimate of accuracy was attempted owing to the limited information.

The tabulated values of viscosity were calculated from the data of Kenausis, Evers, and Kraus [172] (325.2 to 383.2 °K, 7 points, Cannon-Ubbelohde viscometer). The cubic equation expresses the data with a precision $s = 3.93$ (5.18%). No estimate of accuracy was made owing to the limited information.

Lithium Molybdate

[Refer: Table 160, p. 103, for numerical values]

The tabulated values of specific conductance for molten Li_2MoO_4 were calculated from the quadratic equation reported by Kvist and Lunden [117] for the temperature range 977 to 1223 °K. The precision is $s = 0.017$ (0.79%). No estimate of accuracy was attempted owing to the limited information.

Sodium Molybdate

[Refer: Table 161, p. 103, for numerical values]

The specific conductance of molten Na_2MoO_4 has been determined by Jaeger and Kapma [26] and Morris et al. [76]. The tabulated values were calculated from the data of Morris [76] (1024.2 to 1237.2 °K, 6 points). Using the quadratic equation for specific conductance the precision is $s = 0.00282$ (0.18%). The maximum departure between the specific conductance values of Morris [76] and Jaeger [26] is 13.6 percent (1198 °K). The uncertainty of the specific conductance values is estimated to be about 10 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.142$ (0.23%).

The density data of Jaeger and Kapma [26] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Potassium Molybdate

[Refer: Table 162, p. 104, for numerical values]

The tabulated values of density for molten K_2MO_4 were calculated using the quadratic equation (after conversion to the absolute temperature scale) given by Jaeger [25]. No attempt to estimate the accuracy was made due to insufficient information.

Sodium Tungstate

[Refer: Table 163, p. 104, for numerical values]

The tabulated values of specific conductance for molten Na_2WO_4 were calculated from the data of Jaeger and Kapma [26] (925.7 to 1774 °K, 11 points). Using the quadratic equation for specific conductance the precision is $s = 0.0064$ (0.48%).

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0352$ (0.065%).

The density data of Jaeger and Kapma [26] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

Potassium Tungstate

[Refer: Table 164, p. 104, for numerical values]

The tabulated values of density for molten K_2WO_4 were calculated using the quadratic equation (after conversion to the absolute temperature scale) given by Jaeger [25]. No attempt to estimate the accuracy was made due to insufficient information.

Sodium Thiocyanate

[Refer: Table 165, p. 105, for numerical values]

The tabulated values of specific conductance for molten NaSCN were calculated from the exponential equation reported by Ubbelohde et al. [112]. Since the upper temperature limit was not given, it was presumed that the equation is valid over the temperature range cited for the viscosity studies by the same authors [112]. Neither the precision nor the experimental data was reported.

The tabulated values of viscosity were calculated from the data of Plester, Rogers, and Ubbelohde [112] (578.0 to 634.1 °K, 9 points, Ostwald viscometer). The cubic equation expresses the data with a precision $s = 0.0128$ (0.57%). The uncertainty of the viscosity values is estimated to be about (1.5%).

Potassium Thiocyanate

[Refer: Table 166, p. 105, for numerical values]

The tabulated values of specific conductance for molten KSCN were calculated from the exponential equation given by Plester, Rogers and Ubbelohde [112]. Since the upper temperature limit was not reported, it was presumed that the equation is valid over the temperature range cited for viscosity studies by the same authors [112]. Neither the precision nor the experimental data was reported.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.00708$ (0.053%).

The tabulated values of density were calculated from the linear equation reported by Ubbelohde et al. [110]. The upper temperature limit for this density equation was not reported.

The tabulated values of viscosity were calculated from the data of Plester, Rogers, and Ubbelohde

[112] (448.8 to 523.8 °K, 13 points, Ostwald viscometer). The cubic equation expresses the data with a precision $s = 0.0899$ (1.33%). The uncertainty of the viscosity values is estimated to be about (1.5%).

Sodium Hydroxide

[Refer: Table 167, p. 105, for numerical values]

The tabulated values of specific conductance for molten NaOH were calculated from the linear equation reported by Arndt and Ploetz [37] (593.2 to 723.2 °K). Neither the precision nor an accuracy estimate can be gained owing to the limited information.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0128$ (0.020%).

The density data of Arndt and Ploetz [37] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

The tabulated values of viscosities were calculated from the data of Arndt and Ploetz [37] (623.2 to 823.2 °K, 5 points, vertical capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0359$ (1.66%). The uncertainty of the viscosity values is estimated to be about (1.5%).

Potassium Hydroxide

[Refer: Table 168, p. 106, for numerical values]

The tabulated values of specific conductance for molten KOH were calculated from the linear equation reported by Arndt and Ploetz [37] (673 to 873 °K). Neither the precision nor an accuracy estimate can be gained owing to the limited information.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.490$ (0.50%).

The density data of Arndt and Ploetz [37] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to limited information.

The tabulated values of viscosity were calculated from the data of Arndt and Ploetz [37] (673.2 to 873.2 °K, 5 points, vertical capillary viscometer). The cubic equation expresses the data with a precision $s = 0.0120$ (0.93%). The uncertainty of the viscosity values is estimated to be about (1.5%).

Potassium Dichromate

[Refer: Table 169, p. 106, for numerical values]

Two investigations of the specific conductance for molten $K_2Cr_2O_7$ have been reported [8, 110]. The tabulated values were calculated from the exponential equation for specific conductance reported by Frame, Rhodes, and Ubbelohde [110]. No precision was given. The maximum departure between the values reported by Lorenz and Kalmus [8] and Ubbelohde [110] is 15.5 percent (780 °K). The uncertainty of the specific conductance values is estimated to be about 8.0 percent.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.0144$ (0.056%).

Of the two density studies [25, 110], the data of Jaeger [25] were selected to calculate the tabulated values. The maximum departure between the densities reported by Jaeger and Ubbelohde et al. [110] is less than 0.02 percent over the temperature range of 690 to 710 °K. The uncertainty of the density values is judged to be about 0.1 percent.

Two investigations of the viscosity have been reported [8, 110]. The tabulated values were calculated from the data of Lorenz and Kalmus [8] (670.2 to 780.2 °K, 12 points, horizontal capillary viscometer). Using the cubic equation for viscosity the precision is $s = 0.0084$ (0.092%). The uncertainty of the viscosity values is estimated to be about 1.5 percent.

The viscosities of the second study (Ubbelohde et al. [110, 125c]; Ubbelohde viscometer) show increasing departure from those of Lorenz and Kalmus (e.g. −6% at 700 °K).

Sodium Metaphosphate

[Refer: Table 170, p. 107, for numerical values]

The tabulated values of viscosity for molten $NaPO_3$ were calculated from the data of Arndt [200] (916 to 1029 °K, 4 points, restricted falling ball method). The exponential equation expresses the data of Arndt with a precision $s = 63.3$ (8.62%). No estimate of accuracy was attempted owing to the limited information.

Uranyl Chloride

[Refer: Table 171, p. 107, for numerical values]

The tabulated values of specific conductance for molten UO_2Cl_2 were calculated from the linear equation given by Ochs and Strassmann [64] (85 to 953 °K). No attempt to calculate the precision was made due to lack of experimental data.

Lithium Hydride

[Refer: Table 172, p. 107, for numerical values]

The tabulated values of specific conductance for molten LiH were calculated from the data of Moe [165] (958.2 to 1027.2 °K, 5 points). Using the quadratic equation for specific conductance the precision is $s = 9.89 \cdot 10^{-3}$ (12%). The recent work of Johnson and Cairns [213] indicates a need for additional studies since the specific conductivities are high

than those of Moers [165]. An estimate of accuracy was not attempted owing to the limited information of this private communication [213].

Lithium Chlorate

[Refer: Table 173, p. 107, for numerical values]

The tabulated values of specific conductance were calculated from the data of Campbell and Williams [164, 174] (404.6 to 446.7 °K, 10 points). Using the linear equation for specific conductance the precision is $s = 1.99 \cdot 10^{-3}$ (1.1%). Since no other conductance measurements are available for comparison a critical estimate of the accuracy is not possible; however, judging the experimental techniques of Campbell and Williams, these results can be considered reliable.

The exponential equation expresses the tabulated values of equivalent conductance with a precision $s = 0.218$ (3.2%).

The density data of Campbell [164, 175] were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

The tabulated values of viscosity were calculated from the data of Campbell and Williams [175] (404.9 to 440.0 °K, 13 points, capillary viscometer). The cubic equation expresses the data with a precision $s = 0.446$ (2.17%). No estimate of accuracy was attempted owing to the limited information.

Lithium Perchlorate

[Refer: Table 174, p. 108, for numerical values]

The density data of Peterson, Ewing and Smith [177] for molten $LiClO_4$ were used to calculate the tabulated values; no estimate of accuracy was attempted owing to the limited information.

List of Tables

6. Numerical Values of Electrical Conductance, Density, and Viscosity

TABLE 1. *Lithium fluoride*

Eq wt 25.94 mp 845 °C (1118 °K)

$\kappa = -15.0389 + 3.53546 \cdot 10^{-2}T - 1.28145 \cdot 10^{-5}T^2$
$\rho = 2.3581 - 0.4902 \cdot 10^{-3}T$
$\Lambda = 320.71 \exp(-2143.3/RT)$

T	Λ	κ	ρ
1140	124.0	8.602	(1.7993)
1150	125.2	8.662	1.7944
1160	126.4	8.719	1.7895
1170	127.5	8.774	1.7846
1180	128.7	8.826	1.7797
1190	129.7	8.876	1.7748
1200	130.8	8.923	1.7699
1210	131.8	8.968	1.7650
1220	132.8	9.010	1.7601
1230	133.7	9.050	1.7552
1240	134.7	9.087	1.7502
1250	135.6	9.121	1.7454
1260	136.4	9.153	1.7404
1270	137.2	9.182	1.7355
1280	138.0	9.209	1.7306
1290	138.7	9.233	1.7257
1300	139.5	9.254	1.7208
1310	140.2	9.273	1.7159

Density: [25, 81, 83].
Conductance: [42, 83, 86, 88].
Melting point: [130].

TABLE 2. *Sodium fluoride*

Eq wt 41.99 mp 980 °C (1253 °K)

$\kappa = 1.4605 + 2.7374 \cdot 10^{-3}T$
$\rho = 2.655 - 0.54 \cdot 10^{-3}T$
$\Lambda = 344.7 \exp(-2964/RT)$

T	Λ	κ	ρ
1270	106.7	4.937	1.9438
1280	107.6	4.964	1.9382
1290	108.5	4.992	1.9326
1300	109.4	5.019	1.9270
1310	110.3	5.047	1.9214
1320	111.2	5.074	1.9158
1330	112.2	5.101	1.9102
1340	113.1	5.129	1.9046
1350	114.0	5.156	1.8990
1360	115.0	5.183	1.8934
1370	115.9	5.211	1.8878
1380	116.9	5.238	1.8822
1390	117.8	5.265	1.8766
1400	118.8	5.293	1.8710
1410	119.8	5.320	1.8654
1420	120.8	5.348	1.8598

Density: [25, 31].
Conductance: [31, 46, 67, 86, 88].
Melting point: [131].

TABLE 3. *Potassium fluoride*

Eq wt 58.10 mp 856 °C (1129 °K)

$\kappa = 9.2728 \cdot 10^{-2} + 3.0628 \cdot 10^{-3}T$
$\rho = 2.6464 - 0.6515 \cdot 10^{-3}T$
$\Lambda = 480.27 \exp(-3354.9/RT)$

T	Λ	κ	ρ
1130	108.1	3.554	1.9102
1140	109.4	3.584	1.9037
1150	110.7	3.615	1.8972
1160	112.0	3.646	1.8907
1170	113.4	3.676	1.8841
1180	114.7	3.707	1.8776
1190	116.1	3.737	1.8711
1200	117.4	3.768	1.8646
1210	118.8	3.799	1.8581
1220	120.2	3.829	1.8516
1230	121.5	3.860	1.8451
1240	122.9	3.891	1.8385
1250	124.4	3.921	1.8320
1260	125.8	3.952	1.8255
1270	127.2	3.982	1.8190
1280	128.6	4.013	1.8125
1290	130.1	4.044	1.8060

Density: [26, 81, 83].
Conductance: [26, 31, 42, 73, 83, 86, 88, 198].
Melting point: [130].

TABLE 4. *Cesium fluoride*

Eq wt 151.90 mp 681 °C (955 °K)

$\kappa = -1.47691 + 3.997 \cdot 10^{-3}T$
$\rho = 4.8985 - 1.2806 \cdot 10^{-3}T$
$\Lambda = 817.76 \exp(-4068.2/RT)$

T	Λ	κ	ρ
1010	107.9	2.560	3.605
1020	110.0	2.600	3.592
1030	112.0	2.640	3.579
1040	114.1	2.680	3.567
1050	116.3	2.720	3.554
1060	118.4	2.760	3.541
1070	120.6	2.800	3.528
1080	122.7	2.840	3.515
1090	124.9	2.880	3.503
1100	127.1	2.920	3.490
1110	129.3	2.960	3.477
1120	131.5	3.000	3.464
1130	133.8	3.040	3.451

Density: [25, 83].
Conductance: [83, 182].
Melting point: [130].

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TABLE 5. *Beryllium fluoride*

Eq wt 23.51 mp 540 °C (813 °K)

κ was obtained from a smooth curve through the experimental points of Mackenzie.

$\eta = 1.756 \cdot 10^{-7} \exp(58,566/RT)$

T	$\kappa \cdot 10^5$	$\eta \cdot 10^3$
850	.....	190,000.
870	.....	85,600.
890	.....	40,000.
910	.....	19,400.
930	.....	9,660.
950	.....	4,960.
970	0.61	2,620.
990	1.36	1,420.
1010	2.63	788.
1030	4.64	448.
1050	7.87	260.
1070	13.77	154.
1090	22.3	92.9
1110	33.9	57.1
1130	51.9	35.7
1150	75.7	22.7
1170	106.2	14.7
1190	144.7	9.61
1210	194.5	6.39
1230	.....	4.30
1250	.....	2.93

Conductance: [143].
Viscosity: [143, 225].
Melting Point: [143].

TABLE 6. *Magnesium fluoride*

Eq wt 31.16 mp 1263 °C (1536 °K

$\rho = 3.235 - 5.24 \cdot 10^{-4}T$

T	ρ
1650	2.370
1700	2.344
1750	2.318
1800	2.292
1850	2.266
1900	2.239
1950	2.213
2000	2.187
2050	2.161
2100	2.135

Density: [95].
Melting point: [130].

TABLE 7. *Calcium fluoride*

Eq wt 39.04 mp 1418 °C (1691 °

$\rho = 3.179 - 3.91 \cdot 10^{-4}T$

T	ρ
1650	2.534
1700	2.514
1750	2.495
1800	2.475
1850	2.456
1900	2.436
1950	2.417
2000	2.397
2050	2.377
2100	2.358
2150	2.338
2200	2.319
2250	2.299
2300	2.280

Density: [95, 197].
Melting point: [130].

TABLE 8. *Strontium fluoride*

Eq wt 62.81 mp 1400 °C (1673 °K)

$\rho = 4.784 - 7.51 \cdot 10^{-4}T$

T	ρ
1750	3.470
1800	3.432
1850	3.395
1900	3.357
1950	3.320
2000	3.282
2050	3.244
2100	3.207
2150	3.169
2200	3.132

Density: [95].
Melting point: [130].

TABLE 9. *Barium fluoride*

Eq wt 87.68 mp 1320 °C (1593 °K)

$\rho = 5.775 - 9.99 \cdot 10^{-4}T$

T	ρ
1600	4.177
1650	4.127
1700	4.077
1750	4.027
1800	3.977
1850	3.927
1900	3.877
1950	3.827
2000	3.777

Density: [95].
Melting point: [130].

TABLE 10. *Lanthanum (III) fluoride*

Eq wt 65.30 mp < 1477 °C (< 1750 °K)

$\rho = 5.793 - 6.82 \cdot 10^{-4}T$

T	ρ
1750	4.600
1800	4.565
1850	4.531
1900	4.497
1950	4.463
2000	4.429
2050	4.395
2100	4.361
2150	4.327
2200	4.293
2250	4.259
2300	4.224
2350	4.190
2400	4.156
2450	4.122

Density: [95].
Melting point: [95].

TABLE 11. *Cerium (III) fluoride*

Eq wt 65.70 mp 1460 °C (1733 °K)

$\rho = 6.253 - 9.36 \cdot 10^{-4}T$

T	ρ
1700	4.662
1750	4.615
1800	4.568
1850	4.521
1900	4.475
1950	4.428
2000	4.381
2050	4.334
2100	4.287
2150	4.241
2200	4.194

Density: [95].
Melting point: [130].

TABLE 12. *Thorium (IV) fluoride*

Eq wt 77.03 mp 1110 °C (1383 °K)

$\rho = 7.108 - 7.590 \cdot 10^{-4}T$

T	ρ
1390	6.0530
1400	6.0454
1420	6.0302
1440	6.0150
1460	5.9999
1480	5.9847
1500	5.9695
1520	5.9543
1540	5.9391
1560	5.9240
1580	5.9088
1600	5.8936
1620	5.8784
1640	5.8632

Density: [167].
Melting point: [167].

TABLE 13. *Uranium (IV) fluoride*

Eq wt 78.52 mp 1036 °C (1309 °K)

$\rho = 7.784 - 9.920 \cdot 10^{-4}T$

T	ρ
1310	6.4845
1320	6.4746
1340	6.4547
1360	6.4349
1380	6.4150
1400	6.3952
1420	6.3754
1440	6.3555
1460	6.3357
1480	6.3158
1500	6.2960
1520	6.2762
1540	6.2563
1560	6.2365
1580	6.2166
1600	6.1968
1620	6.1770

Density: [167].
Melting point: [167].

TABLE 14. *Manganese (II) fluoride*

Eq wt 46.46 mp 856 °C (1129 °K)

$\kappa = 4.0 \cdot 10^{-3}T$

T	κ
1200	4.8
1250	5.0
1300	5.2

Conductance: [86].
Melting point: [130].

TABLE 15. *Copper (II) fluoride*

Eq wt 50.77 mp 856 °C (1129 °

$\kappa = 0.93 + 1.0 \cdot 10^{-3}T$

T	κ
1270	2.2
1320	2.3
1370	2.4

Conductance: [86].
Melting point: [130].

TABLE 16. *Silver fluoride*

Eq wt 126.88 mp 435 °C (708 °K)

$\kappa = -5.2 + 12.0 \cdot 10^{-3}T$

T	κ
800	4.4
850	5.0
900	5.6

Conductance: [86].
Melting point: [130].

TABLE 17. *Zinc fluoride*

Eq wt 51.69 mp 872 °C (1145 °K)

$\kappa = -3.75 + 6.0 \cdot 10^{-3}T$

T	κ
1150	3.15
1200	3.45

Conductance: [86].
Melting point: [130].

TABLE 18. *Lead (II) fluoride*

Eq wt 122.60 mp 822 °C (1095 °K)

$\kappa = 0.7 + 4.0 \cdot 10^{-3}T$

T	κ
1150	5.3
1200	5.5
1250	5.7

Conductance: [86].
Melting point: [130].

TABLE 19. *Lithium chloride*

Eq wt 42.4 mp 610 °C (883 °K)

$\kappa = -2.0647 + 12.1271 \cdot 10^{-3}T - 3.7641 \cdot 10^{-6}T^2$
$\rho = 1.8842 - 0.4328 \cdot 10^{-3}T$
$\Lambda = 508.2 \exp(-2015/RT)$
$\eta = 3.306 \cdot 10^{-2} \exp(7007/RT)$

T	Λ	κ	ρ	η	T	η
					1060	0.92
910	166.8_3	5.864	1.4904	1.59	1070	.89
920	168.8_1	5.916_5	1.4860	1.53	1080	.87
930	170.7_8	5.968	1.4817	1.47		
940	172.7_4	6.019	1.4774	1.41		
950	174.6_9	6.069	1.4730	1.35		
960	176.6_3	6.118_5	1.4687	1.30		
970	178.5_6	6.167	1.4644	1.25		
980	180.4_8	6.215	1.4601	1.21		
990	182.3_9	6.262	1.4557	1.16		
1000	184.2_9	6.308_5	1.4514	1.12		
1010	186.1_7	6.354	1.4471	1.09		
1020	188.0_5	6.399	1.4427	1.05		
1030	189.9_2	6.443	1.4384	1.01		
1040	191.7_7	6.486	1.4341	0.98		
1050	193.6_1	6.529	1.4298	.95		

Density: [3, 25, 55, 62, 66, 79, 81].
Conductance: [33, 42, 44, 45, 55, 62, 66, 79, 85].
Viscosity: [12, 45, 47, 121].
Melting point: [130].

TABLE 20. *Sodium chloride*

Eq wt 58.45 mp 800 °C (1073 °K)

$\kappa = -2.4975 + 8.0431 \cdot 10^{-3}T - 2.2227 \cdot 10^{-6}T^2$
$\rho = 2.1393 - 0.5430 \cdot 10^{-3}T$
$\Lambda = 544.6 \exp(-2990/RT)$
$\eta = 81.9007 - 0.185538\ T + 1.42786 \cdot 10^{-3}T^2 - 3.70073 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
1080	135.4	3.596	1.553	.....
1090	137.1	3.629	1.547	1.38
1100	138.8	3.660	1.542	1.32
1110	140.4	3.692	1.537	1.27
1120	142.1	3.723	1.531	1.22
1130	143.8	3.753	1.526	1.17
1140	145.4	3.783	1.520	1.12
1150	147.1	3.813	1.515	1.08
1160	148.8	3.842	1.509	1.04
1170	150.4	3.870	1.504	1.01
1180	152.1	3.898	1.499	0.98
1190	153.7	3.926	1.493	.95
1200	155.3	3.954	1.488	.92
1210	157.0	3.980	1.483	.89
1220	158.6	4.007	1.477	.87
1230	160.2	4.033	1.471	.84
1240	161.8	4.058	1.466	.82
1250	163.4	4.083	1.461	.....
1260	165.0	4.108	1.455	.....
1270	166.6	4.132	1.450	.....
1280	168.2	4.156	1.444	.....
1290	169.8	4.179	1.439	.....

Density: [3, 11, 25, 55, 62, 66, 79, 80, 81, 96, 126].

Conductance: [2, 4, 10, 27, 33, 42, 49, 52, 55, 62, 63, 71, 79, 82, 85, 199].

Viscosity: [12, 38, 57, 121].

Melting point: [130].

TABLE 21. *Potassium chloride*

Eq wt 74.55 mp 770 °C (1043 °K)

$\kappa = -3.99005 + 9.0222 \cdot 10^{-3}T - 3.000 \cdot 10^{-6}T^2$
$\rho = 2.1359 - 0.5831 \cdot 10^{-3}T$
$\Lambda = 548.0 \exp(-3415.2/RT)$
$\eta = 55.5632 - 0.127847T + 9.99580 \cdot 10^{-5}T^2 - 2.62035 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
1060	108.2	2.203	1.5178	1.14_9
1070	109.9	2.229	1.5120	1.10_8
1080	111.6	2.255	1.5062	1.07_1
1090	113.3	2.280	1.5003	1.03_6
1100	114.9	2.304	1.4945	1.00_4
1110	116.6	2.328	1.4887	0.97_5
1120	118.2	2.352	1.4828	$.94_8$
1130	119.8	2.374	1.4770	$.92_4$
1140	121.4	2.396	1.4712	$.90_1$
1150	123.0	2.418	1.4653	$.88_1$
1160	124.6	2.439	1.4595	$.86_3$
1170	126.1	2.459	1.4537	$.84_7$
1180	127.6	2.479	1.4478	$.83_2$
1190	129.1	2.498	1.4420	$.81_9$
1200	130.6	2.517	1.4362	$.80_7$

Density: [3, 11, 26, 62, 66, 70, 79, 80, 81, 126, 178].

Conductance: [2, 4, 10, 26, 27, 42, 44, 49, 50, 55, 62, 63, 66, 79, 85, 123, 124, 125, 129].

Viscosity: [12, 102, 111].

Melting point: [130].

TABLE 22. *Rubidium chloride*

Eq wt 120.94 mp 715 °C (988 °K)

$\kappa = -3.6290 + 7.3405 \cdot 10^{-3}T - 2.1918 \cdot 10^{-6}T^2$
$\rho = 3.1210 - 0.8832 \cdot 10^{-3}T$
$\Lambda = 754.1 \exp(-4401/RT)$
$\eta = 40.8082 - 9.61807 \cdot 10^{-2}T + 7.83918 \cdot 10^{-5}T^2 - 2.16855 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
990	80.2	1.490	2.2466	.....
1000	82.1	1.520	2.2378	.....
1010	84.0	1.549	2.2290	1.29
1020	86.0	1.578	2.2201	1.25
1030	87.9	1.606	2.2113	1.21
1040	89.8	1.634	2.2025	1.18
1050	91.6	1.662	2.1936	1.14
1060	93.5	1.689	2.1848	1.11
1070	95.4	1.716	2.1760	1.08
1080	97.2	1.742	2.1671	1.05
1090	99.1	1.768	2.1583	1.03
1100	100.9	1.793	2.1495	1.00
1110	102.7	1.818	2.1406	0.98
1120	104.6	1.843	2.1318	.95
1130	106.4	1.867	2.1230	.93
1140	108.2	1.891	2.1142	.91
1150	119.9	1.914	2.1053	.....
1160	111.7	1.937	2.0965	.....
1170	113.5	1.959	2.0877	.....
1180	115.2	1.981	2.0788	.....
1190	117.0	2.002	2.0700	.....
1200	118.7	2.023	2.0612	.....
1210				
1220				

Density: [25, 35, 36, 82].
Conductance: [33, 82, 129].
Viscosity: [109, 121].
Melting point: [131].

TABLE 23. *Cesium chloride*

Eq wt 168.37 mp 645 °C (918 °K)

$\kappa = -3.2034 + 6.0802 \cdot 10^{-3}T - 1.5216 \cdot 10^{-6}T^2$
$\rho = 3.7692 - 1.065 \cdot 10^{-3}T$
$\Lambda = 1102 \exp(-5110/RT)$
$\eta = 30.0396 - 7.09298 \cdot 10^{-2}T + 5.80038 \cdot 10^{-5}T^2 - 1.60636 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
940	71.0	1.167	2.7681	1.28
950	73.2_5	1.200	2.7575	1.23
960	75.4_5	1.231	2.7468	1.19
970	77.7	1.263	2.7362	1.15
980	79.9_5	1.294	2.7255	1.12
990	82.1_5	1.325	2.7149	1.08
1000	84.4	1.355	2.7042	1.05
1010	86.6	1.385	2.6936	1.02
1020	88.8	1.415	2.6829	0.99
1030	91.0_5	1.445	2.6723	.97
1040	93.2_5	1.474	2.6616	.94
1050	95.5	1.503	2.6510	.82
1060	97.7	1.532	2.6403	.90
1070	99.9	1.560	2.6297	.88
1080	100.2	1.588	2.6190	.86
1090	104.3	1.616	2.6084	.84
1100	106.5	1.644	2.5977	.82
1110	108.7	1.671	2.5871	.80
1120	110.9	1.698	2.5764	.....
1130	113.2	1.724	2.5658	.....
1140	115.3	1.751	2.5551	.....
1150	117.6	1.777	2.5445	.....
1160	119.8	1.802	2.5338	.....
1170	122.0	1.828	2.5232	.....

Density: [25, 59, 80, 81, 82].
Conductance: [33, 82, 129, 199].
Viscosity: [109, 121].
Melting point: [130].

TABLE 24. *Beryllium (II) chloride*

Eq wt 39.96 mp 440 °C (713 °K)

$\kappa = -0.075392 + 1.0576 \cdot 10^{-4} T$
$\rho = 2.276 - 1.10 \cdot 10^{-3} T$
$\Lambda = 5.3567 \cdot 10^{13} \exp(-50479/RT)$

T	$\Lambda \cdot 10^2$	$\kappa \cdot 10^3$	ρ
720	2.03	0.755	1.484
730	4.92	1.81	1.473
740	7.84	2.87	1.462
750	10.8	3.93	1.451
760	13.8	4.99	1.440

Density: [36].
Conductance: [32, 186].
Melting Point: [131].

TABLE 25. *Magnesium chloride*

Eq wt 47.62 mp 714 °C (987 °K)

$\kappa = -0.6049 + 1.352 \cdot 10^{-3} T + 0.2911 \cdot 10^{-6} T^2$
$\rho = 1.976 - 0.302 \cdot 10^{-3} T$
$\Lambda = 263.7 \exp(-4363/RT)$

T	Λ	κ	ρ
1000	(29.51)	1.038	(1.675)
1020	30.75	1.077	1.668
1040	31.98	1.116	1.662
1060	33.21	1.155	1.656
1080	34.49	1.195	1.650
1100	35.77	1.235	1.644
1120	37.04	1.274	1.638
1140	38.37	1.315	1.632
1160	39.68	1.355	1.626
1180	(41.04)	1.396	(1.620)
1200	(42.40)	1.437	(1.614)
1220	(43.77)	1.478	(1.608)
1240	(45.15)	1.519	(1.602)

Density: [36, 63, 91, 113].
Conductance: [35, 63, 94].
Melting Point: [130].

TABLE 26. *Calcium chloride*

Eq wt 55.49 mp 782 °C (1055 °K)

$\kappa = 19.628 \exp(-4749/RT)$
$\rho = 2.5261 - 0.4225 \cdot 10^{-3} T$
$\Lambda = 675.3 \exp(-5285/RT)$
$\eta = 619.541 - 1.54489 \quad T + 1.29259 \cdot 10^{-3} T^2 - 3.61856 \cdot 10^{-7} T^3$

T	Λ	κ	ρ	η
1060	54.9_8	2.059	2.0783	3.34
1070	56.2_6	2.103	2.0740	3.11
1080	57.5_5	2.147	2.0698	2.90
1090	58.8_5	2.191	2.0656	2.72
1100	60.1_6	2.235	2.0614	2.57
1110	61.4_8	2.279	2.0571	2.43
1120	62.8_0	2.323	2.0529	2.31
1130	64.1_3	2.368	2.0487	2.20
1140	65.4_6	2.412	2.0445	2.11
1150	66.8_1	2.456	2.0402	2.03
1160	68.1_6	2.501	2.0360	1.96
1170	69.5_1	2.545	2.0318	1.89
1180	70.8_7	2.590	2.0276	1.83
1190	72.2_4	2.634	2.0233	1.77
1200	73.6_1	2.679	2.0191	1.72
1210	74.9_9	2.723	2.0149	1.66
1220	76.3_8	2.767	2.0107	1.59
1230	77.7_6	2.812	2.0064	1.52
1240	.....	.....	.....	1.44

Density: [11, 17, 63, 83].
Conductance: [2, 4, 11, 35, 42, 50, 71, 83, 85, 94].
Viscosity: [47, 109].
Melting Point: [130].

TABLE 27. *Strontium chloride*

Eq wt 79.27 mp 875 °C (1148 °K)

$\kappa = 17.792 \exp(-4987/RT)$
$\rho = 3.3896 - 0.5781 \cdot 10^{-3} T$
$\Lambda = 689.6 \exp(-5646/RT)$
$\eta = 4.401 \cdot 10^{-4} \exp(20655/RT)$

T	Λ	κ	ρ	η
1160	.....	.....	.....	3.43
1170	60.85	2.082_5	2.7132	3.18
1180	62.09	2.120_8	2.7074	2.95
1190	63.35	2.159_0	2.7017	2.74
1200	64.61	2.197_3	2.6959	2.54
1210	65.88	2.235_6	2.6901	2.37
1220	67.15	2.274_0	2.6843	2.21
1230	68.43	2.312_3	2.6785	2.06
1240	69.72	2.350_7	2.6728	1.92
1250	71.01	2.389_1	8.6670	1.80
1260	72.31	2.427_4	2.6612	.....
1270	73.61	2.465_8	2.6554	.....
1280	74.92	2.504_2	2.6496	.....
1290	76.23	2.542_5	2.6439	.....
1300	77.55	2.580_9	2.6381	.....
1310	78.88	2.619_2	2.6323	.....

Density: [11, 81, 83, 91].
Conductance: [4, 83, 94].
Viscosity: [109].
Melting Point: [130].

TABLE 28. *Barium chloride*

Eq wt 104.14 mp 962 °C (1235 °K)

$\kappa = 17.479 \exp(-5274/RT)$
$\rho = 4.0152 - 0.6813 \cdot 10^{-3} T$
$\Lambda = 772.5 \exp(-6004/RT)$
$\eta = 1.643 \cdot 10^{-3} \exp(20029/RT)$

T	Λ	κ	ρ	η
1240	67.5_8	2.058	3.1704	.....
1250	68.9_0	2.093	3.1636	.....
1260	70.2_2	2.129	3.1568	.....
1270	71.5_5	2.164	3.1499	4.60
1280	72.8_9	2.200	3.1431	4.32
1290	74.2_3	2.236	3.1363	4.07
1300	75.5_8	2.271	3.1295	3.83
1310	76.9_3	2.307	3.1227	3.61
1320	78.2_9	2.343	3.1159	.....
1330	79.6_6	2.378	3.1091	.....
1340	81.0_3	2.414	3.1023	.....
1350	82.4_1	2.450	3.0954	.....
1360	83.8_0	2.485	3.0886	.....

Density: [11, 63, 70, 81, 83].
Conductance: [4, 63, 83, 85, 94].
Viscosity: [109, 210].
Melting Point: [130].

TABLE 29. *Scandium (III) chloride*

Eq wt 50.49 mp 939 °C (1212 °K)

$\kappa = -2.890 + 2.796 \cdot 10^{-3} T$

T °K	κ	ρ
1213	.....	1.67
1223	0.53	.....
1273	.67	1.63

Density: [36].
Conductance: [30].
Melting Point: [131].

TABLE 30. *Yttrium (III) chloride*

Eq wt 65.09 mp 700 °C (973 °K)

$\kappa = -3.7071 + 5.9576 \cdot 10^{-3}T - 1.8199 \cdot 10^{-6}T^2$
$\rho = 3.007 - 0.50 \cdot 10^{-3}T$
$\Lambda = 959.2 \exp(-8827/RT)$

T	Λ	κ	ρ
980	9.9	0.384	2.517
990	10.5_5	.407	2.512
1000	11.2	.431	2.507
1010	11.8	.454	2.502
1020	12.4	.476	2.497
1030	13.0	.498	2.492
1040	13.6	.520	2.487
1050	14.2	.542	2.482
1060	14.8	.563	2.477
1070	15.4	.584	2.472
1080	15.9_5	.604	2.467
1090	16.5	.624	2.462
1100	17.0_5	.644	2.457
1110	17.6	.664	2.452
1120	18.1_5	.683	2.447
1130	(18.7)	.701	(2.442)
1140	(19.2)	.719	(2.437)
1150	(19.7_5)	.737	(2.432)
1160	(20.2_5)	.755	(2.427)

Density: [36].
Conductance: [35].
Melting Point: [130].

TABLE 31. *Lanthanum (III) chloride*

Eq wt 81.76 mp 870 °C (1143 °K)

$\kappa = -13.538 + 22.487 \cdot 10^{-3}T - 8.167 \cdot 10^{-6}T^2$
$\rho = 4.0895 - 0.7774 \cdot 10^{-3}T$
$\Lambda = 469.4 \exp(-5678/RT)$
$\eta = 2.061 \cdot 10^{-2} \exp(13049/RT)$

T	Λ	κ	ρ	η
1140	37.86	1.483	3.2033	.....
1150	38.92	1.521	3.1955	.....
1160	39.95	1.557	3.1877	.....
1170	40.93	1.592	3.1799	.....
1180	41.88	1.625	3.1722	.....
1190	42.79	1.656	3.1644	5.14
1200	43.67	1.686	3.1566	4.91
1210	44.50	1.714	3.1488	4.69
1220	45.30	1.740	3.1411	4.49
1230	46.06	1.765	3.1333	4.29
1240	46.78	1.788	3.1255	4.11
1250	47.46	1.810	3.1178	3.94
1260	48.10	1.830	3.1100	3.78

Density: [36, 83].
Conductance: [35, 83, 118].
Viscosity: [136].
Melting Point: [130].

TABLE 32. *Cerium (III) chloride*

Eq wt 82.17 mp 822 °C (1095 °K)

$\kappa = -10.03815 + 1.707017 \cdot 10^{-2}\, T - 6.301668 \cdot 10^{-6}\, T^2$
$\rho = 4.248 - 0.920 \cdot 10^{-3}\, T$
$\Lambda = 460.7 \exp(-6078.0/RT)$

T	Λ	κ	ρ
1100	28.3	1.114	3.236
1110	29.2	1.145	3.227
1120	30.0	1.176	3.218
1130	30.8	1.204	3.208
1140	31.6	1.232	3.199
1150	32.4	1.259	3.190
1160	33.2	1.284	3.181
1170	33.9	1.308	3.172
1180	34.6	1.330	3.162
1190	35.2	1.352	3.153
1200	35.8	1.372	3.144
1210	36.4	1.390	3.135

Density: [99].
Conductance: [99, 119].
Melting Point: [130].

TABLE 33. *Praseodymium (III) chloride*

Eq wt 82.43 mp 823 °C (1096 °K)

$\kappa = 36.17 \exp(-8258/RT)$

T	κ
1100	0.82_7
1110	$.85_6$
1120	$.88_5$
1130	$.91_4$
1140	$.94_4$
1150	$.97_5$
1160	1.00_5
1170	1.03_7
1180	1.06_8
1190	1.10_1
1200	1.13_3
1210	1.16_6
1220	1.19_9
1230	1.23_3
1240	1.26_7

Conductance: [32, 120].
Melting Point: [130].

TABLE 34. *Neodymium (III) chloride*

Eq wt 83.55 mp 760 °C (1033 °K)

$\kappa = -2.018 + 2.527 \cdot 10^{-3} T$

T	κ
1050	0.635
1060	.661
1070	.686
1080	.712
1090	.736
1100	.762
1110	.787
1120	.812
1130	.838
1140	.863
1150	.888
1160	.913
1170	.939

Conductance: [32, 118].
Melting Point: [130].

TABLE 35. *Gadolinium (III) chloride*

Eq wt 87.7 mp 602 °C (875 °K)

$\kappa = 22.247 \exp(-7300.6/RT)$

T	κ
900	0.375
910	.392
920	.410
930	.428
940	.446
950	.465
960	.484
970	.504
980	.524

Conductance: [171].
Melting Point: [170].

TABLE 36. *Dysprosium (III) chloride*

Eq wt 89.61 mp 647 °C (910 °K)

$\kappa = -1.37966 + 1.8417 \cdot 10^{-3} T$

T	κ
950	0.370
960	.388
970	.407
980	.425
990	.444
1000	.462
1010	.480

Conductance: [171].
Melting Point: [170].

TABLE 37. *Holmium (III) chloride*

Eq wt 90.45 mp 720 °C (99

$\kappa = -1.4081 + 1.79896 \cdot 10^{-3} T$

T	κ
1020	0.432
1030	.450
1040	.468
1050	.486
1060	.504
1070	.522
1080	.540
1090	.558
1100	.576

Conductance: [171].
Melting Point: [170].

TABLE 38. *Erbium (III) chloride*

Eq wt 91.22 mp 776 °C (104

$\kappa = -1.31353 + 1.6584 \cdot 10^{-3} T$

T	κ
1070	0.461
1080	.478
1090	.494
1100	.511
1110	.527
1120	.544

Conductance: [171].
Melting Point: [170].

TABLE 39. *Thorium (IV) chloride*

Eq wt 93.49 mp 770 °C (1043 °K)

$\kappa = -13.1887 + 22.5705 \cdot 10^{-3}T - 9.0973 \cdot 10^{-6}T^2$
$\rho = 3.3_2$ (1090 °K − 1190 °K)
$\Lambda = 395.0 \exp(-6764/RT)$

T	Λ	κ	ρ
1090	17.0	0.60	3.3_2
1100	17.8	.63	3.3_2
1110	18.5	.66	3.3_2
1120	19.1	.69	3.3_2
1130	19.7	.70	3.3_2
1140	20.2	.72	3.3_2
1150	20.7	.74	3.3_2
1160	21.2	.75	3.3_2
1170	21.6	.77	3.3_2
1180	21.9	.78	3.3_2
1190	22.2	.79	3.3_2

Density: [36].
Conductance: [32].
Melting Point: [130].

TABLE 40. *Uranium (IV) chloride*

Eq wt 94.98 mp < 570 °C (< 843 °K)

$\kappa = -2.023 + 2.803 \cdot 10^{-3}T$

T	κ
850	0.360
860	.388
870	.416
880	.444
890	.472

Conductance: [32].
Melting Point: [32].

TABLE 41. *Manganese (II) chloride*

Eq wt 62.92 mp 650 °C (923 °K)

$\kappa = 1.572640 - 1.669355 \cdot 10^{-3}T + 1.698935 \cdot 10^{-6}T^2$
$\rho = 2.75701 - 4.3766 \cdot 10^{-4}T$
$\Lambda = 169.53 \exp(-2694.3/RT)$

T	Λ	κ	ρ
930	39.88	1.490	2.350
940	40.36	1.505	2.346
950	40.85	1.520	2.341
960	41.35	1.536	2.337
970	41.86	1.552	2.332
980	42.39	1.569	2.328
990	42.92	1.585	2.324
1000	43.47	1.602	2.319
1010	44.02	1.620	2.315
1020	44.59	1.638	2.311
1030	45.17	1.656	2.306
1040	45.76	1.674	2.302
1050	46.37	1.693	2.297
1060	46.98	1.712	2.293
1070	47.60	1.732	2.289
1080	48.24	1.752	2.284
1090	48.89	1.772	2.280
1100	49.55	1.792	2.276
1110	50.2	1.813	2.271
1120	50.9	1.834	2.267
1130	51.6	1.856	2.262

Conductance: [85, 192].
Density: [192].
Melting Point: [130].

TABLE 42. *Titanium (IV) chloride*

Eq wt 47.43 mp − 23 °C (250 °K)

$\eta = 4.952 \cdot 10^{-2} \exp(1643/RT)$

T	η
300	0.779
310	.713
320	.656
330	.607

Viscosity: [204].
Melting Point: [130].

TABLE 43. *Copper (I) chloride*

Eq wt 99.00 mp 422 °C (695 °K)

$\kappa = -1.290779 + 1.2137306 \cdot 10^{-2}T - 9.126581 \cdot 10^{-6}T^2 + 2.196380 \cdot 10^{-9}T^3$

$\rho = 4.226 - 0.76 \cdot 10^{-3}T$

$\Lambda = 153.6 \exp(-650.4/RT)$

$\eta = 50.4565 - 0.140175\ T + 1.37677 \cdot 10^{-4}T^2 - 4.66667 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
740	96.83	3.583	3.664	.....
760	98.40	3.626	3.648	.....
780	99.89	3.666	3.633	.....
800	101.3	3.703	3.618	2.54
810	102.0	3.720	3.610	2.44
820	102.7	3.736	3.603	2.36
830	103.3	3.752	3.595	2.27
840	103.9	3.767	3.588	2.19
850	104.6	3.781	3.580	2.12
860	105.1	3.794	3.572	2.05
870	105.7	3.807	3.565	1.98
880	(106.3)	3.819	(3.557)	1.92
890	(106.8)	3.831	(3.550)	1.86
900	(107.4)	3.841	(3.542)	1.80
910	(107.9)	3.852	(3.534)	1.74
920	(108.4)	3.861	(3.527)	1.69
930	(108.9)	3.870	(3.519)	1.63
940	(109.3)	3.878	(3.512)	1.58
950	(109.8)	3.886	(3.504)	1.53
960	(110.2)	3.893	(3.496)	1.48
970	(110.7)	3.900	(3.489)	1.44
1000	(111.9)	3.916	(3.466)	.....
1050	(113.6)	3.934	(3.428)	.....
1100	(115.1)	3.940	(3.390)	.....
1150	(116.3)	3.938	(3.352)	.....
1200	(117.3)	3.927	(3.314)	.....
1250	(118.2)	3.910	(3.276)	.....
1300	(118.9)	3.889	(3.238)	.....
1350	(119.6)	3.865	(3.200)	.....
1400	(120.2)	3.840	(3.162)	.....
1430	(120.6)	3.825	(3.139)	.....

Density: [36, 212].
Conductance: [33, 35, 85, 189, 212].
Viscosity: [47].
Melting Point: [131].

TABLE 44. *Silver chloride*

Eq wt 143.34 mp 455 °C (728 °K)

$\kappa = -1.578 + 1.0697 \cdot 10^{-2}T - 4.51 \cdot 10^{-6}T^2$

$\rho = 5.505 - 8.7 \cdot 10^{-4}T$

$\Lambda = 268.22 \exp(-1252.3/RT)$

$\eta = 6.91305 - 4.47411 \cdot 10^{-3}T - 6.49368 \cdot 10^{-6}T^2 + 5.41584 \cdot 10^{-9}T^3$

T	Λ	κ	ρ	η
730	.....	.....	.....	2.29
740	114.1	3.868	4.861	2.24
750	115.4	3.908	4.852	2.19
760	116.8	3.947	4.844	2.14
770	118.1	3.985	4.835	2.09
780	119.4	4.022	4.826	2.04
790	120.7	4.058	4.818	2.00
800	122.0	4.093	4.809	1.95
810	123.3	4.128	4.800	1.91
820	125.5	4.161	4.792	1.86
830	125.7	4.194	4.783	1.82
840	126.9	4.225	4.774	1.78
850	128.0	4.256	4.765	1.74
860	129.1	4.286	4.757	1.71
870	130.3	4.315	4.748	1.67
880	131.3	4.343	4.739	1.64
890	132.4	4.370	4.731	1.61
900	133.5	4.396	4.722	1.57
910	134.5	4.422	4.713	1.55
920	135.5	4.446	4.705	1.52
930	136.4	4.470	4.696	1.49
940	137.4	4.492	4.687	1.47
950	138.3	4.514	4.678	1.45
960	139.2	4.535	4.670	1.43
970	140.1	4.555	4.661	1.41
980	140.9	4.574	4.652	.....
1000	142.5	4.609	4.635	.....
1020	144.1	4.641	4.618	.....

Density: [22, 54, 60, 81, 166, 212].
Conductance: [1, 10, 21, 23, 60, 72, 100, 166, 212].
Viscosity: [24, 72].
Melting Point: [130].

TABLE 45. *Zinc chloride*

Eq wt 68.15 mp 275 °C (548 °K)

$\kappa = 0.423433 - 1.53761 \cdot 10^{-3}T + 1.39393 \cdot 10^{-6}T^2$ (593.3–672.5 °K)

$\kappa = 1.51396 - 4.77073 \cdot 10^{-3}T + 3.79161 \cdot 10^{-6}T^2$ (672.5–824.7 °K)

$\kappa = 1.3084 - 4.33201 \cdot 10^{-3}T + 3.56250 \cdot 10^{-6}T^2$ (824.7–969.7 °K)

$\rho = 2.7831 - 4.48 \cdot 10^{-4}T$

$\Lambda = 5.3419 \cdot 10^{7} \exp(-24343/RT)$ (593.3–672.5 °K)

$\Lambda = 4.8591 \cdot 10^{4} \exp(-15153/RT)$ (672.5–824.7 °K)

$\Lambda = 6096.5 \exp(-11785/RT)$ (824.7–969.7 °K)

η Obtained from smooth curve through experimental points of Mackenzie and Murphy, since fit to both exponential and cubic equations is poor.

T	Λ	κ	ρ	η
590	0.0398	0.00147	2.519	.....
600	.0727	.00268	2.514	2900
610	.113	.00417	2.510	1760
620	.162	.00594	2.505	1100
630	.218	.00799	2.501	810
640	.282	.0103	2.496	635
650	.353	.0129	2.492	515
660	.433	.0158	2.487	424
670	.521	.01897	2.483	360
680	.635	.0231	2.478	.....
700	.892	.0323	2.469	.....
720	1.235	.0446	2.461	.....
740	1.665	.0599	2.452	.....
760	2.183	.0782	2.443	.....
780	2.789	.0996	2.434	.....
800	3.485	.1240	2.425	.....
820	(4.272)	.1514	(2.416)	.....
840	(5.189)	.1832	(2.407)	.....
860	(6.188)	.2177	(2.398)	.....
880	(7.277)	.2551	(2.389)	.....
900	(8.455)	.2953	(2.380)	.....
920	(9.724)	.3383	(2.371)	.....
940	(11.08)	.3842	(2.362)	.....
960	(12.54)	.4329	(2.353)	.....

Density: [36, 40, 56, 87, 91, 98, 113].
Conductance: [33, 87, 94, 98, 189].
Viscosity: [98].
Melting Point: [130].

TABLE 46. *Cadmium chloride*

Eq wt 91.66 mp 568 °C (841 °K)

$\kappa = -1.9571 + 6.1834 \cdot 10^{-3}T - 1.9576 \cdot 10^{-6}T^2$

$\rho = 4.078 - 0.82 \cdot 10^{-3}T$

$\Lambda = 224.4 \exp(-2499/RT)$

$\eta = 24.05 \cdot 10^{-2} \exp(3912/RT)$

T	Λ	κ	ρ	η
840	50.19	1.8557	3.389	.....
850	51.09	1.8844	3.381	.....
860	51.98	1.9128	3.373	.....
870	52.87	1.9408	3.365	2.31
880	53.75	1.9683	3.356	2.25
890	54.63	1.9955	3.348	2.20
900	55.50	2.0223	3.340	2.14
910	56.36	2.0487	3.332	2.09
920	57.22	2.0747	3.324	2.04
930	58.06	2.1003	3.315	2.00
940	58.91	2.1256	3.307	1.95
950	59.75	2.1504	3.299	1.91
960	60.58	2.1748	3.291	1.87
970	61.40	2.1989	3.283	.....
980	62.22	2.2226	3.274	.....
990	63.02	2.2458	3.266	.....
1000	63.83	2.2687	3.258	.....
1010	64.62	2.2912	3.250	.....
1020	65.41	2.3133	3.242	.....
1030	66.19	2.3350	3.233	.....
1040	66.97	2.3563	3.225	.....
1050	67.73	2.3772	3.217	.....
1060	68.49	2.3977	3.209	.....
1070	69.24	2.4179	3.201	.....

Density: [15, 54, 66].
Conductance: [19, 27, 33, 51, 66, 94].
Viscosity: [47, 53].
Melting Point: [130].

TABLE 47. *Mercury (I) chloride*

Eq wt 236.07 mp 306 °C (579 °K)

$\kappa = 5.255 \exp(-2644/RT)$
$\rho = 9.0928 - 4.0 \cdot 10^{-3}T$
$\Lambda = 353.5 \exp(-3469/RT)$

T	Λ	κ	ρ
800	39.88	0.995	5.89
810	40.96	1.015	5.85
820	42.06	1.035	5.81

Density: [36].
Conductance: [35].
Melting Point: [131].

TABLE 48. *Mercury (II) chloride*

Eq wt 135.76 mp 277 °C (550 °K)

$\kappa = 2.060513 \cdot 10^{-3} - 1.061468 \cdot 10^{-5}T + 1.793902 \cdot 10^{-8}T^2 - 9.720443 \cdot 10^{-12}T^3$
$\rho = 5.9391 - 2.8624 \cdot 10^{-3}T$
$\Lambda = 0.1775 \exp(-5626.7/RT)$
$\eta = -4341.632 + 22.96096\ T - 4.043872 \cdot 10^{-2}T^2 + 2.372690 \cdot 10^{-5}T^3$

T	$\Lambda \cdot 10^3$	$\kappa \cdot 10^5$	ρ	η
550	0.9876	3.175	4.3648	.....
560	1.093	3.490	4.336	1.74
570	1.209	3.837	4.306	1.63
580	1.336	4.211	4.279	1.54
590	1.471	4.605	4.250	.....
600	1.612	5.014	4.222	.....
610	(1.758)	5.431	(4.193)	.....
620	(1.907)	5.852	(4.164)	.....
630	(2.058)	6.270	(4.136)	.....
640	(2.207)	6.678	(4.107)	.....
650	(2.354)	7.073	(4.079)	.....
660	(2.496)	7.447	(4.050)	.....
670	(2.632)	7.795	(4.021)	.....
680	(2.758)	8.111	(3.993)	.....
690	(2.873)	8.390	(3.964)	.....
700	(2.975)	8.624	(3.935)	.....
710	(3.061)	8.810	(3.907)	.....

Density: [18, 103, 127].
Conductance: [35, 94, 103, 189].
Viscosity: [103].
Melting Point: [130].

TABLE 49. *Aluminum (III) chloride*

Eq wt 44.45 mp 191.8 °C (465.0 °K)

$\rho = -5.711383 + 2.859744 \cdot 10^{-2}T - 2.953960 \cdot 10^{-5}T^2$
$\eta = 10.5980 - 5.14676 \cdot 10^{-2}T + 8.59674 \cdot 10^{-5}T^2 - 4.86480 \cdot 10^{-8}T^3$

T	ρ	η
470	.....	0.348
480	1.2094	.320
490	1.2088	.296
500	1.2024	.275
510	1.1900	.256
520	1.1717	.240
530	1.1476	.226
540	1.1175	.213
550	1.0815	.202
560	1.0395	.....
570	0.9917	.....
580	.9380	.....
590	.8784	.....
600	.8128	.....
610	.7413	.....
620	.6640	.....
630	.5807	.....

Density: [149].
Viscosity: [149].
Melting Point: [130].

TABLE 50. *Gallium (III) chloride*

Eq wt 58.69 mp 77.6 °C (350.7 °K)

$\rho = 2.7841 - 2.0826 \cdot 10^{-3}T$

$\eta = 42.1652 - 0.251746\ T + 5.13276 \cdot 10^{-4}T^2 - 3.53160 \cdot 10^{-7}T^3$

T	ρ	η
360	2.034	1.58
370	2.014	1.40
380	1.993	1.24
390	1.972	1.10
400	1.951	0.99
410	1.930	.89
420	1.909	.81
430	.....	.74
440	.....	.68
450	.....	.64
460	.....	.60
470	.....	.56
480	.....	.53
490	.....	.50
500	.....	.47
510	.....	.43
520	.....	.39

Density: [148, 149].
Viscosity: [149, 148].
Melting Point: [130].

TABLE 51. *Indium chloride*

Eq wt 150.22 mp 225 °C (498 °K)

$\kappa = -2.0281 + 5.2188 \cdot 10^{-3}T + 1.0942 \cdot 10^{-6}T^2$

$\rho = 4.43_7 - 1.40 \cdot 10^{-3}T$

$\Lambda = 1208 \exp(-3528/RT)$

T	Λ	κ	ρ
500	$(34._4)$	0.85	(3.73_7)
510	$(37._0)$	.92	(3.72_3)
520	$(39._8)$	.98	(3.70_9)
530	$(42._5)$	1.05	(3.69_5)
540	$45._3$	1.11	3.68_1
550	$48._1$	1.17	3.66_7
560	$50._9$	1.24	3.65_3
570	$53._8$	1.30	3.63_9
580	$56._6$	1.37	3.62_5
590	$59._6$	1.43	3.61_1
600	$62._5$	1.50	3.59_7
610	$65._5$	1.56	3.58_3
620	$68._5$	1.63	3.56_9

Density: [34].
Conductance: [34].
Melting Point: [130].

TABLE 52. *Indium (II) chloride*

Eq wt 92.84 mp 235 °C (508 °K)

$\kappa = -1.2783 + 3.6986 \cdot 10^{-3}T - 1.4444 \cdot 10^{-6}T^2$
$\rho = 3.86_3 - 1.60 \cdot 10^{-3}T$
$\Lambda = 288.4 \exp(-3687/RT)$

T	Λ	κ	ρ
510	(7.1)	0.23_2	(3.04_7)
520	(7.8)	$.25_4$	(3.03_1)
530	(8.5)	$.27_6$	(3.01_5)
540	9.2	$.29_8$	2.99_9
550	9.9	$.31_9$	2.98_3
560	10.6	$.34_0$	2.96_7
570	11.3	$.36_1$	2.95_1
580	12.1	$.38_1$	2.93_5
590	12.8	$.40_1$	2.91_9
600	13.5	$.42_1$	2.90_3
610	14.2	$.44_0$	2.88_7
620	14.9	$.46_0$	2.87_1
630	15.6	$.47_9$	2.85_5
640	16.3	$.49_7$	2.83_9
650	17.0	$.51_5$	2.82_3
660	17.6	$.53_4$	2.80_7
670	18.3	$.55_1$	2.79_1
680	19.0	$.56_9$	2.77_5
690	19.7	$.58_6$	2.75_9
700	20.4	$.60_3$	2.74_3
710	21.1	$.62_0$	2.72_7
720	(21.8)	$.63_6$	(2.71_1)
730	(22.5)	$.65_2$	(2.69_5)
740	(23.1)	$.66_8$	(2.67_9)
750	(23.8)	$.68_3$	(2.66_3)
760	(24.5)	$.69_8$	(2.64_7)
770	(25.2)	$.71_3$	(2.63_1)
780	(25.8)	$.72_8$	(2.61_5)

Density: [34].
Conductance: [34].
Melting Point: [130].

TABLE 53. *Indium (III) chloride*

Eq wt 73.71 mp 586 °C (859 °K)

$\kappa = 1.184 - 0.883 \cdot 10^{-3}T$
$\rho = 3.94_4 - 2.10 \cdot 10^{-3}T$
$\Lambda = 4.112 \exp(+2181/RT)$

T	Λ	κ	ρ
860	14.6_4	0.425	2.13_8
870	14.4_8	.416	2.11_7
880	14.3_1	.407	2.09_6
890	14.1_4	.398	2.07_5
900	13.9_7	.389	2.05_4
910	13.7_9	.380	2.03_3
920	13.6_2	.372	2.01_2
930	13.4_3	.363	1.99_1
940	13.2_4	.354	1.97_0
950	(13.0_5)	.345	(1.94_9)
960	(12.8_6)	.336	(1.92_8)
970	(12.6_6)	.327	(1.90_7)

Density: [34].
Conductance: [34].
Melting Point: [130].

TABLE 54. *Thallium (I) chloride*

Eq wt 239.85 mp 429 °C (702 °K)

$\kappa = -2.073997 + 4.839529 \cdot 10^{-3}T + 4.677176 \cdot 10^{-10}T^2 - 6.884975 \cdot 10^{-10}T^3$

$\rho = 6.893 - 1.80 \cdot 10^{-3}T$

$\Lambda = 546.0 \exp(-3421.0/RT)$

T	Λ	κ	ρ
720	49.44	1.154	5.597
740	52.99	1.228	5.561
760	56.53	1.302	5.525
780	60.06	1.374	5.489
800	63.58	1.445	5.453
820	67.09	1.515	5.417
840	70.58	1.583	5.381
860	74.06	1.650	5.345
880	77.52	1.716	5.309
900	80.97	1.780	5.273
920	84.39	1.843	5.237
940	(87.79)	1.904	(5.201)
960	(91.17)	1.963	(5.165)
980	(94.52)	2.021	(5.129)
1000	(97.84)	2.078	(5.093)
1020	(101.13)	2.132	(5.057)
1040	(104.38)	2.185	(5.021)
1060	(107.60)	2.236	(4.985)
1080	(110.79)	2.286	(4.949)
1100	(113.93)	2.334	(4.913)
1120	(117.03)	2.380	(4.877)
1140	(120.08)	2.424	(4.841)
1160	(123.09)	2.466	(4.805)

Density: [36].
Conductance: [21, 189].
Melting Point: [130].

TABLE 55. *Tin (II) chloride*

Eq wt 94.81 mp 245 °C (518 °K)

$\kappa = -4.734129 - 1.434825 \cdot 10^{-2}T - 7.776484 \cdot 10^{-6}T^2 + 8.757843 \cdot 10^{-10}T^3$

$\rho = 4.016 - 1.253 \cdot 10^{-3}T$

$\Lambda = 361.8 \exp(-2726.9/RT)$

T	Λ	κ	ρ
520	21.06	0.7473	(3.364)
540	25.10	.8842	3.339
560	29.06	1.016	3.314
580	32.94	1.143	3.289
600	36.73	1.264	3.264
620	40.43	1.381	3.239
640	44.04	1.493	3.214
660	47.57	1.600	3.189
680	51.01	1.702	3.164
700	54.36	1.800	3.139
720	57.61	1.892	3.114
740	60.78	1.980	3.089
760	63.85	2.063	3.064
780	66.83	2.142	(3.039)
800	69.71	2.216	(3.014)
820	72.50	2.285	(2.989)
840	75.20	2.350	(2.963)
860	77.79	2.411	(2.938)
880	80.29	2.467	(2.913)
900	82.68	2.519	(2.888)
950	88.22	2.629	(2.826)
1000	93.11	2.713	(2.763)
1050	97.32	2.772	(2.700)
1100	100.8	2.805	(2.638)
1150	103.6	2.814	(2.575)
1200	105.6	2.799	(2.512)
1220	106.2	2.787	(2.487)
1240	106.7	2.770	(2.462)

Density: [25, 36].
Conductance: [35, 189].
Melting Point: [131].

TABLE 56. *Tin (IV) chloride*

Eq wt 65.13 mp −33.3 °C (239.9 °K)

$\rho = 3.0185 - 2.687 \cdot 10^{-3} T$
$\eta = 3.187 \cdot 10^{-2} \exp(1928/RT)$

T	ρ	η
280	.....	1.02
290	.....	0.90
300	.....	.81
310	2.186	.73
320	2.159	.66
330	2.132	.60
340	2.105	.55
350	2.078	.51
360	2.051	.47
370	2.024	.44
380	1.997	.41
390	1.971	.38
400	1.944	.36
410	1.917	.34
420	1.890	.32

Density: [147].
Viscosity: [147, 204].
Melting Point: [130].

TABLE 57. *Lead (II) chloride*

Eq wt 139.06 mp 498 °C (771 °K)

$\kappa = -0.487664 + 11.2124 \cdot 10^{-3} T - 3.9156 \cdot 10^{-6} T^2$
$\rho = 6.112 - 1.50 \cdot 10^{-3} T$
$\Lambda = 588.1 \exp(-4093/RT)$
$\eta = 5.619 \cdot 10^{-2} \exp(6762/RT)$

T	Λ	κ	ρ	η
780	41.8	1.486	4.942	4.41
790	43.4	1.537	4.927	4.17
800	44.9	1.586	4.912	3.95
810	46.4	1.635	4.897	3.75
820	48.0	1.684	4.882	3.56
830	49.5	1.731	4.867	3.39
840	51.0	1.778	4.852	3.23
850	52.4	1.824	4.837	3.08
860	53.9	1.869	4.822	2.94
870	55.4	1.913	4.807	2.81
880	56.8	1.957	4.792	2.69
890	58.2	2.000	4.777	2.57
900	59.6	2.042	4.762	2.47
910	61.0	2.083	4.747	2.36
920	62.4	2.123	4.732	2.27
930	63.8	2.163	4.717	2.18
940	65.1	2.202	4.702	2.10
950	.....	.....	4.687	2.02
960	.....	.....	4.672	1.95

Density: [15, 40, 54, 150, 212].
Conductance: [7, 51, 72, 85, 97, 151, 212].
Viscosity: [8, 72].
Melting Point: [130].

TABLE 58. *Bismuth (III) chloride*

Eq wt 105.12 mp 232 °C (505 °K)

$\kappa = -4.0243 + 1.6574 \cdot 10^{-2}T - 1.9059 \cdot 10^{-5}\,T^2 + 6.8368 \cdot 10^{-9}\,T^3$

$\rho = 5.073 - 2.30 \cdot 10^{-3}\,T$

$\Lambda = 32.36 \exp(-981.3/RT)$

$\eta = 0.3787 \exp(4693/RT)$

T	Λ	κ	ρ	η
510	10.18	0.3780	3.900	.....
520	10.90	.4019	3.877	.....
530	11.57	.4240	3.854	.....
540	12.20	.4445	3.831	30.2
550	12.79	.4635	3.808	27.7
560	13.35	.4808	3.785	25.6
570	13.88	.4967	3.762	23.7
580	14.37	.5110	3.739	22.0
590	14.82	.5240	3.716	20.7
600	15.24	.5355	3.693	19.4
610	15.63	.5457	3.670	18.3
620	15.99	.5546	3.647	.....
630	16.31	.5622	3.624	.....
640	(16.60)	.5686	(3.601)	.....
660	(17.09)	.5779	(3.555)	.....
680	(17.46)	.5827	(3.509)	.....
700	(17.71)	.5835	(3.463)	.....
720	(17.86)	.5805	(3.417)	.....
740	(17.90)	.5741	(3.371)	.....
760	(17.85)	.5645	(3.325)	.....
780	(17.70)	.5522	(3.279)	.....
800	(17.47)	.5374	(3.233)	.....
850	(16.59)	.4920	(3.118)	.....
900	(15.34)	.4384	(3.003)	.....

Density: [25, 32].
Conductance: [114, 32].
Viscosity: [16].
Melting Point: [130].

TABLE 59. *Tellurium (II) chloride*

Eq wt 99.26 mp 175 °C (448 °K)

$\kappa = -0.2949 + 0.3715 \cdot 10^{-3}T + 0.6918 \cdot 10^{-6}T^2$

T	κ
480	0.043
490	.053
500	.064
510	.075
520	.085
530	.096
540	.107
550	.119
560	.130
570	.142
580	.153

Conductance: [32].
Melting Point: [131].

TABLE 60. *Tellurium (IV) chloride*

Eq wt 67.36 mp 224 °C (497 °K)

$\kappa = -0.6702 + 1.930 \cdot 10^{-3}T - 0.7617 \cdot 10^{-6}T^2$

T	κ
510	0.116_0
520	$.127_5$
530	$.138_5$
540	$.150_0$
550	$.161_0$
560	$.171_5$
570	$.182_5$
580	$.193_0$
590	$.203_5$

Conductance: [32].
Melting Point: [130].

TABLE 61. *Lithium bromide*

Eq wt 86.86 mp 550 °C (823 °K)

$\kappa = -1.1362 + 8.6159 \cdot 10^{-3}T - 1.86212 \cdot 10^{-6}T^2$
$\rho = 3.0658 - 0.6520 \cdot 10^{-3}T$
$\Lambda = 585.3 \exp(-2117/RT)$
$\eta = 6.868 \cdot 10^{-2} \exp(5355/RT)$

T	Λ	κ	ρ	η
830	162.83	4.7328	2.5246	.....
840	165.16	4.7879	2.5181	.....
850	167.47	4.8426	2.5116	.....
860	169.79	4.8969	2.5051	.....
870	172.11	4.9509	2.4986	1.52_1
880	174.43	5.0045	2.4920	1.46_9
890	176.75	5.0577	2.4855	1.41_9
900	179.06	5.1105	2.4790	1.37_2
910	181.38	5.1630	2.4725	1.32_7
920	183.69	5.2151	2.4660	1.28_5
930	186.01	5.2668	2.4594	1.24_6
940	188.34	5.3187	2.4529	1.20_8
950	190.63	5.3692	2.4464	1.17_1
960	192.94	5.4198	2.4399	1.13_8
970	195.25	5.4700	2.4334	1.10_5
980	197.57	5.5199	2.4268	1.07_4
990	199.88	5.5694	2.4203	1.04_5
1000	202.18	5.6185	2.4138	1.01_6
1010	204.48	5.6672	2.4073	0.99_0
1020	206.79	5.7156	2.4008	$.96_5$
1030	.....	.....	.....	$.94_0$
1040	.....	.....	.....	$.91_7$

Density: [3, 81, 82].
Conductance: [82].
Viscosity: [47, 102].
Melting Point: [130].

TABLE 62. *Sodium bromide*

Eq wt 102.91 mp 750 °C (1023 °K)

$\kappa = 9.097 \exp(-2324/RT)$
$\rho = 3.1748 - 0.8169 \cdot 10^{-3}T$
$\Lambda = 622.7 \exp(-3228/RT)$
$\eta = 64.3240 - 0.152525\,T + 1.23215 \cdot 10^{-4}T^2 - 3.34241 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
1030	128.9	2.922	2.3334	.....
1040	130.8	2.954	2.3252	.....
1050	132.6	2.986	2.3171	.....
1060	134.5	3.018	2.3089	1.28_3
1070	136.4	3.049	2.3007	1.24_5
1080	138.3	3.080	2.2925	1.21_0
1090	140.1	3.111	2.2844	1.17_8
1100	142.0	3.141	2.2762	1.14_9
1110	143.9	3.172	2.2680	1.12_3
1120	145.8	3.202	2.2599	1.09_8
1130	147.7	3.231	2.2517	1.07_6
1140	149.6	3.261	2.2435	1.05_6
1150	151.5	3.290	2.2353	1.03_8
1160	153.4	3.319	2.2272	1.02_2
1170	155.3	3.348	2.2190	1.00_6
1180	157.2	3.376	2.2109	0.99_2
1190	159.1	3.404	2.2027	$.97_9$
1200	161.0	3.432	2.1945	$.96_7$
1210	162.9	3.460	2.1864	$.95_5$
1220	164.8	3.488	2.1782	.....

Density: [3, 25, 81, 82].
Conductance: [10, 52, 82, 129, 199].
Viscosity: [12, 102].
Melting Point: [130].

TABLE 63. *Potassium bromide*

Eq wt 119.01 mp 735 °C (1008 °K)

$\kappa = -6.6001 + 13.1823 \cdot 10^{-3}T - 5.0051 \cdot 10^{-6}T^2$
$\rho = 2.9583 - 0.8253 \cdot 10^{-3}T$
$\Lambda = 591.1 \exp(-3747/RT)$
$\eta = 128.399 - 0.334905\,T + 2.94450 \cdot 10^{-4}T^2 - 8.66540 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
1020	92.1	1.639	2.1165	1.18_3
1030	94.1	1.668	2.1082	1.14_0
1040	96.1	1.696	2.1000	1.10_1
1050	98.0	1.723	2.0917	1.06_7
1060	99.9	1.749	2.0835	1.03_7
1070	101.8	1.775	2.0752	1.01_2
1080	103.6	1.799	2.0670	0.98_9
1090	105.3	1.822	2.0587	$.96_9$
1100	107.0	1.844	2.0505	$.95_2$
1110	108.7	1.865	2.0422	$.93_6$
1120	110.3	1.886	2.0340	$.92_1$
1130	111.9	1.905	2.0257	$.90_7$
1140	113.4	1.923	2.0175	$.89_3$
1150	114.9	1.940	2.0092	$.87_8$
1160	116.4	1.957	2.0010	$.86_3$
1170	117.8	1.972	1.9927	$.84_7$
1180	119.1	1.986	1.9844	$.82_8$
1190	120.4	1.999	1.9762	.....
1200	121.6	2.011	1.9679	.....

Density: [3, 15, 26, 66, 81, 82].
Conductance: [10, 26, 33, 52, 66, 82, 100, 125, 129].
Viscosity: [12, 47, 102].
Melting Point: [130].

TABLE 64. *Rubidium bromide*

Eq wt 165.40 mp 680 °C (953 °K)

$\kappa = -5.6453 + 11.1780 \cdot 10^{-3}T - 4.3285 \cdot 10^{-6}T^2$
$\rho = 3.7390 - 1.0718 \cdot 10^{-3}T$
$\lambda = 611.1 \exp(-4171/RT)$
$\eta = 51.9396 - 0.131564\,T + 1.14887 \cdot 10^{-4}T^2 - 3.39298 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
960	.....	.....	.....	1.49_9
970	68.9	1.125	2.6994	1.45_3
980	70.9	1.152	2.6886	1.41_0
990	72.8	1.179	2.6779	1.37_0
1000	74.7	1.204	2.6672	1.33_3
1010	76.5	1.229	2.6565	1.29_8
1020	78.3	1.253	2.6458	1.26_6
1030	80.1	1.276	2.6350	1.23_6
1040	81.8	1.298	2.6243	1.20_8
1050	83.5	1.319	2.6136	1.18_2
1060	85.1	1.340	2.6029	1.15_8
1070	86.7	1.359	2.5922	1.13_5
1080	88.3	1.378	2.5815	1.11_3
1090	89.8	1.396	2.5707	1.09_2
1100	91.3	1.413	2.5600	1.07_2
1110	92.7	1.429	2.5493	1.05_2
1120	94.1	1.444	2.5386	1.03_3
1130	95.4	1.459	2.5279	1.01_4
1140	96.7	1.472	2.5171	.....
1150	98.0	1.485	2.5064	.....
1160	99.2	1.497	2.4957	.....
1170	100.4	1.508	2.4850	.....
1180	101.5	1.518	2.4743	.....

Density: [25, 82].
Conductance: [82].
Viscosity: [102].
Melting Point: [130].

TABLE 65. *Cesium bromide*

Eq wt 212.83 mp 636 °C (909 °K)

$\kappa = -2.5553 + 4.7068 \cdot 10^{-3}T - 1.1218 \cdot 10^{-6}T^2$
$\rho = 4.2449 - 1.2234 \cdot 10^{-3}T$
$\Lambda = 1169 \exp(-5533/RT)$

T	Λ	κ	ρ
910	54.3	0.799	3.1316
920	56.3	.826	3.1194
930	58.3	.852	3.1071
940	60.4	.878	3.0949
950	62.4	.904	3.0827
960	64.4	.929	3.0704
970	66.4_5	.955	3.0582
980	68.5	.980	3.0460
990	70.5	1.005	3.0337
1000	72.5	1.030	3.0215
1010	74.6	1.054	3.0093
1020	76.6	1.079	2.9970
1030	78.6	1.103	2.9848
1040	80.6_5	1.126	2.9726
1050	82.7	1.150	2.9603
1060	84.7	1.173	2.9481
1070	86.7_5	1.197	2.9359
1080	88.8	1.220	2.9236
1090	90.8	1.242	2.9114
1100	92.8_5	1.265	2.8992
1110	94.9	1.287	2.8869
1120	96.9	1.309	2.8747
1130	99.0	1.331	2.8625
1140	101.0	1.353	2.8502

Density: [25, 74, 82].
Conductance: [82, 199].
Melting Point: [130].

TABLE 66. *Magnesium bromide*

Eq wt 92.08 mp 711 °C (984 °K)

$\kappa = -0.4257 + 0.5717 \cdot 10^{-3}T + 0.5784 \cdot 10^{-6}T^2$
$\rho = 3.087 - 0.478 \cdot 10^{-3}T$
$\Lambda = 385.5 \exp(-5404/RT)$

T	Λ	κ	ρ
1000	(25.5_6)	0.724	(2.510)
1020	(26.8_9)	.759	(2.600)
1040	28.2_4	.795	2.590
1060	29.6_2	.830	2.581
1080	31.0_2	.866	2.571
1100	32.4_6	.903	2.562
1120	33.9_2	.940	2.552
1140	35.4_1	.978	2.542
1160	36.9_3	1.016	2.533
1180	38.4_7	1.054	2.523
1200	40.0_4	1.093	2.514
1220	(41.6_5)	1.133	(2.504)
1240	(43.2_8)	1.173	(2.495)

Density: [91, 113].
Conductance: [94].
Melting Point: [130].

TABLE 67. *Calcium bromide*

Eq wt 99.91 mp 730 °C (1003 °K)

$\kappa = 12.820 \exp(-4475/RT)$
$\rho = 3.618 - 0.500 \cdot 10^{-3}T$
$\Lambda = 506.7 \exp(-4901/RT)$

T	Λ	κ	ρ
1020	45.3_0	1.409	3.108
1040	47.4_2	1.470	3.098
1060	49.5_6	1.532	3.088
1080	(51.7_1)	1.593	(3.078)
1100	(53.8_8)	1.655	(3.068)
1120	(56.0_7)	1.716	(3.058)
1140	(58.2_8)	1.778	(3.048)
1160	(60.5_0)	1.840	(3.038)
1180	(62.7_3)	1.901	(3.028)
1200	(64.9_7)	1.963	(3.018)
1220	(67.2_2)	2.024	(3.008)
1240	(69.4_8)	2.085	(2.998)
1260	(71.7_6)	2.146	(2.988)
1280	(74.0_4)	2.207	(2.978)

Density: [91, 113].
Conductance: [94].
Melting Point: [132].

TABLE 68. *Strontium bromide*

Eq wt 123.73 mp 643 °C (916 °K)

$\kappa = -4.0086 + 6.8056 \cdot 10^{-3}T - 1.7296 \cdot 10^{-6}T^2$
$\rho = 4.390 - 0.745 \cdot 10^{-3}T$
$\Lambda = 806.5 \exp(-6183/RT)$

T	Λ	κ	ρ
940	28.8_5	0.800	3.690
960	31.3_3	.931	3.675
980	33.7_9	1.000	3.660
1000	36.2_3	1.067	3.646
1020	38.6_3	1.134	3.631
1040	41.0_1	1.198	3.616
1060	43.3_6	1.262	3.601
1080	45.6_9	1.324	3.586
1100	47.9_8	1.385	3.571
1120	50.2_4	1.444	3.556
1140	52.4_8	1.502	3.541
1160	54.6_9	1.559	3.526
1180	56.8_6	1.614	3.511

Density: [91, 113].
Conductance: [94].
Melting Point: [130].

TABLE 69. *Barium bromide*

Eq wt 148.60 mp 850 °C (1123 °K)

$\kappa = -2.4631 + 3.736 \cdot 10^{-3}T - 0.4410 \cdot 10^{-6}\ T^2$
$\rho = 5.035 - 0.924 \cdot 10^{-3}T$
$\Lambda = 691.8 \exp(-6153/RT)$

T	Λ	κ	ρ
1150	46.8	1.250	3.972
1160	47.9	1.277	3.963
1170	49.0	1.304	3.954
1180	50.1	1.331	3.945
1190	(51.3)	1.358	(3.935)
1200	(52.4)	1.385	(3.926)
1210	(53.6)	1.412	(3.917)
1220	(54.7)	1.438	(3.908)
1230	(55.8)	1.465	(3.898)
1240	(57.0)	1.491	(3.889)
1250	(58.1)	1.518	(3.880)
1260	(59.3)	1.544	(3.871)
1270	(60.4)	1.570	(3.862)
1280	(61.6)	1.596	(3.852)
1290	(62.7)	1.622	(3.843)
1300	(63.9)	1.648	(3.834)
1310	(65.1)	1.674	(3.825)
1320	(66.2)	1.700	(3.815)
1330	(67.4)	1.726	(3.806)

Density: [66, 91].
Conductance: [94].
Melting Point: [130].

TABLE 70. *Lanthanum (III) bromide*

Eq wt 126.22 mp 783 °C (1056 °K)

$\kappa = 4.7336 - 10.8289 \cdot 10^{-3}T + 6.700 \cdot 10^{-6}T^2$
$\rho = 5.0351 - 0.096 \cdot 10^{-3}\ T$
$\Lambda = 2652 \exp(-10296/RT)$

T	Λ	κ	ρ
1060	20.0	0.783	4.9333
1070	20.9	.818	4.9324
1080	21.8	.853	4.9314
1090	22.8	.890	4.9305
1100	23.8	.929	4.9295
1110	24.8	.969	4.9285
1120	25.9	1.010	4.9276
1130	27.0	1.052	4.9266
1140	28.1	1.096	4.9257
1150	29.2	1.141	4.9247
1160	30.4	1.188	4.9237
1170	31.7	1.236	4.9228
1180	32.95	1.285	4.9218
1190	34.2	1.335	4.9209

Density: [83].
Conductance: [83, 171].
Melting Point: [130].

TABLE 71. *Praseodymium (III) bromide*

Eq wt 126.89 mp 691 °C (964 °K)

$\kappa = -1.3387 + 1.8574 \cdot 10^{-3}\ T$

T	κ
1000	0.519
1010	.537
1020	.556
1030	.574
1040	.593
1050	.612

Conductance: [171].
Melting Point: [170].

TABLE 72. *Neodymium (III) bromide*

Eq wt 128.01 mp 684 °C (957 °K)

$\kappa = 3.2271 - 7.6760 \cdot 10^{-3}\ T + 4.800 \cdot 10^{-6}\ T^2$
$\rho = 4.9750 - 0.7779 \cdot 10^{-3}\ T$
$\Lambda = 3973 \exp(-11749/RT)$

T	Λ	κ	ρ
960	8.53	0.282	4.2282
970	9.03	.298	4.2204
980	9.56	.315	4.2127
990	10.12	.332	4.2049
1000	10.71	.351	4.1971
1010	11.33	.371	4.1893
1020	11.99	.392	4.1815
1030	12.67	.413	4.1738
1040	13.40	.436	4.1660
1050	14.14	.460	4.1582
1060	14.92	.484	4.1504
1070	15.74	.509	4.1426
1080	16.59	.536	4.1349
1090	17.47	.563	4.1271
1100	18.38	.592	4.1193
1110	19.33	.621	4.1115
1120	20.31	.651	4.1038
1130	21.32	.682	4.0960
1140	22.37	.714	4.0882
1150	23.46	.748	4.0804

Density: [83].
Conductance: [83, 171].
Melting Point: [130].

TABLE 73. *Gadolinium (III) bromide*

Eq wt 132.2 mp 770 °C (1043 °K)

$\kappa = -0.98898 + 1.3356 \cdot 10^{-3}\ T$

T	κ
1070	0.440
1080	.453
1090	.467
1100	.480
1110	.493
1120	.507

Conductance: [171].
Melting Point: [170].

TABLE 74. *Copper (I) bromide*

Eq wt 143.46 mp 488 °C (761 °K)

$\kappa = 6.342 \exp(-1416/RT)$

T	κ
770	2.514
780	2.544
790	2.573
800	2.602
810	2.631
820	2.659

Conductance: [41].
Melting Point: [130].

TABLE 75. *Silver bromide*

Eq wt 187.0 mp 430 °C (703 °K)

$\kappa = 0.32105 + 4.8157 \cdot 10^{-3}\ T - 1.72064 \cdot 10^{-6}\ T^2$
$\rho = 6.307 - 1.035 \cdot 10^{-3}\ T$
$\Lambda = 210.2 \exp(-1104/RT)$
$\eta = 37.1747 - 0.100768\ T + 9.80868 \cdot 10^{-5} T^2 - 3.25971 \cdot 10^{-8}\ T^3$

T	Λ	κ	ρ	η
720	97.4	2.896	5.562	3.30
730	98.35	2.920	5.551	3.20
740	99.3	2.942	5.541	3.11
750	100.2_5	2.965	5.531	3.02
760	101.2	2.987	5.520	2.94
770	102.1	3.009	5.510	2.86
780	103.0	3.030	5.500	2.78
790	104.0	3.052	5.489	2.71
800	104.9	3.072	5.479	2.65
810	105.8	3.093	5.469	2.58
820	106.6	3.113	5.458	2.53
830	107.5	3.133	5.448	2.47
840	108.4	3.152	5.438	2.42
850	109.3	3.171	5.427	2.37
860	110.1	3.190	5.417	2.33
870	111.0	3.208	5.407	.....
880	111.8	3.226	5.396	.....
890	112.6	3.244	5.386	.....
900	113.5	3.261	5.376	.....
910	114.3	3.278	5.365	.....
920	115.1	3.295	5.355	.....
930	115.9	3.311	5.344	.....

Density: [2, 22, 54, 81].
Conductance: [1, 10, 21, 23, 72, 100].
Viscosity: [24, 72].
Melting Point: [130].

TABLE 76. *Zinc bromide*

Eq wt 112.61 mp 394 °C (667 °K)

$\kappa = 1.2220 - 3.9416 \cdot 10^{-3} T + 3.1971 \cdot 10^{-6} T^2$
$\rho = 4.113 - 0.959 \cdot 10^{-3} T$
$\Lambda = 35684 \exp(-14604/RT)$
$\eta = 400$ cp at 400 °C.

T	Λ	κ	ρ
670	(0.52_9)	0.016	(3.470)
680	$(\ .65_2)$	.020	(3.461)
690	$(\ .79_7)$	.024	(3.451)
700	$.96_4$	.029	3.442
710	1.15_2	.035	3.432
720	1.36_3	.041	3.423
730	1.59_6	.048	3.413
740	1.85_1	.056	3.403
750	2.12_9	.064	3.394
760	2.43_0	.073	3.384
770	2.75_4	.083	3.375
780	3.10_1	.093	3.365
790	3.47_2	.103	3.355
800	3.86_6	.115	3.346
810	4.28_4	.127	3.336
820	4.72_6	.140	3.327
830	5.19_3	.153	3.317
840	5.68_4	.167	3.307
850	6.19_9	.182	3.298
860	6.74_0	.197	3.288
870	7.30_5	.213	3.279
880	7.89_6	.229	3.269
890	(8.51_3)	.246	(3.259)
900	(9.15_5)	.264	(3.250)

Density: [43, 113].
Conductance: [94, 98].
Viscosity: [98].
Melting Point: [130].

TABLE 77. *Cadmium bromide*

Eq wt 136.12 mp 568 °C (841 °K)

$\kappa = -1.6351 + 4.1892 \cdot 10^{-3}T - 1.1777 \cdot 10^{-6}T^2$
$\rho = 4.9831 - 1.08 \cdot 10^{-3}T$
$\Lambda = 243.4 \exp(-3226/RT)$
$\eta = -110.000 + 0.409042T - 4.84560 \cdot 10^{-4}T^2 + 1.87613 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
850	35.99	1.075	4.065	.....
860	36.82	1.097	4.054	2.73
870	37.64	1.118	4.043	2.65
880	38.46	1.139	4.033	2.57
890	39.27	1.160	4.022	2.49
900	40.09	1.181	4.011	2.41
910	40.89	1.202	4.000	2.34
920	41.70	1.222	3.990	2.28
930	42.50	1.242	3.979	2.22
940	43.30	1.262	3.968	2.17
950	44.09	1.282	3.957	2.13
960	44.88	1.301	3.946	.....
970	45.67	1.320	3.936	.....
980	46.45	1.339	3.925	.....
990	47.23	1.358	3.914	.....
1000	48.00	1.376	3.903	.....
1010	(48.77)	1.395	(3.892)	.....
1020	(49.54)	1.413	(3.882)	.....
1030	(50.30)	1.430	(3.871)	.....
1040	(51.06)	1.448	(3.860)	.....
1050	(51.81)	1.465	(3.849)	.....
1060	(52.56)	1.482	(3.838)	.....

Density: [54].
Conductance: [94].
Viscosity: [53].
Melting Point: [130].

TABLE 78. *Mercury (II) bromide*

Eq wt 180.22 mp 237 °C (510 °K)

$\kappa = 2.203887 \cdot 10^{-3} - 1.489099 \cdot 10^{-5}T + 3.099289 \cdot 10^{-8}T^2 - 1.913523 \cdot 10^{-11}T^3$
$\rho = 6.7715 - 3.2331 \cdot 10^{-3}T$
$\Lambda = 0.310523 \exp(-4065.3/RT)$
$\eta = 1.801 \cdot 10^{-2} \exp(5040/RT)$

T	$\Lambda \cdot 10^2$	$\kappa \cdot 10^4$	ρ	η
520	0.5328	1.505	5.090	.....
530	.6013	1.688	5.057	2.16
540	.6712	1.872	5.025	1.98
550	.7419	2.056	4.993	1.81
560	.8132	2.239	4.961	.....
570	.8845	2.419	4.928	.....
580	.9556	2.596	4.896	.....
590	1.026	2.769	4.864	.....
600	1.095	2.935	4.831	.....
610	1.162	3.095	4.799	.....
620	(1.227)	3.247	(4.767)	.....
630	(1.290)	3.389	(4.735)	.....
640	(1.350)	3.522	(4.702)	.....
650	(1.406)	3.642	(4.670)	.....
660	(1.457)	3.750	(4.638)	.....
670	(1.505)	3.845	(4.605)	.....
680	(1.546)	3.924	(4.573)	.....
690	(1.583)	3.987	(4.541)	.....
700	(1.612)	4.033	(4.508)	.....
710	(1.635)	4.061	(4.476)	.....
720	(1.650)	4.069	(4.449)	.....
730	(1.657)	4.056	(4.411)	.....

Density: [18, 103].
Conductance: [94, 103, 189].
Viscosity: [6, 58].
Melting Point: [131].

TABLE 79. *Aluminum bromide*

Eq wt 88.91 mp 97.5 °C (370.7 °K)

$\eta = 3.491 \cdot 10^{-2} \exp(3123/RT)$

T	η
380	2.18
390	1.96
400	1.78
410	1.61
420	1.47
430	1.35
440	1.24
450	1.15
460	1.06
470	0.99
480	.92
490	.86
500	.81
510	.76
520	.72

Viscosity: [138, 203].
Melting Point: [130].

TABLE 80. *Indium (III) bromide*

Eq wt 118.17 mp 436 °C (709 °K)

$\kappa = -0.1914 + 1.0056 \cdot 10^{-3}T - 0.7065 \cdot 10^{-6}T^2$
$\rho = 4.184 - 1.50 \cdot 10^{-3}T$
$\Lambda = 6.766 \exp(-91/RT)$

T	Λ	κ	ρ
710	6.31	0.166_4	3.11_9
720	6.33	$.166_4$	3.10_4
730	6.36	$.166_2$	3.08_9
740	6.38	$.165_9$	3.07_4
750	6.39	$.165_4$	3.05_9
760	6.40	$.164_8$	3.04_4
770	6.40	$.164_0$	3.02_9
780	6.40	$.163_1$	3.01_4
790	6.39	$.162_1$	2.99_9
800	6.37	$.160_9$	2.98_4
810	6.35	$.159_6$	2.96_9

Density: [34].
Conductance: [34].
Melting Point: [130].

TABLE 81. *Thallium (I) bromide*

Eq wt 284.31 mp 459 °C (732 °K)

$\kappa = -1.663401 + 4.171786 \cdot 10^{-3}T - 1.098403 \cdot 10^{-6}T^2$
$\rho = 7.4335 - 1.922 \cdot 10^{-3}T$
$\Lambda = 425.8 \exp(-3510.8/RT)$

T	Λ	κ	ρ
740	38.89	0.8222	6.011
760	41.54	.8727	5.973
780	44.19	.9223	5.934
800	46.82	.9710	5.896
820	49.46	1.0189	5.857
840	52.08	1.0659	5.819
860	54.69	1.1120	5.781
880	57.29	1.1572	5.742
900	59.89	1.2015	5.704
920	62.48	1.2450	5.665
940	65.06	1.2875	5.627
960	67.62	1.3292	5.588
980	70.18	1.3700	5.550
1000	72.73	1.4100	5.511
1020	75.27	1.4490	5.473
1040	77.80	1.4872	5.435
1060	(80.32)	1.525	(5.396)
1080	(82.83)	1.561	(5.358)
1100	(85.33)	1.596	(5.319)
1120	(87.82)	1.631	(5.281)

Density: [196].
Conductance: [21, 189].
Melting Point: [130].

TABLE 82. *Lead (II) bromide*

Eq wt 183.52 mp 370 °C (643 °K)

$\kappa = -3.4892 + 8.7490 \cdot 10^{-3}\ T - 3.7998 \cdot 10^{-6}\ T^2$
$\rho = 6.789 - 1.65 \cdot 10^{-3}\ T$
$\Lambda = 660.8 \exp(-4559/RT)$
$\eta = 112.439 - 0.329572\ T + 3.31646 \cdot 10^{-4}\ T^2 - 1.12536 \cdot 10^{-7}\ T^3$

T	Λ	κ	ρ	T	η	T	η
650	(19.01)	0.592	(5.717)	700	5.65	870	2.63
660	(20.28)	.630	(5.700)	710	5.35	880	2.55
670	(21.53)	.667	(5.684)	720	5.07	890	2.48
680	(22.77)	.703	(5.667)	730	4.81	900	2.42
690	(23.99)	.739	(5.651)	740	4.56	910	2.36
700	(25.19)	.773	(5.634)	750	4.33	920	2.31
710	(26.37)	.807	(5.618)	760	4.12	930	2.26
720	(27.53)	.840	(5.601)	770	3.93	940	2.21
730	(28.68)	.873	(5.585)	780	3.74	950	2.17
740	(29.81)	.904	(5.568)	790	3.57	960	2.13
750	(30.91)	.935	(5.552)	800	3.42	970	2.09
760	(32.00)	.965	(5.535)	810	3.27	980	2.05
770	33.08	.995	5.519	820	3.14	990	2.02
				830	3.02	1000	1.98
				840	2.91	1010	1.94
				850	2.81	1020	1.90
				860	2.71	.....	.....

Density: [15, 54].
Conductance: [7, 72].
Viscosity: [8, 72, 142].
Melting Point: [130].

TABLE 83. *Bismuth (III) bromide*

Eq wt 149.58 mp 218 °C (491 °K)

$\kappa = -1.99453 + 8.17416 \cdot 10^{-3}T - 8.99735 \cdot 10^{-6}T^2 + 3.02196 \cdot 10^{-9}T^3$

$\rho = 5.958 - 2.6 \cdot 10^{-3}T$

$\Lambda = 16.67 \exp(-535.6/RT)$

T	Λ	κ	ρ
510	7.587	0.2349	4.632
530	8.502	.2603	4.580
550	9.327	.2823	4.528
570	10.064	.3011	4.476
590	10.714	.3169	4.424
610	11.281	.3297	4.372
630	11.765	.3398	4.320
650	12.168	.3472	4.268
670	12.494	.3521	4.216
690	12.743	.3547	4.164
710	12.919	.3551	4.112
730	(13.024)	.3535	(4.060)
750	(13.061)	.3500	(4.008)
770	(13.032)	.3447	(3.956)
790	(12.941)	.3378	(3.904)
810	(12.790)	.3294	(3.852)
830	(12.583)	.3197	(3.800)
850	(12.323)	.3088	(3.748)
870	(12.014)	.2969	(3.696)
890	(11.660)	.2841	(3.644)
910	(11.265)	.2705	(3.592)
930	(10.832)	.2564	(3.540)
950	(10.368)	.2418	(3.488)
970	(9.876)	.2269	(3.436)

Density: [25].
Conductance: [114].
Melting Point: [130].

TABLE 84. *Lithium iodide*

Eq wt 133.86 mp 449 °C (722 °K)

$\kappa = -3.4283 + 1.4264 \cdot 10^{-2}T - 0.59652 \cdot 10^{-5}T^2$

$\rho = 3.7902 - 0.9176 \cdot 10^{-3}T$

$\Lambda = 569.49 \exp(-1809.9/RT)$

$\eta = 17.1272 - 3.14251 \cdot 10^{-2}T + 1.54596 \cdot 10^{-5}T^2 - 1.34806 \cdot 10^{-11}T^3$

T	Λ	κ	ρ	η
760	171.7	3.9668	3.0928	2.17
770	174.4	4.0182	3.0836	2.09
780	177.1	4.0683	3.0745	2.01
790	179.8	4.1173	3.0653	1.94
800	182.4	4.1651	3.0561	1.87
810	185.0	4.2117	3.0469	1.81
820	187.6	4.2571	3.0378	1.75
830	190.1	4.3013	3.0286	1.69
840	192.6	4.3444	3.0194	1.63
850	195.0	4.3862	3.0102	1.58
860	197.5	4.4268	3.0011	1.53
870	199.8	4.4663	2.9919	1.48
880	202.2	4.5045	2.9827	1.44

Density: [82].
Conductance: [82, 108, 227].
Viscosity: [47].
Melting Point: [130].

TABLE 85. *Sodium iodide*

Eq wt 149.92 mp 662 °C (935 °K)

$\kappa = -2.8948 + 7.5861 \cdot 10^{-3}T - 2.2381 \cdot 10^{-6}\ T^2$
$\rho = 3.6274 - 0.9491 \cdot 10^{-3}T$
$\Lambda = 694.5 \exp(-3221/RT)$
$\eta = 7.171 \cdot 10^{-2} \exp(5673/RT)$

T	Λ	κ	ρ	η
940	123.8	2.259	2.7352	.....
950	126.1	2.292	2.7258	1.45
960	128.3	2.325	2.7163	1.40
970	130.6	2.358	2.7068	1.36
980	132.8	2.390	2.6973	1.32
990	135.1	2.422	2.6878	1.28
1000	137.3	2.453	2.6783	1.25
1010	139.5	2.484	2.6688	1.21
1020	141.8	2.514	2.6593	1.18
1030	144.0	2.545	2.6498	1.15
1040	146.2	2.574	2.6403	1.12
1050	148.3	2.603	2.6308	1.09
1060	150.5	2.632	2.6214	1.06
1070	152.7	2.660	2.6119	1.03
1080	154.8	2.688	2.6024	1.01
1090	157.0	2.715	2.5929	0.98
1100	159.1	2.742	2.5834	.96
1110	161.2	2.768	2.5739	.....
1120	163.3	2.794	2.5644	.....
1130	165.4	2.820	2.5549	.....
1140	167.5	2.845	2.5454	.....
1150	169.6	2.869	2.5359	.....
1160	171.7	2.894	2.5264	.....
1170	173.8	2.917	2.5170	.....
1180	175.8	2.940	2.5075	.....
1190	177.8	2.963	2.4980	.....

Density: [25, 66, 82].
Conductance: [2, 10, 66, 82, 129].
Viscosity: [47, 122].
Melting Point: [130].

TABLE 86. *Potassium iodide*

Eq wt 166.02 mp 685 °C (958 °K)

$\kappa = -6.1952 + 12.6232 \cdot 10^{-3}T - 5.0591 \cdot 10^{-6}T^2$
$\rho = 3.3594 - 0.9557 \cdot 10^{-3}T$
$\Lambda = 541.2 \exp(-3442/RT)$
$\eta = 9.836 \cdot 10^{-2} \exp(5343/RT)$

T	Λ	κ	ρ	η
980	.....	.....	.....	1.53
990	.....	.....	.....	1.49
1000	94.5	1.36_9	2.4037	1.45
1010	96.6	1.39_3	2.3941	1.41
1020	98.7	1.41_7	2.3846	1.37
1030	100.6	1.43_9	2.3750	1.34
1040	102.5	1.46_1	2.3655	1.30
1050	104.4	1.48_2	2.3559	1.27
1060	106.2	1.50_1	2.3464	1.24
1070	108.0	1.51_9	2.3368	1.21
1080	109.6	1.53_7	2.3272	1.19
1090	111.3	1.55_3	2.3177	1.16
1100	112.8	1.56_9	2.3081	1.13
1110	114.4	1.58_3	2.2986	1.11
1120	115.8	1.59_7	2.2890	1.09
1130	117.2	1.60_9	2.2795	1.06
1140	118.5	1.62_0	2.2699	1.04
1150	119.8	1.63_1	2.2603	1.02
1160	121.0	1.64_0	2.2508	1.00
1170	122.1	1.64_9	2.2412	.....
1180	123.2	1.65_6	2.2317	.....

Density: [26, 66, 79, 81].
Conductance: [10, 26, 33, 66, 79, 125, 129].
Viscosity: [47, 122].
Melting Point: [130].

TABLE 87. *Rubidium iodide*

Eq wt 212.40 mp 640 °C (913 °K)

$\kappa = -2.5050 + 5.3229 \cdot 10^{-3}T - 1.8114 \cdot 10^{-6}T^2$
$\rho = 3.9499 - 1.1435 \cdot 10^{-3}T$
$\Lambda = 568.1 \exp(-3999/RT)$
$\eta = 35.1934 - 8.85769 \cdot 10^{-2}T + 7.79282 \cdot 10^{-5}T^2 - 2.34005 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
930	64.7	0.879	2.8864	1.39
940	66.3	.898	2.8750	1.35
950	68.0	.917	2.8636	1.31
960	69.7	.936	2.8521	1.27
970	71.3	.954	2.8407	1.24
980	73.0	.972	2.8293	1.21
990	74.6	.989	2.8178	1.17
1000	76.2	1.007	2.8064	1.14
1010	77.8	1.023	2.7950	1.12
1020	79.3	1.040	2.7835	1.09
1030	80.9	1.056	2.7721	1.06
1040	82.4	1.072	2.7607	1.04
1050	84.0	1.087	2.7492	1.01
1060	85.5	1.102	2.7378	0.99
1070	87.0	1.117	2.7264	.97
1080	88.5	1.131	2.7149	.95
1090	89.9	1.145	2.7035	.93
1100	91.4	1.158	2.6921	.91
1110	92.8	1.172	2.6806	.89
1120	94.3	1.184	2.6692	.86
1130	95.7	1.197	2.6577	.....
1140	97.0	1.209	2.6463	.....
1150	98.4	1.221	2.6349	.....
1160	99.8	1.232	2.6234	.....

Density: [25, 82].
Conductance: [82].
Viscosity: [122].
Melting Point: [130].

TABLE 88. *Cesium iodide*

Eq wt 259.83 mp 621 °C (894 °K)

$\kappa = -2.4630 + 4.5942 \cdot 10^{-3}T - 1.2749 \cdot 10^{-6}T^2$
$\rho = 4.2410 - 1.1834 \cdot 10^{-3}T$
$\Lambda = 1125 \exp(-5450/RT)$
$\eta = 41.8211 - 0.101156T + 8.49570 \cdot 10^{-5}T^2 - 2.42543 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
910	.....	.....	.....	1.84
920	.....	.....	.....	1.78
930	58.49	0.7069	3.1404	1.72
940	60.55	.7290	3.1286	1.66
950	72.60	.7509	3.1168	1.60
960	64.64	.7725	3.1049	1.55
970	66.68	.7938	3.0931	1.50
980	68.71	.8149	3.0813	1.45
990	70.75	.8357	3.0694	1.41
1000	72.77	.8563	3.0576	1.37
1010	74.78	.8766	3.0458	1.33
1020	76.79	.8967	3.0339	1.29
1030	78.80	.9165	3.0221	1.26
1040	80.79	.9360	3.0103	1.23
1050	82.78	.9553	2.9984	1.19
1060	84.77	.9744	2.9866	1.17
1070	86.75	.9932	2.9748	1.14
1080	88.72	1.0117	2.9629	1.11
1090	90.68	1.0300	2.9511	1.09
1100	92.64	1.0480	2.9393	1.06
1110	94.59	1.0658	2.9274	1.04
1120	96.54	1.0833	2.9156	1.02
1130	98.48	1.1005	2.9038	.....

Density: [25, 74, 82].
Conductance: [82].
Viscosity: [122].
Melting Point: [130].

TABLE 89. *Magnesium iodide*

Eq wt 139.08 mp < 637 °C (< 910 °K)

$\kappa = -0.7656 + 0.8785 \cdot 10^{-3}T + 0.4299 \cdot 10^{-6}T^2$
$\rho = 3.642 - 0.651 \cdot 10^{-3}T$
$\Lambda = 751.1 \exp(-6752/RT)$

T	Λ	κ	ρ
920	18.5_8	0.406	3.043
940	20.2_0	.440	3.030
960	21.8_5	.474	3.017
980	23.5_3	.508	3.004
1000	25.2_4	.543	2.991
1020	26.9_8	.578	2.978
1040	28.7_6	.613	2.965
1060	30.5_6	.649	2.952
1080	(32.4_0)	.685	(2.939)
1100	(34.2_7)	.721	(2.926)
1120	(36.1_7)	.758	(2.913)
1140	(38.1_1)	.795	(2.900)
1160	(40.0_8)	.832	(2.887)
1180	(42.0_9)	.870	(2.874)

Density: [91, 113].
Conductance: [94].
Melting Point: [94].

TABLE 90. *Calcium iodide*

Eq wt 146.96 mp 575 °C (848 °K)

$\kappa = -4.6282 + 8.2567 \cdot 10^{-3}T - 2.6610 \cdot 10^{-6}T^2$
$\rho = 4.233 - 0.751 \cdot 10^{-3}T$
$\Lambda = 440.3 \exp(-4617/RT)$

T	Λ	κ	ρ
1060	48.49	1.134_0	3.437
1070	49.70	1.159_9	3.429
1080	50.90	1.185_2	3.422
1090	52.08	1.210_1	3.414
1100	53.25	1.234_4	3.407
1110	54.39	1.258_1	3.399
1120	55.52	1.281_3	3.392
1130	56.63	1.304_0	3.384
1140	57.72	1.326_2	3.377
1150	58.79	1.347_8	3.369
1160	59.84	1.368_9	3.362
1170	60.88	1.389_5	3.354
1180	61.89	1.409_5	3.347
1190	62.89	1.429_0	3.339
1200	63.86	1.448_0	3.332
1210	64.83	1.466_4	3.324
1220	65.76	1.484_3	3.317
1230	66.96	1.501_7	3.309
1240	67.59	1.518_6	3.302
1250	68.48	1.534_9	3.294
1260	69.33	1.550_6	3.287
1270	70.18	1.565_9	3.279
1280	70.99	1.580_6	3.272
1290	71.81	1.594_8	3.264

Density: [91, 113].
Conductance: [94].
Melting Point: [131].

TABLE 91. *Strontium iodide*

Eq wt 170.74 mp 515 °C (788 °K)

$\kappa = -1.8747 + 3.3276 \cdot 10^{-3}T - 0.5169 \cdot 10^{-6}T^2$
$\rho = 4.803 - 0.885 \cdot 10^{-3}T$
$\Lambda = 610.1 \exp(-5409/RT)$

T	Λ	κ	ρ
820	21.2_0	0.506	4.077
840	23.3_7	.556	4.060
860	25.5_5	.605	4.042
880	27.7_2	.653	4.024
900	29.8_9	.701	4.007
920	32.0_7	.749	3.989
940	34.2_5	.797	3.971
960	36.4_3	.843	3.953
980	38.6_1	.890	3.936
1000	40.7_9	.936	3.918
1020	42.9_7	.982	3.900
1040	45.1_6	1.027	3.883
1060	47.3_5	1.072	3.865
1080	49.5_4	1.116	3.847
1100	51.7_3	1.160	3.830
1120	53.9_2	1.204	3.812
1140	56.1_2	1.247	3.794
1160	58.3_1	1.290	3.776
1180	60.5_1	1.332	3.759
1200	62.7_1	1.374	3.741
1220	64.9_2	1.416	3.723
1240	67.1_2	1.457	3.706
1260	69.3_3	1.497	3.688
1280	71.5_4	1.538	3.670

Density: [91, 113].
Conductance: [94].
Melting Point: [130].

TABLE 92. *Barium iodide*

Eq wt 195.59 mp 740 °C (1013 °K)

$\kappa = -2.1845 + 3.3755 \cdot 10^{-3}T - 0.4666 \cdot 10^{-6}T^2$
$\rho = 5.222 - 0.977 \cdot 10^{-3}T$
$\Lambda = 831.2 \exp(-6367/RT)$

T	Λ	κ	ρ
1020	(35.7_8)	0.77_3	(4.225)
1040	38.2_0	$.82_1$	4.206
1060	40.6_1	$.86_9$	4.186
1080	43.0_3	$.91_7$	4.167
1100	45.4_6	$.96_4$	4.147
1120	47.8_9	1.01_1	4.128
1140	50.3_3	1.05_7	4.108
1160	52.7_7	1.10_3	4.089
1180	55.2_2	1.14_9	4.069
1200	57.6_8	1.19_4	4.050
1220	60.1_4	1.23_9	4.030
1240	62.6_0	1.28_4	4.011
1260	(65.0_8)	1.32_8	(3.991)
1280	(67.5_5)	1.37_2	(3.971)

Density: [91, 113].
Conductance: [94].
Melting Point: [130].

TABLE 93. *Aluminum (III) iodide*

Eq wt 135.91 mp 191 °C (464 °K)

$\kappa = -0.1721 \cdot 10^{-4} + 0.8131 \cdot 10^{-8}T + 0.6801 \cdot 10^{-10}T^2$
$\rho = 4.38_3 - 2.50 \cdot 10^{-3}T$
$\Lambda = 118670 \exp(-11160/RT)$

T	$\Lambda \cdot 10^4$	$\kappa \cdot 10^6$	ρ
470	0.69	1.6_3	3.20_8
480	1.01	2.3_6	3.18_3
490	1.33	3.1_0	3.15_8
500	1.67	3.8_6	3.13_3
510	2.02	4.6_3	3.10_8
520	2.38	5.4_1	3.08_3
530	2.75	6.2_0	3.05_8

Density: [35].
Conductance: [35].
Melting Point: [130].

TABLE 94. *Lanthanum (III) iodide*

Eq wt 173.23 mp 761 °C (1034 °K)

$\kappa = -0.9535 + 1.319 \cdot 10^{-3}T$

T	κ
1070	0.457_8
1080	$.471_0$
1090	$.484_2$
1100	$.497_4$
1110	$.510_6$
1120	$.523_8$
1130	$.537_0$
1140	$.550_2$

Conductance: [106].
Melting Point: [130].

TABLE 95. *Cerium (III) iodide*

Eq wt 173.63 mp 752 °C (1025 °K)

$\kappa = -0.8580 + 1.221 \cdot 10^{-3}T$

T	κ
1070	0.448_5
1080	$.460_7$
1090	$.472_9$
1100	$.485_1$
1110	$.497_3$
1120	$.509_5$
1130	$.521_7$

Conductance: [106].
Melting Point: [130].

TABLE 96. *Praseodymium (III) iodide*

Eq wt 173.89 mp 743 °C (1006 °K)

$\kappa = -0.7724 + 1.1304 \cdot 10^{-3}T$

T	κ
1030	0.3919
1040	.4033
1050	.4146
1060	.4259
1070	.4372
1080	.4485
1090	.4598

Conductance: [106].
Melting Point: [130].

TABLE 97. *Neodymium (III) iodide*

Eq wt 175.01 mp 775 °C (1048 °K)

$\kappa = -0.7193 + 1.040 \cdot 10^{-3}T$

T	κ
1080	0.403_9
1090	$.414_3$
1100	$.424_7$
1110	$.435_1$

Conductance: [106].
Melting Point: [130].

TABLE 98. *Silver iodide*

Eq wt 234.80 mp 558 °C (831 °K)

$\kappa = 4.674 \exp(-1146/RT)$
$\rho = 6.415 - 1.01 \cdot 10^{-3}T$
$\Lambda = 239.9 \exp(-1475/RT)$
$\eta = 116.161 - 0.333640T + 3.30383 \cdot 10^{-4}T^2 - 1.10721 \cdot 10^{-7}T^3$

T	Λ	κ		η
840	(99)	2.35	(5.567)	.....
850	(100)	2.37	(5.557)	.....
860	(101)	2.39	(5.546)	.....
870	102	2.41	5.536	.....
880	103	2.43	5.526	2.95
890	104	2.45	5.516	2.86
900	105	2.46	5.506	2.78
910	106	2.48	5.496	2.70
920	107	2.50	5.486	2.63
930	108	2.52	5.476	2.56
940	109	2.53	5.466	2.50
950	110	2.55	5.456	2.44
960	110.5	2.56	5.445	2.39
970	111.5	2.58	5.435	2.34
980	112	2.60	5.425	2.28
990	113	2.61	5.415	2.23
1000	114	2.63	5.405	2.18
1010	115	2.64	5.395	2.13
1020	116	2.66	5.385	2.08
1030	117	2.67	5.375	2.03
1040	117.5	2.69	5.365	1.97
1050	118.5	2.70	5.355	1.91
1060	119	2.71	5.344	1.85
1070	120	2.73	5.334	1.78
1080	121	2.74	5.324	1.71
1090	.....	.....	.....	1.63
1100	.....	.....	.....	1.55

Density: [22].
Conductance: [1, 10, 11, 21, 23, 35].
Viscosity: [24].
Melting Point: [130].

TABLE 99. *Zinc iodide*

Eq wt 159.61 mp 446 °C (719 °K)

$\kappa = 0.6723 - 2.6838 \cdot 10^{-3}T + 2.5446 \cdot 10^{-6}T^2$
$\rho = 4.856 - 1.360 \cdot 10^{-3}T$
$\Lambda = 17880 \exp(-12636/RT)$

T	Λ	κ	ρ
720	2.43	0.059	3.877
730	2.86	.069	3.864
740	3.30	.080	3.850
750	3.78	.091	3.837
760	4.27	.102	3.823
770	4.80	.114	3.809
780	5.34	.127	3.796
790	5.92	.140	3.782
800	6.51	.154	3.767
810	7.14	.168	3.755
820	7.79	.183	3.741
830	8.47	.198	3.728
840	9.17	.213	3.714
850	9.90	.230	3.701
860	10.66	.246	3.687
870	11.45	.263	3.673

Density: [91, 113].
Conductance: [94, 189].
Melting Point: [130].

TABLE 100. *Cadmium iodide*

Eq wt 183.13 mp 387 °C (660 °K)

$\kappa = -1.0841 + 1.7574 \cdot 10^{-3}T + 0.2449 \cdot 10^{-6}T^2$
$\rho = 5.133 - 1.117 \cdot 10^{-3}T$
$\Lambda = 1109.0 \exp(-6365/RT)$

T	Λ	κ	ρ
680	9.4	0.224	4.373
690	10.3	.245	4.362
700	11.2	.266	4.351
710	12.1	.287	4.340
720	13.0_5	.308	4.329
730	13.9_5	.329	4.318
740	14.9	.351	4.306
750	15.8_5	.372	4.295
760	16.8	.393	4.284
770	17.7_5	.414	4.273
780	18.7	.436	4.262
790	19.7	.457	4.251
800	20.6_5	.479	4.239
810	21.6_5	.500	4.228
820	22.6_5	.522	4.217
830	23.6_5	.543	4.206
840	24.6_5	.565	4.195
850	25.7	.587	4.184
860	26.7	.608	4.172
870	27.7_5	.630	4.161
880	28.7_5	.652	4.150
890	29.8	.674	4.139
900	30.8_5	.696	4.128
910	31.9_5	.718	4.117

Density: [66].
Conductance: [66, 94].
Melting Point: [130].

TABLE 101. *Mercury (II) iodide*

Eq wt 227.23 mp 257 °C (530 °K)

$\kappa = 0.3033113 - 1.075096 \cdot 10^{-3}T + 1.411112 \cdot 10^{-6}T^2 - 6.651402 \cdot 10^{-10}T^3$
$\rho = 6.9435 - 3.2351 \cdot 10^{-3}T$
$\Lambda = 0.07345 \exp(3114.3/RT)$
$\eta = 4.00 \cdot 10^{-2} \exp(4531/RT)$

T	Λ	κ	ρ	η
530	1.341	0.03087	5.229	.....
540	1.290	.02950	5.197	.....
550	1.241	.02821	5.164	2.53
560	1.194	.02697	5.132	2.35
570	1.150	.02580	5.099	2.19
580	1.107	.02468	5.067	2.04
590	1.065	.02361	5.035	1.91
600	1.026	.02258	5.002	1.79
610	0.9877	.02160	4.970	1.68
620	.9508	.02066	4.938	1.58
630	.9151	.01975	4.905	1.49
640	.8803	.01888	4.873	.....
650	.8463	.01803	4.841	.....
660	(.8130)	.01720	(4.808)	.....
670	(.7800)	.01640	(4.776)	.....
680	(.7474)	.01560	(4.744)	.....
690	(.7148)	.01482	(4.711)	.....
700	(.6821)	.01405	(4.679)	.....
710	(.6491)	.01327	(4.647)	.....
720	(.6156)	.01250	(4.614)	.....
730	(.5813)	.01172	(4.582)	.....

Density: [18, 78, 103].
Conductance: [29, 94, 103, 189].
Viscosity: [6, 78, 103].
Melting Point: [130].

TABLE 102. *Gallium (II) iodide*

Eq wt 161.78 mp < 150 °C (< 423 °K)

$\kappa = -0.4546 + 1.149 \cdot 10^{-3}T$
$\rho = 4.841 - 1.688 \cdot 10^{-3}T$
$\Lambda = 771.8 \exp(-5121/RT)$

T	Λ	κ	ρ
430	$1._6$	0.04	4.115
440	$2._0$	.05	4.098
450	$2._5$	.06	4.081
460	$2._9$	.07	4.064
470	$3._4$	.08	4.048
480	$3._9$	.10	4.031
490	$4._4$	.11	4.014
500	$4._9$	.12	3.997
510	$5._3$	.13	3.980
520	$5._8$	.14	3.963
530	$6._3$	.15	3.946
540	$6._8$	.17	3.929
550	$(7._3)$	.18	(3.913)
560	$(7._8)$	.19	(3.896)
570	$(8._4)$	.20	(3.879)
580	$(8._9)$	.21	(3.862)
590	$(9._4)$	.22	(3.845)
600	$(9._9)$	.23	(3.828)
610	$(10._4)$	.25	(3.811)
620	$(11._0)$	.26	(3.794)

Density: [105].
Conductance: [105].
Melting Point: [105].

TABLE 103. *Indium (III) iodide*

Eq wt 165.17 mp 210 °C (483 °K)

$\kappa = -0.4380474 + 1.734687 \cdot 10^{-3}T - 1.759083 \cdot 10^{-6}T^2 + 5.775249 \cdot 10^{-10}T^3$

$\rho = 4.5448 - 1.50 \cdot 10^{-3}T$
$\Lambda = 18.26 \exp(-1779.9/RT)$

T	Λ	κ	ρ
500	2.686	0.06172	3.795
520	3.051	.06954	3.765
540	3.391	.07667	3.735
560	3.707	.08315	3.705
580	4.000	.08900	3.675
600	4.271	.09424	3.645
620	4.519	.09891	3.615
640	4.747	.1030	3.585
660	(4.954)	.1066	(3.555)
680	(5.142)	.1097	(3.525)
700	(5.311)	.1124	(3.495)
720	(5.462)	.1146	(3.465)
740	(5.596)	.1164	(3.435)
760	(5.714)	.1178	(3.405)
780	(5.817)	.1188	(3.375)
800	(5.905)	.1196	(3.345)
820	(5.980)	.1200	(3.315)
840	(6.043)	.1202	(3.285)
860	(6.095)	.1201	(3.255)
880	(6.136)	.1198	(3.225)

Density: [34].
Conductance: [34, 189].
Melting Point: [130].

TABLE 104. *Thallium (I) iodide*

Eq wt 331.31 mp 440 °C (713 °K)

$\kappa = -1.261276 + 3.023831 \cdot 10^{-3}T - 7.494862 \cdot 10^{-7}T^2$

T	κ
720	0.527
740	.566
760	.604
780	.641
800	.678
820	.714
840	.750
860	.785
880	.819
900	.853
920	.886
940	.919
960	.951
980	.982
1000	1.013
1020	1.043
1040	1.073
1060	1.102
1080	1.130
1100	1.158
1120	1.185
1140	1.212
1160	1.238
1180	1.263
1200	1.288
1250	1.347
1300	1.403
1340	1.445

Conductance: [21, 125c, 189].
Melting Point: [130].

TABLE 105. *Lead (II) iodide*

Eq wt 230.53 mp 402 °C (675 °K)

$\kappa = -0.6501 + 1.0054 \cdot 10^{-3}T + 0.7888 \cdot 10^{-6}T^2$

T	κ
680	0.399
690	.419
700	.440
710	.442
720	.483
730	.504
740	.526
750	.548
760	.570
770	.592
780	.614
790	.636
800	.659
810	.682
820	.704
830	.727
840	.751
850	.775
860	.798
870	.822

Conductance: [108].
Melting Point: [131].

TABLE 106. *Bismuth (III) iodide*

Eq wt 199.59 mp 418 °C (681 °K)

$\kappa = -0.9306 + 3.0374 \cdot 10^{-3}T - 1.8477 \cdot 10^{-6}T^2$

T	κ
690	0.286
700	.290
710	.295
720	.298
730	.302
740	.305
750	.308
760	.311
770	.313

Conductance: [104].
Melting Point: [104].

TABLE 107. *Lithium carbonate*

Eq wt 36.94 mp 618 °C (891 °K)

$\kappa = 0.9877 - 1.3529 \cdot 10^{-3}T + 4.3873 \cdot 10^{-6}T^2$
$\rho = 2.2026 - 0.3729 \cdot 10^{-3}T$
$\Lambda = 754.5 \exp(-4438/RT)$
$\eta = -5259.12 + 14.8091\ T - 1.38581 \cdot 10^{-2}T^2 + 4.31294 \cdot 10^{-6}T^3$

T	Λ	κ	ρ	η
1010	82.88	4.097	1.8260	.....
1020	84.58	4.172	1.8222	.....
1030	86.31	4.249	1.8185	.....
1040	88.06	4.326	1.8148	.....
1050	89.83	4.404	1.8111	4.64
1060	91.63	4.483	1.8073	4.34
1070	93.46	4.563	1.8036	4.01
1080	95.31	4.644	1.7999	3.67
1090	97.19	4.726	1.7961	3.36
1100	99.09	4.808	1.7924	3.10
1110	101.02	4.892	1.7887	2.91
1120	102.98	4.976	1.7850	2.83

Density: [3, 101].
Conductance: [101].
Viscosity: [107, 128].
Melting Point: [131].

TABLE 108. *Sodium carbonate*

Eq wt 53.00 mp 854 °C (1127 °K)

$\kappa = 13.758 \exp(-3527/RT)$
$\rho = 2.4797 - 0.4487 \cdot 10^{-3}T$
$\Lambda = 550.2 \exp(-4199/RT)$
$\eta = 3.832 \cdot 10^{-5} \exp(26260/RT)$

T	Λ	κ	ρ	η
1140	78.0_8	2.900	1.9682	.....
1150	79.3_3	2.939	1.9637	.....
1160	80.5_7	2.978	1.9592	3.40
1170	81.8_2	3.018	1.9547	3.08
1180	83.0_7	3.057	1.9502	2.80
1190	84.3_2	3.096	1.9457	2.55
1200	85.5_7	3.134	1.9413	2.32
1210	86.8_3	3.173	1.9368	2.12
1220	88.0_8	3.211	1.9323	1.94
1230	89.3_4	3.249	1.9278	1.78
1240	90.5_9	3.288	1.9233	1.63
1250	.....	.....	1.9188	.....
1260	.....	.....	1.9143	.....
1270	.....	.....	1.9099	.....
1280	.....	.....	1.9054	.....

Density: [3, 101].
Conductance: [4, 101].
Viscosity: [107, 128].
Melting Point: [130].

TABLE 109. *Potassium carbonate*

Eq wt 69.1 mp 896 °C (1169 °K)

$\kappa = 11.027 \exp(-3941/RT)$
$\rho = 2.4141 - 0.4421 \cdot 10^{-3}T$
$\Lambda = 544.6 \exp(-4650/RT)$
$\eta = 1.161 \cdot 10^{-5} \exp(29{,}487/RT)$

T	Λ	κ	ρ	η
1180	74.9_8	2.053	1.8924	.....
1190	76.2_2	2.083	1.8880	3.03
1200	77.4_7	2.112	1.8836	2.73
1210	78.7_2	2.141	1.8792	2.46
1220	79.9_7	2.170	1.8747	2.23
1230	81.2_3	2.199	1.8703	2.02
1240	82.4_9	2.227	1.8659	1.83
1250	83.7_5	2.256	1.8615	1.66
1260	85.0_1	2.285	1.8571	.....
1270	86.2_8	2.313	1.8526	.....
1280	87.5_5	2.342	1.8482	.....

Density: [3, 101].
Conductance: [4, 101].
Melting Point: [130].

TABLE 110. *Lithium nitrite*

Eq wt 52.94 mp 220 °C (493 °K)

$\kappa = -0.397585 - 1.51836 \cdot 10^{-3}T + 7.33374 \cdot 10^{-6}T^2$
$\eta = -14909.1 + 87.5812T - 0.171073T^2 + 1.11184 \cdot 10^{-4}T^3$

T	κ	η
510	0.7356	9.89
520	.7959	8.36
530	.8577	.....

Conductance: [66, 207].
Viscosity: [207].
Melting Point: [207].

TABLE 111. *Sodium nitrite*

Eq wt 69.01 mp 285 °C (558 °K)

$\kappa = 13.2 \exp(-2600/RT)$
$\rho = 2.226 - 0.746 \cdot 10^{-3}T$
$\Lambda = 685.7 \exp(-2949/RT)$
$\eta = 187.118 - 0.876094T + 1.41024 \cdot 10^{-3}T^2 \; T^2 - 7.71 - 7.71608 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
570	50.9	1.32_9	1.801	3.04
580	53.2	1.38_3	1.793	2.84
590	55.5	1.43_7	1.786	2.66
600	57.9	1.49_1	1.778	2.48
610	60.2	1.54_5	1.771	2.31
620	62.6	1.60_0	1.763	.....
630	65.0	1.65_4	1.756	.....
640	67.4	1.70_9	1.749	.....
650	69.9	1.76_3	1.741	.....
660	72.4	1.81_8	1.734	.....
670	74.9	1.87_2	1.726	.....
680	77.4	1.92_7	1.719	.....
690	79.9	1.98_1	1.711	.....
				.....
710	85.0	2.09₆	1.696	

Density: [66, 110].
Conductance: [66, 110, 125c, 207].
Viscosity: [110, 125c, 207].
Melting Point: [207].

TABLE 112. *Potassium nitrite*

Eq wt 105.11 mp 419 °C (692 °K)

$\kappa = -4.167433 + 1.148389 \cdot 10^{-2}T - 5.451471 \cdot 10^{-6}T^2$
$\rho = 2.167 - 6.6 \cdot 10^{-4}T$
$\Lambda = 776.99 \exp(-3267.2/RT)$
$\eta = 864.798 - 3.61760T + 5.06274 \cdot 10^{-3}T^2 - 2.36530 \cdot 10^{-6}T^3$

T	Λ	κ	ρ	η
700	.....	.....	.....	1.92
710	76.62	1.238	1.698	1.86
720	79.21	1.275	1.692	1.81
730	81.75	1.311	1.685	.....
740	84.25	1.345	1.679	.....
750	86.69	1.379	1.672	.....

Conductance: [207].
Density: [173].
Viscosity: [110, 125c, 207, 208].
Melting Point: [110].

TABLE 113. *Rubidium nitrite*

Eq wt 131.49 mp 418 °C (691 °K)

$\kappa = -4.54416 + 1.189408 \cdot 10^{-2}T - 5.890905 \cdot 10^{-6}T^2$
$\eta = 8.754 \cdot 10^{-2} \exp(4495/RT)$

T	κ	η
720	0.966	2.03
730	.999	1.94
740	1.031	1.86
750	1.063	1.79
760	1.093	.....

Conductance: [207].
Viscosity: [207].
Melting Point: [207].

TABLE 114. *Cesium nitrite*

Eq wt 178.92 mp 406 °C (679 °K)

$\kappa = -0.92278 + 2.39945 \cdot 10^{-3}\ T$
$\eta = -182.963 + 0.828051T - 1.21823 \cdot 10^{-3}T^2 + 5.90224 \cdot 10^{-7}T^3$

T	κ	η
690	0.7328	2.29
700	.7568	2.19
710	.7808	2.09
720	.8048	2.00
730	.8288	1.93
740	.....	1.86

Conductance: [207].
Viscosity: [207].
Melting Point: [207].

TABLE 115. *Barium nitrite*

Eq wt 114.69 mp 267 °C (540 °K)

$\kappa = -1.284 + 2.65 \cdot 10^{-3}\ T$
$\rho = 3.639 - 7.0 \cdot 10^{-4}\ T$
$\Lambda = 10217 \exp(-8103.8/RT)$

T	Λ	κ	ρ
550	6.115	0.1735	3.254
560	7.064	.2000	3.247
570	8.017	.2265	3.240
580	8.975	.2530	3.233
590	.....	.....	3.226
600	.....	.....	3.219
610	.....	.....	3.212
620	.....	.....	3.205

Conductance: [185].
Density: [173].
Melting Point: [39].

TABLE 116. *Lithium nitrate*

Eq wt 68.95 mp 254 °C (527 °K)

$\kappa = -1.5242 + 3.4674 \cdot 10^{-3}T + 1.8027 \cdot 10^{-6}\ T^2$
$\rho = 2.068 - 0.546 \cdot 10^{-3}T$
$\Lambda = 967.8 \exp\ (-3589/RT)$
$\eta = 20.4645 + 1.34189 \cdot 10^{-2}T - 1.31061 \cdot 10^{-4}T^2 + 1.06106 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
550	36.2	0.928	1.768	5.85
560	38.5	.983	1.762	5.51
570	40.7	1.038	1.757	5.18
580	43.0	1.093	1.751	4.86
590	45.4	1.149	1.746	4.55
600	47.7	1.205	1.740	4.25
610	50.1	1.262	1.735	3.97
620	52.6	1.318	1.729	3.69
630	55.0	1.376	1.724	3.43
640	57.5	1.433	1.719	3.18
650	.....	.....	1.713	2.95
660	.....	.....	1.708	2.74
670	.....	.....	1.702	2.53
680	.....	.....	1.697	2.35
690	.....	.....	1.691	2.18
700	.....	.....	.....	2.03

Density: [26, 180, 224].
Conductance: [26, 93, 116, 195, 224].
Viscosity: [5, 38, 139, 228].
Melting Point: [130].

TABLE 117. *Sodium nitrate*

Eq wt 85.01 mp 310 °C (583 °K)

$\kappa = -1.5713 + 4.3835 \cdot 10^{-3}\ T$
$\rho = 2.320 - 0.715 \cdot 10^{-3}\ T$
$\Lambda = 705.6 \exp\ (-3215/RT)$
$\eta = 10.41 \cdot 10^{-2} \exp\ (3886/RT)$

T	Λ	κ	ρ	η
590	45.4_5	1.015	1.898	2.86
600	47.6	1.059	1.891	2.71
610	49.7_5	1.103	1.884	2.57
620	51.9_5	1.146	1.877	2.44
630	54.1	1.190	1.870	2.32
640	56.3_5	1.234	1.862	2.21
650	(58.5_5)	1.278	(1.855)	2.11
660	(60.8)	1.322	(1.848)	2.01
670	(63.0_5)	1.366	(1.841)	1.93
680	(65.3_5)	1.409	(1.834)	1.85
690	(67.6_5)	1.453	(1.827)	1.77
700	(69.9_5)	1.497	(1.820)	1.70
710	.....	.....	.....	1.63
720	.....	.....	.....	1.57
730	.....	.....	.....	1.52

Density: [15, 26, 61, 66].
Conductance: [7, 26, 27, 61, 66, 71, 75, 93, 192, 224].
Viscosity: [5, 8, 12, 38, 102, 228].
Melting Point: [130].

TABLE 118. *Potassium nitrate*

Eq wt 101.10 mp 337 °C (610 °K)

$\kappa = -1.4347 + 3.7376 \cdot 10^{-3}T - 0.5779 \cdot 10^{-6}T^2$
$\rho = 2.315 - 0.729 \cdot 10^{-3}T$
$\Lambda = 657.4 \exp(-3577/RT)$
$\eta = 50.1676 - 0.164572\ T + 1.86335 \cdot 10^{-4}\ T^2 - 7.12497 \cdot 10^{-8}\ T^3$

T	Λ	κ	ρ	η
620	35.8_5	0.660	1.863	.....
630	37.6	.691	1.856	2.63
640	39.4	.721	1.848	2.49
650	41.2	.751	1.841	2.36
660	43.0	.780	1.834	2.23
670	44.8_5	.810	1.827	2.12
680	46.6_5	.840	1.819	2.02
690	48.5	.869	1.812	1.92
700	50.3_5	.898	1.805	1.88
710	52.2	.928	1.797	1.75
720	54.0_5	.957	1.790	1.69
730	55.9	.986	1.783	1.61
740	57.8	1.015	1.776	1.55
750	59.6_5	1.043	1.768	1.49
760	61.5_5	1.072	1.761	1.44
770	63.4_5	1.101	1.754	1.40
780	65.3_5	1.129	1.746	1.36
790	67.3	1.157	1.739	1.32
800	69.2	1.186	1.732	1.28
810	71.1_5	1.214	1.725	1.25
820	73.1	1.242	1.717	.....
830	75.0_5	1.269	1.710	.....
840	77.0	1.297	1.703	.....
850	79.0	1.325	1.695	.....
860	81.0	1.352	1.688	.....
870	83.0	1.380	1.681	.....

Density: [15, 26, 38, 66, 84, 173, 177, 184, 192, 210].
Conductance: [7, 20, 26, 27, 66, 84, 92, 116, 192, 193, 194, 224].
Viscosity: [5, 8, 12, 38, 57, 102, 107, 228].
Melting Point: [130].

TABLE 119. *Rubidium nitrate*

Eq wt 147.49 mp 316 °C (589 °K)

$\kappa = -1.3769 + 3.8156 \cdot 10^{-3}T - 1.2658 \cdot 10^{-6}T^2$
$\rho = 3.049 - 0.972 \cdot 10^{-3}T$
$\Lambda = 515.7 \exp(-3496/RT)$
$\eta = 190.972 - 0.791802\ T + 1.11940 \cdot 10^{-3}T^2 - 5.33333 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
590	25.8	0.434	2.476	.....
600	27.3	.457	2.466	3.68
610	28.8	.480	2.456	3.45
620	30.3	.502	2.446	3.24
630	31.7	.525	2.437	3.07
640	33.2	.547	2.427	2.92
650	34.7	.568	2.417	2.78
660	36.1	.590	2.407	2.66
670	37.6	.611	2.398	2.56
680	39.1	.632	2.388	2.46
690	40.5	.653	2.378	2.37
700	42.0	.673	2.369	.....
710	43.4	.694	2.359	.....
720	44.8	.714	2.349	.....
730	46.3	.734	2.339	.....
740	47.7	.753	2.330	.....
750	49.1	.773	2.320	.....
760	50.6	.792	2.310	.....

Density: [26].
Conductance: [26, 224].
Viscosity: [139, 228].
Melting Point: [130].

TABLE 120. *Cesium nitrate*

Eq wt 194.92 mp 414 °C (687 °K)

$\kappa = -0.7610 + 1.887 \cdot 10^{-3}T$
$\rho = 3.6206 - 1.16605 \cdot 10^{-3}T$
$\Lambda = 552.4 \exp(-3688/RT)$
$\eta = -41.3159 + 0.21403T - 3.32966 \cdot 10^{-4}T^2 + 1.65583 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
690	37.49	0.5416	2.8160	2.23
700	38.96	.5605	2.8044	2.15
710	40.44	.5794	2.7927	2.06
720	41.93	.5983	2.7810	1.98
730	43.44	.6171	2.7694	1.90
740	44.95	.6360	2.7577	1.83
750	46.48	.6549	2.7461	1.77
760	48.03	.6738	2.7344	1.71

Density: [26, 84].
Conductance: [26, 84, 224].
Viscosity: [139, 228].
Melting Point: [131].

TABLE 121. *Silver nitrate*

Eq wt 169.89 mp 210 °C (483 °K)

$\kappa = -1.9314 + 6.2321 \cdot 10^{-3}T - 1.7924 \cdot 10^{-6}T^2$
$\rho = 4.454 - 1.02 \cdot 10^{-3}T$
$\Lambda = 587.9 \exp(-2898/RT)$
$\eta = 81.7743 - 0.336741T + 4.80289 \cdot 10^{-4}T^2 - 2.32448 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
490	(29.7_3)	0.692	(3.954)	.....
500	(31.7_3)	.737	(3.944)	.....
510	(33.7_2)	.781	(3.934)	.....
520	(35.7_1)	.825	(3.924)	.....
530	(37.6_9)	.868	(3.913)	3.61
540	(39.6_6)	.911	(3.903)	3.38
550	41.6_3	.954	3.893	3.18
560	43.6_0	.996	3.883	3.00
570	45.5_6	1.038	3.873	2.83
580	47.5_2	1.080	3.862	2.68
590	49.4_7	1.122	3.852	2.55
600	51.4_1	1.163	3.842	.....

Density: [25, 36, 54, 60, 224].
Conductance: [5, 60, 78, 135, 181, 194, 219, 224].
Viscosity: [5, 65, 69, 219, 228].
Melting Point: [130].

TABLE 122. *Thallium nitrate*

Eq wt 266.40 mp 207 °C (480 °K)

$\kappa = -0.906043 + 2.6094 \cdot 10^{-3}T$
$\rho = 5.8041 - 1.8737 \cdot 10^{-3}T$
$\Lambda = 633.25 \exp(-3348.3/RT)$
$\eta = -26.2068 + 0.276304T - 7.00275 \cdot 10^{-4}T^2 + 5.31820 \cdot 10^{-7}T^3$

T	Λ	κ	$\frac{\rho}{\pi}$	η
480	18.82	0.3465	4.905	.....
490	20.31	.3726	4.885	.....
500	21.82	.3987	4.867	3.35
510	23.34	.4248	4.849	3.11
520	24.87	.4508	4.830	2.90
530	26.41	.4769	4.811	2.70
540	27.96	.5030	4.792	2.54
550	29.53	.5291	4.773	2.41
560	31.11	.5552	4.755	.....

Density: [25, 191, 224].
Conductance: [110, 125c, 191, 215, 216, 217, 219, 224].
Viscosity: [110, 191, 219, 228].
Melting Point: [130].

TABLE 123. *Vanadium pentoxide*

mp 670 °C (943 °K)

$\kappa = -2.056 + 1.890 \cdot 10^{-3}T$

T	κ
1140	0.09_9
1150	$.11_8$
1160	$.13_6$
1170	$.15_5$
1180	$.17_4$
1190	$.19_3$
1200	$.21_2$
1210	$.23_1$
1220	$.25_0$
1230	$.26_9$
1240	$.28_8$

Conductance: [68].
Melting Point: [130].

TABLE 124. *Chromium trioxide*

mp 196 °C (469 °K)

$\kappa = -0.1952 + 0.4032 \cdot 10^{-3}T - 0.0391 \cdot 10^{-6}T^2$

T	κ
510	0.00026
520	.00389
530	.00751
540	.01113

Conductance: [68].
Melting Point: [133].

TABLE 125. *Molybdenum trioxide*

mp 795 °C (1068 °K)

$\kappa = 11.642 \exp(-5586/RT)$

T	κ
1080	0.862
1090	.883
1100	.904
1110	.925
1120	.946
1130	.967
1140	.989
1150	1.010
1160	1.032
1170	1.053
1180	1.075

Conductance: [76, 68].
Melting Point: [130].

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TABLE 126. *Wüstite* ($Fe_{0.95}O$)

mp 1368 °C (1641 °K)

$\kappa = -31771.7 + 36.3092\ T - 0.0102617\ T^2$ (1648–1700 °K)
$\kappa = -171.25 + 0.27981\ T$ (1710–1773 °K)

T	κ
1650	201
1660	225
1670	246
1680	265
1690	283
1700	298
1710	307
1720	310
1730	313
1740	316
1750	318
1760	321
1770	324

Conductance: [159].
Melting Point: [130].

TABLE 127. *Boron oxide*

Eq wt 23.21 mp 450 °C (723 °K)

$\rho = 1.82216 - 3.45772 \cdot 10^{-4}T + 8.71571 \cdot 10^{-8}T^2$
$\eta = 97913.6 - 135.257\ T + 6.32685 \cdot 10^{-2}T^2 - 9.97755 \cdot 10^{-6}T^3$

T	ρ	η
1410	1.508	5020
1430	1.506	4700
1450	1.504	4400
1470	1.502	4110
1490	1.500	3840
1510	1.499	3580
1530	1.497	3340
1550	1.496	3110
1570	1.494	2900
1590	1.493	2700
1610	1.491	2510
1630	1.490	2330
1650	1.489	2170
1670	1.488	2010
1690	1.487	1870
1710	1.486	1740
1730	1.485	1610
1750	1.484	1500
1770	1.483	1400
1790	1.482	1300
1810	1.482	1210
1830	1.481	1130
1850	1.481	1050
1870	1.480	981
1890	1.480	918

Density: [144, 201].
Viscosity: [137, 144, 145, 200, 201, 209, 222].
Melting Point: [133].

TABLE 128. *Silicon dioxide*

Eq wt 15.02 mp 1723 °C (1996 °K)

$$\eta = 2.52255 \cdot 10^{8} - 294897\ T + 114.935\ T^{2} - 1.49316 \cdot 10^{-2}\ T^{3}$$

T	η	T	η
2210	717,000	2390	127,000
2220	663,000	2400	114,000
2230	610,000	2410	102,000
2240	561,000	2420	91,900
2250	515,000	2430	83,400
2260	472,000	2440	75,400
2270	432,000	2450	69,000
2280	394,000	2460	63,700
2290	359,000	2470	59,100
2300	325,000	2480	55,100
2310	295,000	2490	52,300
2320	267,000	2500	50,200
2330	241,000	2510	48,900
2340	217,000	2520	47,700
2350	195,000	2530	46,900
2360	176,000	2540	46,500
2370	158,000	2550	46,400
2380	141,000	.....	.....

Viscosity: [205, 206].
Melting Point: [133].

TABLE 129. *Germanium dioxide*

Eq wt 26.15 mp 1116 °C (1389 °K)

$\kappa = 29.758 \exp(-37957/RT)$
$\eta = 1.316 \cdot 10^{-4} \exp(74254/RT)$ (1430–1750 °K)
$\eta = 1.967 \cdot 10^{-3} \exp(65143/RT)$ (1760–1990 °K)

T	$\kappa \cdot 10^{+4}$	$\eta \cdot 10^{-3}$
1390	0.320	.....
1420	.428	.....
1450	.565	20,500
1480	.738	12,200
1510	.954	7,370
1540	1.220	4,550
1570	1.547	2,860
1600	1.943	1,830
1630	2.420	1,190
1660	.....	787
1690	.....	528
1720	.....	359
1750	.....	247
1760	.....	242
1790	.....	177
1820	.....	131
1850	.....	97.7
1880	.....	73.7
1910	.....	56.0
1940	.....	43.0
1970	.....	33.2
1990	.....	28.1

Conductance: [163, 146].
Viscosity: [137, 140, 141, 146].
Melting Point: [133].

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TABLE 130. *Lead oxide*

mp 886 °C (1159 °K)

$\kappa = 1.750 \cdot 10^5 \exp(-27629/RT)$

T	κ
1170	1.2_1
1180	1.3_3
1190	1.4_7
1200	1.6_2
1210	1.7_9
1220	1.9_6
1230	2.1_6
1240	2.3_6
1250	2.5_8
1260	2.8_2

Conductance: [68].
Melting Point: [130].

TABLE 131. *Arsenic trioxide*

Eq wt 65.94 mp 312.3 °C (585.5 °K)

$\eta = 1.679 \cdot 10^{-2} \exp(22{,}211/RT)$

T	η
610	1,550,000
620	1,150,000
630	841,000
640	617,000
650	460,000
660	354,000
670	285,000
680	236,000
690	195,000
700	145,000

Viscosity: [202].
Melting Point: [133].

TABLE 132. *Antimony sesquioxide*

mp 655 °C (928 °K)

$\kappa = -1.086 + 1.062 \cdot 10^{-3} T$

T	κ
1110	0.09_3
1120	$.10_3$
1130	$.11_4$
1140	$.12_5$
1150	$.13_5$
1160	$.14_6$

Conductance: [68].
Melting Point: [130].

TABLE 133. *Bismuth sesquioxide*

mp 817 °C (1090 °K)

$\kappa = -11.668 + 10.764 \cdot 10^{-3} T$

T	κ
1100	0.1_7
1110	$.2_8$
1120	$.3_9$
1130	$.5_0$
1140	$.6_0$
1150	$.7_1$
1160	$.8_2$
1170	$.9_3$
1180	1.0_3
1190	1.1_4
1200	1.2_5
1210	1.3_6

Conductance: [68].
Melting Point: [130].

TABLE 134. *Tellurium dioxide*

mp 733 °C (1006 °K)

$\kappa = 1.454 \cdot 10^2 \exp(-9656/RT)$

T	κ
1020	1.24
1030	1.30
1040	1.36
1050	1.42
1060	1.48
1070	1.55
1080	1.62
1090	1.68
1100	1.75
1110	1.82
1120	1.90
1130	1.97
1140	2.05
1150	2.12
1160	2.20
1170	2.28
1180	2.37
1190	2.45
1200	2.53
1210	2.62
1220	2.71
1230	2.80

Conductance: [68].
Melting Point: [133].

TABLE 135. *Iron (II) sulfide*

Eq wt 43.96 mp 1195 °C (1468 °K)

$\kappa = 24462.0 - 30.289\ T + 9.9715 \cdot 10^{-3} T^2$

T	κ
1460	1495
1470	1485
1480	1476
1490	1469
1500	1464

Conductance: [153, 154, 155].
Melting Point: [132].

TABLE 136. *Cobalt (II) sulfide*

Eq wt 45.50 mp 1100 °C (1373 °K)

$\kappa = 6.2884 \exp(-15494/RT)$

T	κ
1460	1312
1470	1265
1480	1221
1490	1178
1500	1138

Conductance: [155].
Melting Point: [130].

TABLE 137. *Nickel (II) sulfide*

Eq wt 48.38 mp 797 °C (1070 °K)

$\kappa = 19337.0 - 20.810\ T + 6.000 \cdot 10^{-3}\ T^2$

T	κ
1150	3340
1160	3271
1170	3203
1180	3136
1190	3070
1200	3005
1210	2941
1220	2879
1230	2818
1240	2758
1250	2699
1260	2642
1270	2586
1280	2531
1300	2424
1320	2322
1340	2225
1360	2134
1380	2045
1400	1963

Conductance: [154].
Melting Point: [130].

TABLE 138. *Copper (I) sulfide*

Eq wt 47.81 mp 1127 °C (1400 °K)

$\kappa = 1923.06 - 2.8871\ T + 1.1055 \cdot 10^{-3}\ T^2$

T	κ
1400	47.94
1410	50.13
1420	52.55
1430	55.19
1440	58.04
1450	61.12
1460	64.42
1470	67.94
1480	71.69
1490	75.65
1500	79.83
1510	84.24
1520	88.86
1530	93.71

Conductance: [155, 152].
Melting Point: [130].

TABLE 139. *Silver sulfide*

Eq wt 123.91 mp 825 °C (1098 °K)

$\kappa = 41.5109 \exp\ (2569.13/RT)$

T	κ
1120	131.7
1140	129.0
1160	126.5
1180	124.2
1200	121.9
1220	119.8
1240	117.8
1260	115.8
1280	114.0
1300	112.2
1320	110.6
1340	108.9
1360	107.4

Conductance: [156, 166].
Melting Point: [166].

TABLE 140. *Germanium (II) sulfide*

Eq wt 52.33 mp 625 °C (898 °K)

$\kappa = 0.616343 - 1.56399 \cdot 10^{-3} T + 1.009032 \cdot 10^{-6} T^2$

T	κ
870	0.01939
890	.02363
910	.02868
930	.03453
950	.04119
970	.04866
990	.05693
1010	.06601
1030	.07590
1050	.08660
1070	.09810

Conductance: [155].
Melting Point: [130].

TABLE 141. *Tin (II) sulfide*

Eq wt 150.77 mp 880 °C (1153 °K)

$\kappa = -12.948 - 6.28321 \cdot 10^{-2}T + 7.81646 \cdot 10^{-5}T^2$
$\rho = 5.111 - 6.83 \cdot 10^{-4}T$
$\Lambda = 25730 \exp(-13618/RT)$

T	Λ	κ	ρ
1160	675	19.35	(4.319)
1170	718	20.54	4.312
1180	762	21.75	4.305
1190	806	22.97	4.298
1200	851	24.21	4.291
1210	896	25.47	4.285
1220	942	26.74	4.278
1230	989	28.02	4.271
1240	1037	29.33	4.264
1250	1085	30.64	4.257
1260	1134	31.98	4.250
1270	1184	33.33	4.244
1280	1235	34.69	4.237
1290	1286	36.07	4.230
1300	1338	37.47	4.223
1320	1444	40.31	4.209
1340	1553	43.21	4.196
1360	1665	46.17	(4.182)
1380	1780	49.20	(4.168)
1400	1897	52.29	(4.155)
1420	2019	55.44	(4.141)

Density: [158].
Conductance: [155].
Melting Point: [130].

TABLE 142. *Lead sulfide*

Eq wt 119.64 mp 1114 °C (1387 °K)

$\kappa = 1815.4 - 2.2606T + 7.4254 \cdot 10^{-4}T^2$
$\rho = 7.260 - 5.400 \cdot 10^{-4}T$
$\Lambda = 338.66 \exp(4867.0/RT)$

T	Λ	κ	ρ
1390	1982	107.8	6.509
1400	1949	105.9	6.504
1410	1918	104.2	6.499
1420	1891	102.6	6.493
1430	1866	101.2	6.488
1440	1843	99.87	6.482
1450	1824	98.72	6.477
1460	1807	97.72	6.472
1470	1792	96.87	6.466
1480	1781	96.17	6.461
1490	1772	95.62	6.455

Density: [150].
Conductance: [151, 154, 155].
Melting Point: [132].

TABLE 143. *Antimony (III) sulfide*

Eq wt 113.25 mp 547 °C (820 °K)

$\kappa = 4.0712 - 1.12847 \cdot 10^{-2}\, T + 7.9857 \cdot 10^{-6}\, T^2$
$\rho = 4.387 - 6.5 \cdot 10^{-4}\, T$
$\Lambda = 14940 \exp(-12846/RT)$

T	Λ	κ	ρ
830	6.07	0.206	3.847
840	6.69	.227	3.841
850	7.35	.249	3.834
860	8.06	.273	3.828
870	8.83	.298	3.821
880	9.64	.325	3.815
890	10.51	.353	3.808
900	11.42	.383	3.802
910	12.39	.415	3.795
920	13.40	.448	3.789
930	14.47	.483	3.782
940	15.59	.520	3.776
950	16.76	.558	3.769
960	17.98	.598	3.763
970	19.26	.639	3.756
980	20.59	.682	3.750
1000	23.40	.772	3.737
1020	26.43	.869	3.724
1040	29.67	.972	3.711
1060	33.14	1.082	3.698
1080	36.83	1.198	3.685

Density: [158].
Conductance: [155].
Melting Point: [130].

TABLE 144. *Bismuth (III) sulfide*

Eq wt 171.40 mp 747 °C (1020 °K)

$\kappa = 3955.2 - 0.598558\, T$
$\rho = 7.237 - 9.72 \cdot 10^{-4}\, T$
$\Lambda = 89320 \exp(55.18/RT)$

T	Λ	κ	ρ
970	9189_3	3374	(6.294)
980	9187_2	3369	(6.284)
990	9185_1	3363	(6.275)
1000	9182_9	3357	6.265
1010	9180_8	3351	6.255
1020	9178_7	3345	6.246
1030	9176_5	3338	6.236
1040	9174_4	3333	6.226
1050	9172_2	3327	6.216
1060	9170_1	3321	6.207
1070	9167_9	3315	6.197
1080	9165_7	3309	6.187
1090	9163_5	3303	6.177
1100	9161_3	3297	6.168
1110	9159_1	3291	6.158
1120	9156_9	3285	6.148
1130	9154_7	3279	6.139
1140	9152_5	3273	6.129
1150	9150_3	3267	6.119
1160	9148_0	3261	(6.109)
1170	9145_8	3255	(6.100)
1180	9143_5	3249	(6.090)
1190	9141_3	3243	(6.080)
1200	9139_0	3237	(6.071)

Density: [158].
Conductance: [157].
Melting Point: [132].

TABLE 145. *Lithium sulfate*

Eq wt 54.97 mp 859 °C (1132 °K)

$\kappa = -24.544 + 4.4630 \cdot 10^{-2}T - 1.7251 \cdot 10^{-5}\,T^2$
$\rho = 2.464 - 0.000407\,T$
$\Lambda = 394.8 \exp(-2932/RT)$

T	Λ	κ	ρ
1140	107.5	3.915	2.000
1150	109.1	3.966	1.996
1160	110.6	4.014	1.992
1170	112.1	4.058	1.987
1180	113.5	4.099	1.984
1190	114.7	4.136	1.980
1200	115.9	4.170	1.976
1210	117.0	4.201	1.972
1220	118.0	4.228	1.967
1230	118.9	4.252	1.964
1240	119.7	4.272	1.959
1250	120.4	4.289	1.955

Density: [25].
Conductance: [115].
Melting Point: [130].

TABLE 146. *Sodium sulfate*

Eq wt 71.03 mp 889 °C (1157 °K)

$\kappa = 11.893 \exp(-3819.9/RT)$
$\rho = 2.628 - 4.83 \cdot 10^{-4}T$
$\Lambda = 550.19 \exp(-4507.0/RT)$

T	Λ	κ	ρ
1180	80.48	2.332	2.058
1190	81.79	2.364	2.053
1200	83.09	2.396	2.048
1210	84.40	2.428	2.044
1220	85.71	2.460	2.039
1230	87.02	2.492	2.034
1240	88.34	2.523	2.029
1250	.....	.....	2.440
1300	.....	.....	2.576
1350	.....	.....	2.712

Density: [25].
Conductance: [4, 226].
Melting Point: [131].

TABLE 147. *Potassium sulfate*

Eq wt 137.13 mp 1069 °C (1342 °K)

$\kappa = -23.5770 + 3.57269 \cdot 10^{-2}\,T - 1.24807 \cdot 10^{-5}\,T^2$
$\rho = 2.4697 - 4.473 \cdot 10^{-4}\,T$
$\Lambda = 814.95 \exp(-4721.6/RT)$

T	Λ	κ	ρ
1350	140.2	1.908	1.866
1360	142.0	1.927	1.861
1370	.....	.....	1.857
1380	.....	.....	1.853
1390	.....	.....	1.848
1400	.....	.....	1.843
1410	.....	.....	1.839

Density: [25, 178].
Conductance: [4, 161].
Melting Point: [130].

TABLE 148. *Rubidium sulfate*

Eq wt 133.52 mp 1074 °C (1347 °K)

$\kappa = 6.2394 \exp(-3977.2/RT)$
$\rho = 3.442 - 6.65 \cdot 10^{-4}T$
$\Lambda = 471.72 \exp(-4956.6/RT)$

T	Λ	κ	ρ
1340	73.33	1.401	2.551
1350	74.34	1.416	2.544
1360	75.35	1.432	2.538
1370	76.36	1.447	2.531
1380	77.38	1.463	2.524
1390	78.40	1.478	2.518
1400	79.42	1.493	2.511
1450	.....	.....	2.478
1500	.....	.....	2.445
1550	.....	.....	2.411
1600	.....	.....	2.378
1650	.....	.....	2.345
1700	.....	.....	2.312
1750	.....	.....	2.278
1800	.....	.....	2.245

Density: [25].
Conductance: [226].
Melting Point: [130].

TABLE 149a. *Cesium sulfate*

Eq wt 180.95 mp 1019 °C (1292 °K)

$\kappa = -0.46852 + 1.2287 \cdot 10^{-3}T$
$\rho = 3.116 + 5.86 \cdot 10^{-4}T - 4.94 \cdot 10^{-7}T^2$
$\Lambda = 387.47 \exp(-4528.7/RT)$

T	Λ	κ	ρ
1300	67.12	1.129	3.043
1310	68.01	1.141	3.036
1320	68.90	1.153	3.029
1330	69.80	1.166	3.021
1340	70.71	1.178	3.014
1350	71.63	1.190	3.007
1360	72.55	1.202	2.999
1400	.....	.....	2.968
1450	.....	.....	2.927
1500	.....	.....	2.884
1550	.....	.....	2.837
1600	.....	.....	2.789
1650	.....	.....	2.738
1700	.....	.....	2.685
1750	.....	.....	2.629

Density: [25].
Conductance: [226].
Melting Point: [130].

TABLE 149b. *Silver sulfate*

Eq wt 101.97 mp 660 °C (933 °K)

$\kappa = 7.4568 \exp(-2754.1/RT)$
$\rho = 5.843 - 1.089 \cdot 10^{-3}T$
$\Lambda = 199.04 \exp(-3188.5/RT)$

T	Λ	κ	ρ
940	36.11	1.707	4.819
950	36.76	1.733	4.808
960	37.41	1.760	4.798
970	38.06	1.786	4.787
980	38.70	1.813	4.776
990	39.35	1.839	4.765
1000	40.00	1.865	4.754
1010	40.64	1.890	4.743
1020	41.29	1.916	4.732

Density: [226].
Conductance: [226].
Melting Point: [130].

TABLE 150. *Tetrapropylammonium tetrafluoroborate*

Eq wt 273.17 mp 248 °C (521 °K)

$\kappa = 6.6731 \exp(-4472.7/RT)$
$\rho = 1.2467 - 6.415 \cdot 10^{-4}T$
$\Lambda = 2973.9 \exp(-4884.8/RT)$
$\eta = 539.745 - 2.88873T + 5.20040 \cdot 10^{-3}T^2 - 3.13987 \cdot 10^{-6}T^3$

T	Λ	κ	ρ	η
530	28.76	0.09546	0.9067	2.06
540	31.34	.10328	.9003	1.85
550	34.04	.11141	.8939	.....
560	36.89	.11985	.8875	.....

Density: [190, 221].
Conductance: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 151. *Tetrapropylammonium hexafluorophosphate*

Eq wt 331.30 mp 237.0 °C (510.2 °K)

$\kappa = 21.0096 \exp(-5902.52/RT)$
$\rho = 1.2433 - 3.224 \cdot 10^{-4}T$
$\Lambda = 7610.3 \exp(-6070.0/RT)$
$\eta = 900.654 - 4.87945T + 8.87944 \cdot 10^{-3}T^2 - 5.41472 \cdot 10^{-6}T^3$

T	Λ	κ	ρ	η
520	21.38	0.06941	1.0757	2.99
530	23.88	.07731	1.0724	2.65
540	26.58	.08577	1.0692	2.37
550	29.46	.09479	1.0660	.....

Density: [190, 221].
Conductance: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 152. *Tetrapropylammonium tetraphenylborate*

Eq wt 505.57 mp 205.7 °C (478.9 °K)

$\rho = 0.14613 + 3.70736 \cdot 10^{-3}T - 4.29706 \cdot 10^{-6}T^2$
$\eta = 2348.89 - 12.9447T + 2.39385 \cdot 10^{-2}T^2 - 1.48320 \cdot 10^{-2}T^3$

T	ρ	η
490	0.9310	8.65
500	.9255	7.16
510	.9192	6.02
520	.9120	5.12
530	.....	4.38

Density: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 153. *Tetrabutylammonium bromide*

Eq wt 322.37 mp 119-5 °C (392.7 °K)

$\kappa = 1926.41 \exp(-10818.4/RT)$
$\rho = 1.287 - 7.039 \cdot 10^{-4}T$
$\Lambda = 817140 \exp(-11041/RT)$

T	Λ	κ	ρ
400	0.7575	0.002362	1.0054
410	1.0631	.003293	0.9984

Density: [190, 221].
Conductance: [190, 221].
Melting Point: [190].

TABLE 154. *Tetrabutylammonium iodide*

Eq wt 369.37 mp 146.0 °C (419.2 °K)

$\kappa = -6.48575 \cdot 10^{-2} + 1.66797 \cdot 10^{-4}T$
$\rho = 1.446 - 8.388 \cdot 10^{-4}T$
$\Lambda = 136940 \exp(-9394.2/RT)$

T	Λ	κ	ρ
420	1.755	0.005197	1.0937
430	2.336	.006865	1.0853
440	2.927	.008533	1.0769

Density: [190, 220, 221].
Conductance: [190, 220, 221].
Melting Point: [190].

TABLE 155. *Tetrabutylammonium tetrafluoroborate*

Eq wt 329.28 mp 162 °C (435 °K)

$\rho = 1.1906 - 5.812 \therefore 10^{-4}\ T$
$\eta = 1099.50 - 6.25565\ T + 1.19468 \cdot 10^{-2}\ T^2 - 7.64127 \cdot 10^{-6}\ T^3$

T	ρ	η
440	0.9349	9.00
450	.9291	7.37
460	.9232	6.07
470	.9174	5.05
480	.9116	4.27
490	.9058	3.67
500	.9000	3.22
510	.8942	2.86
520	.8884	2.55
530	.8826	2.25
540	.8768	1.91

Density: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 156. *Tetrabutylammonium hexafluorophosphate*

Eq wt 387.43 mp 247 °C (520 °K)

$\kappa = -0.193219 + 4.43623 \cdot 10^{-4}\ T$
$\rho = 1.3252 - 6.557 \cdot 10^{-4}\ T$
$\Lambda = 4743.7 \exp(-5954.3/RT)$
$\eta = 3.173 \cdot 10^{-3} \exp(7159/RT)$

T	Λ	κ	ρ	η
530	16.60	0.04190	0.9777	2.84
540	18.49	.04634	.9711	2.51
550	20.39	.05077	.9646	2.22

Density: [190, 221].
Conductance: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 157. *Tetrabutylammonium tetraphenylborate*

Eq wt 561.68 mp 236.5 °C (509.7 °K)

$\kappa = 8.0270 \exp(-6587.0/RT)$
$\rho = 1.1435 - 4.945 \cdot 10^{-4}\ T$
$\Lambda = 6841.1 \exp(-6893.0/RT)$
$\eta = 1.588 \cdot 10^{-3} \exp(8235/RT)$

T	Λ	κ	ρ	η
510	7.605	0.01207	0.8913	.....
520	8.665	.01367	.8864	4.59
530	9.828	.01542	.8814	3.95
540	11.10	.01732	.8765	3.42

Density: [190, 221].
Conductance: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 158. *Tetrahexylammonium tetrafluoroborate*

Eq wt 441.48 mp 91 °C (364 °K)

$\rho = 1.1296 - 5.772 \cdot 10^{-4}\ T$
$\eta = 1.806 \cdot 10^{-4} \exp(9841/RT)$

T	ρ	η
370	0.9161	.....
380	.9103	82.61
390	.9045	59.14
400	.8987	43.06
410	.8930	31.83
420	.8872	23.88
430	.8814	18.15
440	.8757	13.97
450	.8699	10.88
460	.8641	8.56
470	.8583	6.81
480	.8526	5.47
490	.8468	4.43
500	.8410	3.62

Density: [190, 221].
Viscosity: [190, 221].
Melting Point: [190].

TABLE 159. *Tetra-n-amylammonium thiocyanate*

Eq wt 356.64 mp 50.5 °C (323.7 °K)

$\kappa = 0.0621247 - 3.93243 \cdot 10^{-4}T + 6.24733 \cdot 10^{-7}T^2$
$\rho = 1.0774 - 5.3662 \cdot 10^{-4}T$
$\Lambda = 5.7747 \cdot 10^{5} \exp(-9882.2/RT)$
$\eta = 116917 - 941.774T + 2.53276T^2 - 2.27331 \cdot 10^{-3}T^2$

T	Λ	$\kappa \cdot 10^4$	ρ	η
330	0.1540	3.887	0.9003	253
340	.2558	6.420	.8950	151
350	.4090	10.20	.8896	91.1
360	.6145	15.24	.8842	60.6
370	.8731	21.51	.8789	45.4
380	1.1860	29.05	.8735	32.3
390	1.5540	37.83	.8681	.....

Density: [172].
Conductance: [172].
Viscosity: [172].
Melting Point: [218].

TABLE 160. *Lithium molybdate*

Eq wt 86.90 mp 705 °C (978 °K)

$\kappa = -4.531 + 7.740 \cdot 10^{-3}T - 1.356 \cdot 10^{-6}T^2$

T	κ
980	1.752
990	1.803
1000	1.853
1010	1.903
1020	1.953
1030	2.003
1040	2.052
1050	2.101
1060	2.150
1070	2.198
1080	2.247
1090	2.295
1100	2.342
1120	2.437
1140	2.530
1160	2.623
1180	2.714
1200	2.804
1220	2.893

Conductance: [117].
Melting Point: [130].

TABLE 161. *Sodium molybdate*

Eq wt 102.97 mp 687 °C (960 °K)

$\kappa = -3.1705 + 5.2419 \cdot 10^{-3}T - 0.8970 \cdot 10^{-6}T^2$
$\rho = 3.407 - 0.629 \cdot 10^{-3}T$
$\Lambda = 779.9 \exp(-5713/RT)$

T	Λ	κ	ρ
1020	(46.3)	1.243	(2.765)
1030	(47.7)	1.277	(2.759)
1040	(49.0)	1.311	(2.753)
1050	(50.4)	1.345	(2.747)
1060	(51.8)	1.378	(2.740)
1070	(53.2)	1.411	(2.734)
1080	(54.5)	1.444	(2.728)
1090	(55.9)	1.477	(2.721)
1100	(57.3)	1.510	(2.715)
1110	(58.6)	1.543	(2.709)
1120	60.0	1.575	2.703
1130	61.4	1.607	2.696
1140	62.8	1.640	2.690
1150	64.1	1.671	2.684
1160	65.5	1.703	2.677
1170	66.9	1.735	2.671
1180	68.2	1.767	2.665
1190	69.6	1.797	2.658
1200	71.0	1.828	2.652
1210	72.3	1.859	2.646
1220	73.7	1.890	2.640
1230	75.1	1.920	2.633

Density: [26].
Conductance: [26, 76].
Melting Point: [130].

TABLE 162. *Potassium molybdate*

Eq wt 119.08 mp 926 °C (1199 °K)

$$\rho = 2.888 - 2.83 \cdot 10^{-4}T - 1.28 \cdot 10^{-7}T^2$$

T	ρ
1250	2.334
1300	2.304
1350	2.273
1400	2.241
1450	2.209
1500	2.176
1550	2.142
1600	2.108
1650	2.073
1700	2.037
1750	2.001

Density: [25].
Melting Point: [130].

TABLE 163. *Sodium tungstate*

Eq wt 146.96 mp 698 °C (971 °K)

$$\kappa = 7.541 \exp(-3931/RT)$$
$$\rho = 4.629 - 0.797 \cdot 10^{-3}T$$
$$\Lambda = 381.7 \exp(-4491/RT)$$

T	Λ	κ	ρ
1050	44.4	1.14_5	3.792
1060	45.3	1.16_5	3.784
1070	46.2	1.18_5	3.776
1080	47.1	1.20_5	3.768
1090	48.0	1.23	3.760
1100	48.9	1.25	3.752
1110	49.8	1.27	3.744
1120	50.7	1.29	3.736
1130	51.6	1.31	3.728
1140	52.5	1.33	3.720
1150	53.4	1.35	3.712
1160	54.4	1.37	3.704
1170	55.3	1.39	3.697
1180	56.2	1.41	3.689
1190	57.1	1.43	3.681
1200	58.0	1.45	3.673
1210	59.0	1.47	3.665
1220	59.9	1.49	3.657
1230	60.8	1.51	3.649
1240	61.7	1.53	3.641

Density: [26].
Conductance: [26].
Melting Point: [131].

TABLE 164. *Potassium tungstate*

Eq wt 163.07 mp 930 °C (1203 °K)

$$\rho = 4.419 - 1.233 \cdot 10^{-3}T + 1.62 \cdot 10^{-7}T^2$$

T	ρ
1250	3.131
1300	3.090
1350	3.050
1400	3.010
1450	2.972
1500	2.934
1550	2.897
1600	2.861
1650	2.826
1700	2.791
1750	2.757

Density: [25].
Melting Point: [130].

TABLE 165. *Sodium thiocyanate*

Eq wt 81.08 mp 310 °C (583 °K)

$\kappa = 43.0 \exp(-4740/RT)$

$\eta = 526.399 - 2.49292\ T + 3.96856 \cdot 10^{-3}\ T^2 - 2.11546 \cdot 10^{-6}\ T^3$

T	κ	η
590	0.754	2.56
600	.807	2.39
610	.861	2.25
620	.917	2.13
630	.974	2.02
640	1.035	.....
650	1.096	.....

Conductance: [112].
Viscosity: [112].
Melting Point: [112].

TABLE 166. *Potassium thiocyanate*

Eq wt 97.18 mp 172 °C (455 °K)

$\kappa = 100 \exp(-5850/RT)$

$\rho = 1.9581 - 0.800 \cdot 10^{-3}T$

$\Lambda = 7874 \exp(-6082/RT)$

$\eta = 1935.08 - 11.1776\ T + 2.16788 \cdot 10^{-2}\ T^2 - 1.40826 \cdot 10^{-5}T^3$

T	Λ	κ	ρ	η
450	8.8	0.144	1.5981	11.8
460	10.2	.166	1.5901	9.87
470	11.7	.190	1.5821	8.36
480	(13.4)	.217	(1.5741)	7.20
490	(15.3)	.246	(1.5661)	6.33
500	(17.3)	.277	(1.5581)	5.65
510	(19.5)	.311	(1.5501)	5.09
520	.....	.....	.....	4.55

Density: [110].
Conductance: [112].
Viscosity: [112].
Melting Point: [131].

TABLE 167. *Sodium hydroxide*

Eq wt 40.01 mp 318 °C (591 °K)

$\kappa = -3.23 + 9.0 \cdot 10^{-3}T$

$\rho = 2.068 - 0.4784 \cdot 10^{-3}T$

$\Lambda = 668.2 \exp(-3120/RT)$

$\eta = 164.771 - 0.614833T + 7.80340 \cdot 10^{-4}T^2 - 3.33334 \cdot 10^{-7}T^3$

T	Λ	κ	ρ	η
600	(48.7)	2.17	(1.781)	.....
610	(50.9)	2.26	(1.776)	.....
620	53.1	2.35	1.771	.....
630	55.3	2.44	1.767	3.79
640	57.5	2.53	1.762	3.52
650	59.7	2.62	1.757	3.28
660	61.9	2.71	1.752	3.07
670	64.1	2.80	1.747	2.87
680	66.4	2.89	1.743	2.70
690	68.6	2.98	1.738	2.55
700	70.9	3.07	1.733	2.42
710	73.2	3.16	1.728	2.31
720	75.4	3.25	1.724	2.20
730	77.7	3.34	1.719	2.11
740	.....	.....	.....	2.03
750	.....	.....	.....	1.96
760	.....	.....	.....	1.90
770	.....	.....	.....	1.84
780	.....	.....	.....	1.78
790	.....	.....	.....	1.72
800	.....	.....	.....	1.66
810	.....	.....	.....	1.59
820	.....	.....	.....	1.52

Density: [37].
Conductance: [37].
Viscosity: [37].
Melting Point: [131].

TABLE 168. *Potassium hydroxide*

Eq wt 56.10 mp 360 °C (633 °K)

$\kappa = -1.38 + 5.80 \cdot 10^{-3}T$
$\rho = 2.013 - 0.4396 \cdot 10^{-3}T$
$\Lambda = 520.2 \exp(-2467/RT)$
$\eta - 52.7561 - 0.166134T + 1.80314 \cdot 10^{-4}T^2$
$- 6.66494 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
640	.....	.....	1.732	.....
650	.....	.....	1.727	.....
660	.....	.....	1.723	.....
670	$81._8$	2.51	1.718	.....
680	$83._9$	2.56	1.714	2.21
690	$86._0$	2.62	1.710	2.08
700	$88._2$	2.68	1.705	1.96
710	$90._3$	2.74	1.701	1.84
720	$92._5$	2.80	1.696	1.74
730	$94._6$	2.85	1.692	1.64
740	$96._8$	2.91	1.688	1.55
750	$99._0$	2.97	1.683	1.46
760	$101._2$	3.03	1.679	1.39
770	$103._4$	3.09	1.675	1.31
780	$105._6$	3.14	1.670	1.25
790	$107._8$	3.20	1.666	1.18
800	$110._1$	3.26	1.661	1.13
810	$112._3$	3.32	1.657	1.07
820	$114._6$	3.38	1.653	1.02
830	$116._9$	3.43	1.648	0.97
840	$119._2$	3.49	1.644	.93
850	$121._5$	3.55	1.639	.89
860	$123._8$	3.61	1.635	.85
870	$126._1$	3.67	1.631	.81

Density: [37].
Conductance: [37].
Viscosity: [37].
Melting Point: [132].

TABLE 169. *Potassium dichromate*

Eq wt 147.11 mp 398 °C (671 °K)

$\kappa = 73.0 \exp(-7800/RT)$
$\rho = 2.753 - 0.695.10^{-3}T$
$\Lambda = 6052 \exp(-8141/RT)$
$\eta - 79.5667 - 0.110600T \quad 1.12662 \cdot 10^{-5}T^2$
$+ 4.25741 \cdot 10^{-8}T^3$

T	Λ	κ	ρ	η
690	$16._0$	0.24_7	2.273	11.87
700	$17._4$	$.26_8$	2.267	11.23
710	$18._9$	$.29_0$	2.260	10.60
720	$20._4$	$.31_3$	2.253	9.99
730	$22._1$	$.33_7$	2.246	9.39
740	$23._8$	$.36_3$	2.239	8.81
750	$25._7$	$.38_9$	2.232	8.24
760	$27._6$	$.41_7$	2.225	7.69
770	$29._6$	$.44_6$	2.218	7.16
780	$31._7$	$.47_6$	2.211	6.65
790	$33._9$	$.50_7$	2.204	.....
800	$36._1$	$.54_0$	2.197	.....

Density: [25, 110].
Conductance: [8, 110].
Viscosity: [8, 110].
Melting Point: [130].

TABLE 170. *Sodium metaphosphate*

Eq wt 101.98 mp 625 °C (898 °K)

$\eta = 2.412 \cdot 10^{-2} \exp(19899/RT)$

T	η
920	1290
930	1150
940	1020
950	913
960	818
970	735
980	661
990	597
1000	539
1010	488
1020	443

Viscosity: [200].
Melting Point: [130].

TABLE 171. *Uranyl chloride*

Eq wt 170.49 mp 588 °C (851 °K)

$\kappa = -0.273 + 0.371 \cdot 10^{-3}T$

T	κ
860	0.046
870	.050
880	.053
890	.057
900	.061
910	.065
920	.068
930	.072
940	.076
950	.079
960	.083

Conductance: [64].
Melting Point: [64].

TABLE 172. *Lithium hydride*

Eq wt 7.948 mp 688 °C (961 °K)

$\kappa = 37.4709 - 7.75006 \cdot 10^{-2}T + 4.01118 \cdot 10^{-6}T^2$

T	κ
970	0.0366
980	.0438
990	.0590
1000	.0822
1010	.1134
1020	.1527
1030	.2000

Conductance: [165].
Melting Point: [211].

TABLE 173. *Lithium chlorate*

Eq wt 90.39 mp 127.8 °C (401.0 °K)

$\kappa = -0.95475 + 2.6390 \cdot 10^{-3}T$
$\rho = 2.3936 - 7.5702 \cdot 10^{-4}T$
$\Lambda = 9394.7 \exp(-6072.1/RT)$
$\eta = 13199.6 - 88.4573\ T + 0.198361\ T^2 - 1.48684 \cdot 10^{-4}T^3$

T	Λ	κ	ρ	η
410	5.52	0.1272	2.0832	29.14
420	6.69	.1536	2.0756	22.72
430	7.87	.1800	2.0681	18.49
440	9.05	.2064	2.0605	15.58
450	10.25	.2328	2.0529	.....

Density: [164, 175].
Conductance: [164, 174].
Viscosity: [175].
Melting Point: [174].

TABLE 174. *Lithium perchlorate*

Eq wt 106.40 mp 236 °C (509 °K)

$$\rho = 2.337 - 0.612 \cdot 10^{-3} T$$

T	ρ
530	2.013
540	2.007
550	2.000
560	1.994
570	1.988
580	1.982
590	1.976
600	1.970
610	1.964
620	1.958
630	1.951
640	1.945
650	1.939

Density: [177].
Melting Point: [130].

7. Cumulative Tables of Temperature Dependent Equations

The best temperature dependent equations for specific conductance, density, equivalent conductance and viscosity (tables 1–174) are summarized in tables 175–178 respectively. Tables 179–182 contain sets of exponential and power series equations for specific conductance and viscosity.

The precisions marked with asterisks (*) in table 179 are approximate; the values in these instances may be 2 to 5 times larger than the table entries. The uncertainties in brackets, being based on minimal information, are more qualitative than the unbracketed values.

TABLE 175. *Specific conductance—Best equations*

Salt	Best equation	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
LiF	$\kappa = -15.0389 + 3.5354 \cdot 10^{-2}T - 1.28145 \cdot 10^{-5}T^2$	1148.2–1310.2	0.0237	[86]	12
NaF	$\kappa = 1.4605 + 2.7374 \cdot 10^{-3}T$	1276 –1411	.0179	[86]	3.5
KF	$\kappa = 9.2728 \cdot 10^{-2} + 3.0628 \cdot 10^{-3}T$	1132.2–1285.2	.0201	[86]	12
CsF	$\kappa = -1.47691 + 3.997 \cdot 10^{-3}T$	1010 –1125	.0456	[182]	5
CuF_2	$\kappa = 0.93 + 1.0 \cdot 10^{-3}T$	1270 –1370	.....	[86]	(20)
AgF	$\kappa = -5.2 + 12.0 \cdot 10^{-3}T$	773 – 923	.....	[86]	(20)
ZnF_2	$\kappa = -3.75 + 6.0 \cdot 10^{-3}T$	1173 –1223	.....	[86]	(20)
PbF_2	$\kappa = 0.7 + 4.0 \cdot 10^{-3}T$	1123 –1273	.....	[86]	(20)
MnF_2	$\kappa = 4.0 \cdot 10^{-3}T$	1223 –1273	.....	[86]	(20)
LiCl	$\kappa = -2.0647 + 12.1271 \cdot 10^{-3}T - 3.7641 \cdot 10^{-6}T^2$	917 –1056	.00074	[62, 79]	0.7
NaCl	$\kappa = -2.4975 + 8.0431 \cdot 10^{-3}T - 2.2227 \cdot 10^{-6}T^2$	1079 –1294	.00164	[79]	.8
KCl	$\kappa = -3.99005 + 9.0222 \cdot 10^{-3}T - 3.000 \cdot 10^{-6}T^2$	1063 –1198	.0031	[79]	.6
RbCl	$\kappa = -3.6290 + 7.3405 \cdot 10^{-3}T - 2.1918 \cdot 10^{-6}T^2$	1003 –1197	.0026	[82]	3.5
CsCl	$\kappa = -3.2034 + 6.0802 \cdot 10^{-3}T - 1.5216 \cdot 10^{-6}T^2$	926 –1170	.00280	[82]	5.0
$BeCl_2$	$\kappa = -0.075392 + 1.0576 \cdot 10^{-4}T$	718 – 761	$9.70 \cdot 10^{-5}$	[186]	(50)
$MgCl_2$	$\kappa = -0.6049 + 1.352 \cdot 10^{-3}T + 0.2911 \cdot 10^{-6}T^2$	987 –1252	0.00300	[94]	1
$CaCl_2$	$\kappa = 19.528 \exp(-4749/RT)$	1046 –1291	.00587	[94]	2.5
$SrCl_2$	$\kappa = 17.792 \exp(-4987/RT)$	1146 –1357	.0012	[94]	4.0
$BaCl_2$	$\kappa = 17.479 \exp(-5274/RT)$	1233 –1359	.00254	[94]	9.0
$ScCl_3$	$\kappa = -2.890 + 2.796 \cdot 10^{-3}T$	1213 –1264	.....	[30]	.....
YCl_3	$\kappa = -3.7071 + 5.9576 \cdot 10^{-3}T - 1.8199 \cdot 10^{-6}T^2$	973 –1148	.00428	[35]	(10)
$LaCl_3$	$\kappa = -13.538 + 22.487 \cdot 10^{-3}T - 8.167 \cdot 10^{-6}T^2$	1146 –1260	.009	[83]	10
$CeCl_3$	$\kappa = -10.03815 + 1.707017 \cdot 10^{-2}T - 6.301668 \cdot 10^{-6}T^2$	1101 –1204	$5.80 \cdot 10^{-3}$	[119]	15
$PrCl_3$	$\kappa = 36.17 \exp(-8258/RT)$	1097 –1238	0.0032	[32]	15
$NdCl_3$	$\kappa = -2.018 + 2.527 \cdot 10^{-3}T$	1048 –1173	.0024	[32]	(12)
$GdCl_3$	$\kappa = 22.247 \exp(7300.6/RT)$	902.2– 971.2	.00525	[171]	20
$DyCl_3$	$\kappa = -1.37966 + 1.8417 \cdot 10^{-3}T$	952 –1003	.00483	[171]	20
$HoCl_3$	$\kappa = -1.40281 + 1.79896 \cdot 10^{-3}T$	1020 –1092	.00289	[171]	20
$ErCl_3$	$\kappa = -1.31353 + 1.6584 \cdot 10^{-3}T$	1074 –1112	.000150	[171]	20
$ThCl_4$	$\kappa = -13.1887 + 22.5705 \cdot 10^{-3}T - 9.0973 \cdot 10^{-6}T^2$	1087 –1195	.0140	[32]	(15)
UCl_4	$\kappa = -2.023 + 2.803 \cdot 10^{-3}T$	843 – 893	.00130	[32]	(9)
$MnCl_2$	$\kappa = 1.572640 - 1.569355 \cdot 10^{-3}T + 1.698935 \cdot 10^{-6}T^2$	923 –1123	$3.66 \cdot 10^{-4}$	[192]	20
CuCl	$\kappa = -1.290779 + 1.2137306 \cdot 10^{-2}T - 9.126581 \cdot 10^{-6}T^2 + 2.196380 \cdot 10^{-9}T^3$	746 –1430	$6.40 \cdot 10^{-3}$	[189]	5
AgCl	$\kappa = -1.578 + 1.0697 \cdot 10^{-2}T - 4.51 \cdot 10^{-6}T^2$	753 –1013	$3.5 \cdot 10^{-3}$	[166]	0.7
$ZnCl_2$	$\kappa = 0.423433 - 1.53761 \cdot 10^{-3}T + 1.39393 \cdot 10^{-6}T^2$	593.3– 672.5	$4.66 \cdot 10^{-4}$	[94]	30

TABLE 175. *Specific conductance—Best equations*—Continued

Salt	Best equation	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
$ZnCl_2$	$\kappa = 1.51396 - 4.77073 \cdot 10^{-3}T + 3.79161 \cdot 10^{-6}T^2$	672.5- 824.7	$8.38 \cdot 10^{-4}$	[94]	5
$ZnCl_2$	$\kappa = 1.3084 - 4.33201 \cdot 10^{-3}T + 3.56250 \cdot 10^{-6}T^2$	824.7- 969.7	$1.60 \cdot 10^{-3}$	[94]	5
$CdCl_2$	$\kappa = -1.9571 + 6.1834 \cdot 10^{-3}T - 1.9576 \cdot 10^{-6}T^2$	845 -1082	$1.49 \cdot 10^{-4}$	[94]	0.6
HgCl	$\kappa = 5.255 \exp(-2644/RT)$	802 - 819	0.00604	[35]	(20)
$HgCl_2$	$\kappa = 2.060513 \cdot 10^{-3} - 1.061468 \cdot 10^{-5}T + 1.793902 \cdot 10^{-8}T^2 - 9.720443 \cdot 10^{-12}T^3$	559 - 705	$3.87 \cdot 10^{-7}$	[189]	3
InCl	$\kappa = -2.0281 + 5.2188 \cdot 10^{-3}T + 1.0942 \cdot 10^{-6}T^2$	498 - 624	0.0176	[34]	(12)
$InCl_2$	$\kappa = -1.2783 + 3.6986 \cdot 10^{-3}T - 1.4444 \cdot 10^{-6}T^2$	508 - 780	.0074	[34]	(12)
$InCl_3$	$\kappa = 1.184 - 0.883 \cdot 10^{-3}T$	859 - 967	.00235	[34]	(10)
TlCl	$\kappa = -2.073997 + 4.839529 \cdot 10^{-3}T + 4.677176 \cdot 10^{-10}T^2 - 6.884975 \cdot 10^{-10}T^3$	720 -1169	$5.52 \cdot 10^{-3}$	[189]	0.7
$SnCl_2$	$\kappa = -4.734129 + 1.434825 \cdot 10^{-2}T - 7.776484 \cdot 10^{-6}T^2 + 8.757843 \cdot 10^{-10}T^3$	529 -1235	$4.41 \cdot 10^{-3}$	[189]	4
$PbCl_2$	$\kappa = -0.487664 + 11.2124 \cdot 10^{-3}T - 3.9156 \cdot 10^{-6}T^2$	773 - 923	0.00802	[97]	5
$BiCl_3$	$\kappa = -4.0243 + 1.6574 \cdot 10^{-2}T - 1.9059 \cdot 10^{-5}T^2 + 6.8368 \cdot 10^{-9}T^3$	502 - 898	$1.7 \cdot 10^{-4}$	[114]	2.3
$TeCl_2$	$\kappa = -0.2949 + 0.3715 \cdot 10^{-3}T + 0.6918 \cdot 10^{-6}T^2$	479 - 578	$8.0 \cdot 10^{-4}$	[32]	(10)
$TeCl_4$	$\kappa = -0.6702 + 1.930 \cdot 10^{-3}T - 0.7617 \cdot 10^{-6}T^2$	509 - 589	$6.09 \cdot 10^{-4}$	[32]	(9)
LiBr	$\kappa = -1.1362 + 8.6159 \cdot 10^{-3}T - 1.8612 \cdot 10^{-6}T^2$	831 -1022	0.00269	[82]	(1.5)
NaBr	$\kappa = 9.097 \exp(-2324/RT)$	1017 -1229	.00322	[82]	.....
KBr	$\kappa = -6.6001 + 13.1823 \cdot 10^{-3}T - 5.0051 \cdot 10^{-6}T^2$	1011 -1229	.00465	[82]	1.3
RbBr	$\kappa = -5.6453 + 11.1780 \cdot 10^{-3}T - 4.3285 \cdot 10^{-6}T^2$	969 -1179	.00248	[82]	(3.5)
CsBr	$\kappa = -2.5553 + 4.7068 \cdot 10^{-3}T - 1.1218 \cdot 10^{-6}T^2$	917 -1131	.00254	[82]	(5.0)
$MgBr_2$	$\kappa = -0.4257 + 0.5717 \cdot 10^{-3}T + 0.5784 \cdot 10^{-6}T^2$	987 -1244	$2.32 \cdot 10^{-4}$	[94]	(1.0)
$CaBr_2$	$\kappa = 12.820 \exp(-4475/RT)$	1014 -1291	0.00397	[94]	(2.5)
$SrBr_2$	$\kappa = -4.0086 + 6.8056 \cdot 10^{-3}T - 1.7296 \cdot 10^{-6}T^2$	929 -1186	.00196	[94]	(6)
$BaBr_2$	$\kappa = -2.4631 + 3.736 \cdot 10^{-3}T - 0.4410 \cdot 10^{-6}T^2$	1126 -1338	.00501	[94]	(10)
$LaBr_3$	$\kappa = 4.7336 - 10.8289 \cdot 10^{-3}T + 6.700 \cdot 10^{-6}T^2$	1050 -1185	.003	[83]	23
$PrBr_3$	$\kappa = -1.3387 + 1.8574 \cdot 10^{-3}T$	1000 -1043	.00228	[171]	20
$NdBr_3$	$\kappa = 3.2271 - 7.6760 \cdot 10^{-3}T + 4.800 \cdot 10^{-6}T^2$	963 -1143	.0036	[83]	50
$GdBr_3$	$\kappa = -0.98898 + 1.3356 \cdot 10^{-3}T$	1073 -1115	.00109	[171]	20
CuBr	$\kappa = 6.342 \exp(-1416/RT)$	764 - 823	.00533	[41]	(8)
AgBr	$\kappa = 0.32105 + 4.8157 \cdot 10^{-3}T - 1.72064 \cdot 10^{-6}T^2$	723 -1073	.0038	[100, 72]	0.5
$ZnBr_2$	$\kappa = 1.2220 - 3.9416 \cdot 10^{-3}T + 3.1971 \cdot 10^{-6}T^2$	671 - 913	.0012	[94]	18
$CdBr_2$	$\kappa = -1.6351 + 4.1892 \cdot 10^{-3}T - 1.1777 \cdot 10^{-6}T^2$	849 -1055	.00161	[94]	(1.5)
$HgBr_2$	$\kappa = 2.203887 \cdot 10^{-3} - 1.489099 \cdot 10^{-5}T + 3.099289 \cdot 10^{-8}T^2 - 1.913523 \cdot 10^{-11}T^3$	528 - 729	$8.65 \cdot 10^{-7}$	[189]	1.5
$InBr_3$	$\kappa = -0.1914 + 1.0056 \cdot 10^{-3}T - 0.7065 \cdot 10^{-6}T^2$	709 - 813	0.00178	[34]	(12)
TlBr	$\kappa = -1.663401 + 4.171786 \cdot 10^{-3}T - 1.098403 \cdot 10^{-6}T^2$	745 -1127	$4.87 \cdot 10^{-3}$	[189]	1
$PbBr_2$	$\kappa = -3.4892 + 8.7490 \cdot 10^{-3}T - 3.7998 \cdot 10^{-6}T^2$	655 - 765	0.00164	[7]	2.7
$BiBr_3$	$\kappa = -1.99453 + 8.17416 \cdot 10^{-3}T - 8.99735 \cdot 10^{-6}T^2 + 3.02196 \cdot 10^{-9}T^3$	496 - 998	.00132	[114]	(3.0)

TABLE 175. *Specific conductance—Best equations*—Continued

Salt	Best equation	Temperature range, °K	$s(\text{ohm}^{-1}\ \text{cm}^{-1})$	Reference	Uncertainty estimate (percent)
LiI	$\kappa = -3.4283 + 1.4264 \cdot 10^{-2}T - 0.59652 \cdot 10^{-5}T^2$	756 - 877	0.0026	[227]	5.0
NaI	$\kappa = -2.8948 + 7.5861 \cdot 10^{-3}T - 2.2381 \cdot 10^{-6}T^2$	936 -1187	.00263	[82]	3.5
KI	$\kappa = -6.1952 + 12.6232 \cdot 10^{-3}T - 5.0591 \cdot 10^{-6}T^2$	959 -1184	.0075	[79]	0.9
RbI	$\kappa = -2.5050 + 5.3229 \cdot 10^{-3}T - 1.8114 \cdot 10^{-6}T^2$	929 -1158	.00169	[82]	(3.5)
CsI	$\kappa = -2.4630 + 4.5942 \cdot 10^{-3}T - 1.2749 \cdot 10^{-6}T^2$	932 -1137	$1.40 \cdot 10^{-4}$	[82]	(5.0)
MgI_2	$\kappa = -0.7656 + 0.8785 \cdot 10^{-3}T + 0.4299 \cdot 10^{-6}T^2$	910 -1176	0.00110	[94]	(1.3)
CaI_2	$\kappa = -4.6282 + 8.2567 \cdot 10^{-3}T - 2.6610 \cdot 10^{-6}T^2$	1059 -1287	$5.5 \cdot 10^{-4}$	[94]	(2.0)
SrI_2	$\kappa = -1.8747 + 3.3276 \cdot 10^{-3}T - 0.5169 \cdot 10^{-6}T^2$	821 -1270	0.00139	[94]	(6.0)
BaI_2	$\kappa = -2.1845 + 3.3755 \cdot 10^{-3}T - 0.4666 \cdot 10^{-6}T^2$	991 -1292	.0035	[94]	(10)
AlI_3	$\kappa = -0.1721 \cdot 10^{-4} + 0.8131 \cdot 10^{-8}T + 0.6801 \cdot 10^{-10}T^2$	464 - 543	$.125 \cdot 10^{-6}$	[35]	(20)
LaI_3	$\kappa = -0.9535 + 1.319 \cdot 10^{-3}T$	1069 -1144	.0003	[106]	(10)
CeI_3	$\kappa = -0.8580 + 1.221 \cdot 10^{-3}T$	1069 -1133	.0003	[106]	(18)
PrI_3	$\kappa = -0.7724 + 1.1304 \cdot 10^{-3}T$	1036 -1082	.0003	[106]	(15)
NdI_3	$\kappa = -0.7193 + 1.040 \cdot 10^{-3}T$	1072 -1115	.0003	[106]	(15)
AgI	$\kappa = 4.674 \exp(-1146/RT)$	823 -1073	.111	[11, 35]	12
ZnI_2	$\kappa = 0.6723 - 2.6838 \cdot 10^{-3}T + 2.5446 \cdot 10^{-6}T^2$	718 - 870	.0011	[94]	1.5
CdI_2	$\kappa = -1.0841 + 1.7574 \cdot 10^{-3}T + 0.2449 \cdot 10^{-6}T^2$	675 - 913	.0020	[94]	4.5
HgI_2	$\kappa = 0.3033113 - 1.075096 \cdot 10^{-3}T + 1.411112 \cdot 10^{-6}T^2 - 6.651402 \cdot 10^{-10}T^3$	532 - 724	$.61 \cdot 10^{-4}$	[189]	2.5
GaI_2	$\kappa = -0.4546 + 1.149 \cdot 10^{-3}T$	423 - 623	.0050	[105]	(15)
InI_3	$\kappa = -0.4380474 + 1.734687 \cdot 10^{-3}T - 1.759083 \cdot 10^{-6}T^2 + 5.775249 \cdot 10^{-10}T^3$	504 - 880	$6.30 \cdot 10^{-4}$	[189]	6
TlI	$\kappa = -1.261276 + 3.023831 \cdot 10^{-3}T - 7.494862 \cdot 10^{-7}T^2$	721 -1333	$2.65 \cdot 10^{-3}$	[189]	1.5
PbI_2	$\kappa = -0.6501 + 1.0054 \cdot 10^{-3}T + 0.7888 \cdot 10^{-6}T^2$	676 - 873	0.0018	[108]	(5)
BiI_3	$\kappa = -0.9306 + 3.0374 \cdot 10^{-3}T - 1.8477 \cdot 10^{-6}T^2$	686 - 775	$2.13 \cdot 10^{-3}$	[104]	(3)
Li_2CO_3	$\kappa = 0.9877 - 1.3529 \cdot 10^{-3}T - 4.3873 \cdot 10^{-6}T^2$	1018 -1118	$3.0 \cdot 10^{-4}$	[101]	(1.5)
Na_2CO_3	$\kappa = 13.758 \exp(-3527/RT)$	1138 -1240	.....	[101]	1.5
K_2CO_3	$\kappa = 11.027 \exp(-3941/RT)$	1184 -1279	0.0017	[101]	1.5
$LiNO_2$	$\kappa = -0.397585 - 1.51836 \cdot 10^{-3}T + 7.33374 \cdot 10^{-6}T^2$	502.7- 527.2	$4.14 \cdot 10^{-4}$	[207]	6
$NaNO_2$	$\kappa = 13.2 \exp(-2600/RT)$	554 - 723.2	.....	[66]	1.5
KNO_2	$\kappa = -4.167433 + 1.148389 \cdot 10^{-2}T - 5.451471 \cdot 10^{-6}T^2$	713.2- 743.2	$4.70 \cdot 10^{-4}$	[207]	6
$RbNO_2$	$\kappa = -4.54416 + 1.189408 \cdot 10^{-2}T - 5.890905 \cdot 10^{-6}T^2$	712.2- 758.2	0.0025	[207]	6
$CsNO_2$	$\kappa = -0.92278 + 2.39945 \cdot 10^{-3}T$	688.2- 739.2	$7.41 \cdot 10^{-4}$	[207]	6
$Ba(NO_2)_2$	$\kappa = -1.284 + 2.65 \cdot 10^{-3}T$	553.2- 573.2	0.00	[185]	6
$LiNO_3$	$\kappa = -1.5242 + 3.4674 \cdot 10^{-3}T + 1.8027 \cdot 10^{-6}T^2$	558 - 653	.001	[116]	0.4
$NaNO_3$	$\kappa = -1.5713 + 4.3835 \cdot 10^{-3}T$	583 - 691	$7.83 \cdot 10^{-4}$	[61, 7]	1
KNO_3	$\kappa = -1.4347 + 3.7376 \cdot 10^{-3}T - 0.5779 \cdot 10^{-6}T^2$	613 - 880	0.00369	[66, 20]	0.8

TABLE 175. *Specific conductance—Best equations*—Continued

Salt	Best equation	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
$RbNO_3$	$\kappa = -1.3769 + 3.8156 \cdot 10^{-3}T - 1.2658 \cdot 10^{-6}T^2$	592 – 766	0.00153	[26]	6
$CsNO_3$	$\kappa = -0.7610 + 1.887 \cdot 10^{-3}T$	688 – 764	.....	[84]	0.6
$AgNO_3$	$\kappa = -1.9314 + 6.2321 \cdot 10^{-3}T - 1.7924 \cdot 10^{-6}T^2$	483 – 603	.00111	[60]	1
$TlNO_3$	$\kappa = -0.906043 + 2.6094 \cdot 10^{-3}T$	485.5– 554.5	$9.59 \cdot 10^{-4}$	[191]	0.7
V_2O_5	$\kappa = -2.056 + 1.890 \cdot 10^{-3}T$	1140 –1237	0.00575	[68]	.....
CrO_3	$\kappa = -0.1952 + 0.4032 \cdot 10^{-3}T - 0.0391 \cdot 10^{-6}T^2$	491 – 535	$3.31 \cdot 10^{-7}$	[68]	.....
MoO_3	$\kappa = 11.642 \exp(-5586/RT)$	1096 –1187	0.0021	[76]	60
FeO	$\kappa = -31771.7 + 36.3092\ T - 0.0102617\ T^2$	1648 –1713	16.1	[159]	.....
FeO	$\kappa = -171.25 + 0.27981\ T$	1713 –1773	1.18	[159]	.....
GeO_2	$\kappa = 29.758 \exp(-37957/RT)$	1389 –1623	.....	[163]	20
PbO	$\kappa = 1.750 \cdot 10^5 \exp(-27629/RT)$	1164 –1260	0.010	[68]	.....
Sb_2O_3	$\kappa = -1.086 + 1.062 \cdot 10^{-3}T$	1101 –1161	.0038	[68]	.....
Bi_2O_3	$\kappa = -11.668 + 10.764 \cdot 10^{-3}T$	1102 –1228	.0816	[68]	.....
TeO_2	$\kappa = 1.454 \cdot 10^2 \exp(-9656/RT)$	1023 –1233	.0384	[68]	.....
FeS	$\kappa = 24462.0 - 30.289\ T + 9.9715 \cdot 10^{-3}T^2$	1469 –1493	.....	[154]	50
CoS	$\kappa = 6.2884 \exp(-15494/RT)$	1461.2–1497.2	18.95	[155]	50
NiS	$\kappa = 19337.0 - 20.810\ T + 6.000 \cdot 10^{-3}T^2$	1153.2–1398.2	.....	[154]	50
Cu_2S	$\kappa = 1923.06 - 2.8871\ T + 1.1055 \cdot 10^{-3}T^2$	1402.2–1523.3	1.44	[155]	40
Ag_2S	$\kappa = 41.5109 \exp(2569.13/RT)$	1105.2–1352.2	0.783	[156]	50
GeS	$\kappa = 0.616343 - 1.56399 \cdot 10^{-3}T + 1.009032 \cdot 10^{-6}T^2$	873.2–1073.2	.00	[155]	50
SnS	$\kappa = -12.948 - 6.28321 \cdot 10^{-2}T + 7.81646 \cdot 10^{-5}T^2$	1158.2–1411.2	.363	[155]	50
PbS	$\kappa = 1815.4 - 2.2606\ T + 7.4254 \cdot 10^{-4}T^2$	1388.2–1490.2	.....	[154]	20
Sb_2S_3	$\kappa = 4.0712 - 1.12847 \cdot 10^{-2}T + 7.9857 \cdot 10^{-6}T^2$	830.2–1076.2	.00901	[155]	50
Bi_2S_3	$\kappa = 3955.2 - 0.598558\ T$	973.2–1198.2	4.87	[157]	.....
Li_2SO_4	$\kappa = -24.544 + 4.4630 \cdot 10^{-2}T - 1.7251 \cdot 10^{-5}T^2$	848.3–1243.2	$2.68 \cdot 10^{-4}$	[115]	5
Na_2SO_4	$\kappa = 11.893 \exp(-3819.9/RT)$	1189 –1232	0.00119	[226]	2
K_2SO_4	$\kappa = -23.5770 + 3.57269 \cdot 10^{-2}T - 1.24807 \cdot 10^{-5}T^2$	1341 –1360	$2.59 \cdot 10^{-3}$	[161]	3
Rb_2SO_4	$\kappa = 6.2394 \exp(-3977.2/RT)$	1340 –1395	0.00183	[226]	3
Cs_2SO_4	$\kappa = -0.46852 + 1.2287 \cdot 10^{-3}T$	1287 –1355	.00350	[226]	3
Ag_2SO_4	$\kappa = 7.4568 \exp(-2754.1/RT)$	942 –1017	.00203	[226]	3
Pr_4NBF_4	$\kappa = 6.6731 \exp(-4472.7/RT)$	522.7– 554.6	$1.88 \cdot 10^{-3}$	[190, 221]	10
Pr_4NPF_6	$\kappa = 21.0096 \exp(-5902.52/RT)$	511.03- 545.15	$8.86 \cdot 10^{-5}$	[190, 221]	6
Bu_4NBr	$\kappa = 1926.41 \exp(-10818.4/RT)$	390.3– 407.7	$9.42 \cdot 10^{-6}$	[190, 221]	7
Bu_4NI	$\kappa = -6.48575 \cdot 10^{-2} + 1.66797 \cdot 10^{-4}T$	420.7– 440.13	$2.43 \cdot 10^{-4}$	[190, 221]	10
Bu_4NPF_6	$\kappa = -0.193219 + 4.43623 \cdot 10^{-4}T$	529.5– 548.5	$1.06 \cdot 10^{-4}$	[190, 221]	6

TABLE 175. *Specific conductance—Best equations*—Continued

Salt	Best equation	Temperature range, °K	$s(\text{ohm}^{-1}\ \text{cm}^{-1})$	Reference	Uncertainty estimate (percent)
Bu_4NBPh_4	$\kappa = 8.0270 \exp(-6587.0/RT)$	514.3– 540.4	$1.95 \cdot 10^{-5}$	[190, 221]	6
$(n\text{-Amyl})_4NSCN$	$\kappa = 0.0621247 - 3.93243 \cdot 10^{-4}T + 6.24733 \cdot 10^{-7}T^2$	325.2– 383.2	$2.77 \cdot 10^{-5}$	[172]	.....
Li_2MoO_4	$\kappa = -4.531 + 7.740 \cdot 10^{-3}T - 1.356 \cdot 10^{-6}T^2$	977 –1223	0.017	[117]	.....
Na_2MoO_4	$\kappa = -3.1705 + 5.2419 \cdot 10^{-3}T - 0.8970 \cdot 10^{-6}T^2$	1024.2–1237.2	.00282	[76]	10
Na_2WO_4	$\kappa = 7.541 \exp(-3931/RT)$	925.7–1774	.00637	[26]	.....
NaSCN	$\kappa = 43.0 \exp(-4740/RT)$	583 – 643	.....	[112]	.....
KSCN	$\kappa = 100 \exp(-5850/RT)$	.....	.....	[112]	.....
NaOH	$\kappa = -3.23 + 9.0 \cdot 10^{-3}T$	593.2– 723.2	.....	[37]	.....
KOH	$\kappa = -1.38 + 5.80 \cdot 10^{-3}T$	673 – 873	.....	[37]	.....
$K_2Cr_2O_7$	$\kappa = 73.0 \exp(-7800/RT)$	.....	.....	[110]	8
UO_2Cl_2	$\kappa = -0.273 + 0.371 \cdot 10^{-3}T$	851 – 953	.....	[64]	.....
LiH	$\kappa = 37.4709 - 7.75006 \cdot 10^{-2}T + 4.01118 \cdot 10^{-6}T^2$	958.2–1027	$9.89 \cdot 10^{-3}$	[165]	.....
$LiClO_3$	$\kappa = -0.95475 + 2.6390 \cdot 10^{-3}T$	404.6– 446.7	$1.99 \cdot 10^{-3}$	[174]	.....

TABLE 176. *Density—Best equations*

Salt	$\rho = a - bT$		Temperature range °K	Reference	Uncertainty estimate (percent)
	a	$b \cdot 10^3$			
LiF	2.3581	0.4902	1149–1320	[83]	0.5
NaF	2.655	.54	1283–1819	[25]	.....
KF	2.6464	.6515	1154–1310	[83]	.6
CsF	4.8985	1.2806	985–1185	[83]	.8
MgF_2	3.235	0.524	1650–2100	[95]	.....
CaF_2	3.179	.391	1640–2300	[95]	.....
SrF_2	4.784	.751	1750–2200	[95]	.....
BaF_2	5.775	.999	1600–2000	[95]	.....
LaF_3	5.793	.682	1750–2450	[95]	.....
CeF_3	6.253	.936	1700–2200	[95]	.....
ThF_4	7.108	.7590	1393–1651	[167]	(1)
UF_4	7.784	.9920	1309–1614	[167]	(1)
LiCl	1.8842	.4328	894–1054	[79]	0.2
NaCl	2.1393	.5430	1076–1301	[79]	.4
KCl	2.1359	.5831	1053–1212	[79]	.5
RbCl	3.1210	.8832	996–1196	[82]	.4
CsCl	3.7692	1.065	945–1179	[82]	.1
$BeCl_2$	2.276	1.10	706–746	[36]	.....
$MgCl_2$	1.976	0.302	1021–1159	[113]	.2
$CaCl_2$	2.5261	.4225	1060–1223	[83]	.9
$SrCl_2$	3.3896	.5781	1167–1310	[83]	.7
$BaCl_2$	4.0152	.6813	1239–1354	[83]	5.0
YCl_3	3.007	.50	998–1118	[36]	.....
$LaCl_3$	4.0895	.7774	1146–1246	[83]	0.6
$CeCl_3$	4.248	.920	1123–1223	[99]	.....
$MnCl_2$	2.75701	.43766	923–1123	[192]	.....
CuCl	4.226	.76	709–858	[36]	.....
AgCl	5.505	.87	759–1073	[166]	0.1
$ZnCl_2$	2.7831	.448	593–673	[98]	.2
$CdCl_2$	4.078	.82	840–1080	[54, 66]	.3
HgCl	9.0928	4.0	799–850	[36]	.....
$HgCl_2$	5.9391	2.8624	550–577	[103]	.5
$AlCl_3$	Quadratic equation*		480.1–623.2	[149]	.....
$GaCl_3$	2.7841	2.0826	360–414	[148]	.4
InCl	4.43_7	1.40	542–638	[34]	.....
$InCl_2$	3.86_3	1.60	541–710	[34]	.....
$InCl_3$	3.94_4	2.10	870–939	[34]	.....
TlCl	6.893	1.80	708–915	[36]	.....
$SnCl_2$	4.016	1.253	580–753	[25]	1.3
$SnCl_4$	3.0185	2.687	309.4–411.2	[147]	(0.8)
$PbCl_2$	6.112	1.50	789–983	[54]	.3
$BiCl_3$	5.073	2.30	523–623	[32]	.4
LiBr	3.0658	0.6520	825–1012	[82]	.....
NaBr	3.1748	.8169	1027–1218	[82]	1.0
KBr	2.9583	.8253	1014–1203	[82]	0.4
RbBr	3.7390	1.0718	977–1180	[82]	.4
CsBr	4.2449	1.2234	910–1133	[82]	.5
$MgBr_2$	3.087	0.478	1040–1208	[113]	.....
$CaBr_2$	3.618	.500	1036–1064	[113]	.....

TABLE 176. *Density—Best equations*—Continued

Salt	$\rho = a - bT$		Temperature range °K	Reference	Uncertainty estimate (percent)
	a	$b \cdot 10^3$			
$SrBr_2$	4.390	0.745	950–1277	[113]	.....
$BaBr_2$	5.035	.924	1123–1173	[66]	.....
$LaBr_3$	5.0351	.096	1069–1185	[83]	.....
$NdBr_3$	4.9750	.7779	968 –1133	[83]	.....
AgBr	6.307	1.035	720 –940	[22, 54]	0.08
$ZnBr_2$	4.113	0.959	707 –875	[113]	2.0
$CdBr_2$	4.9831	1.08	853 –993	[54]	.....
$HgBr_2$	6.7715	3.2331	511 –592	[103]	0.1
$InBr_3$	4.184	1.50	721 –801	[34]	.....
TlBr	7.4335	1.922	766 –1023	[196]	.....
$PbBr_2$	6.789	1.65	778 –873	[54]	.8
$BiBr_3$	5.958	2.6	525 –715	[25]	.....
LiI	3.7902	0.9176	748 –940	[82]	.....
NaI	3.6274	.9491	945 –1185	[82]	.4
KI	3.3594	.9557	955 –1177	[79]	.25
RbI	3.9499	1.1435	928 –1175	[82]	.7
CsI	4.2410	1.1834	919 –1126	[82]	.4
MgI_2	3.642	0.651	965 –1161	[113]	.....
CaI_2	4.233	.751	1059 –1301	[113]	.....
SrI_2	4.803	.885	789 –1299	[113]	.....
BaI_2	5.222	.977	1043 –1248	[113]	.....
AlI_3	4.38_3	2.50	473 –513	[35]	.....
AgI	6.415	1.01	870 –1075	[22]	.....
ZnI_2	4.856	1.360	729 –861	[113]	.....
CdI_2	5.133	1.117	673 –973	[66]	.....
HgI_2	6.9435	3.2351	532 –627	[103]	.1
GaI_2	4.841	1.688	454 –538	[105]	.....
InI_3	4.5448	1.50	503 –633	[34]	.....
Li_2CO_3	2.2026	0.3729	1012 –1115	[101]	.2
Na_2CO_3	2.4797	.4487	1138 –1277	[101]	.2
K_2CO_3	2.4141	.4421	1181 –1283	[101]	.2
$NaNO_2$	2.226	.746	553 – 723	[66]	1.0
KNO_2	2.167	.66	713 – 733	[173]	.....
$Ba(NO_2)_2$	3.639	.70	573 – 613	[173]	.....
$LiNO_3$	2.068	.546	545 – 714	[26]	.....
$NaNO_3$	2.320	.715	583 – 643	[61, 66]	1.0
KNO_3	2.315	.729	620 – 880	[66]	0.2
$RbNO_3$	3.049	.972	592 – 766	[26]	.....
$CsNO_3$	3.6206	1.1660_5	688 – 764	[84]	.15
$AgNO_3$	4.454	1.02	553 – 683	[25]	.3
$TlNO_3$	5.8041	1.8737	484.4– 552.6	[191]	.15
B_2O_3	Quadratic equation*		723 –1673	[201]	.8
B_2O_3	Quadratic equation*		1410 –1890	[144]	.8
SnS	5.111	0.683	1193 –1324	[158]	.....
PbS	7.260	.5400	1393 –1473	[150]	.....
Sb_2S_3	4.387	.65	826 –1091	[158]	.....
Bi_2S_3	7.237	.972	1016 –1136	[158]	.....
Li_2SO_4	2.464	.407	1133 –1487	[25]	(1)
Na_2SO_4	2.628	.483	1173 –1350	[25]	(1)

TABLE 176. *Density—Best equations* Continued

Salt	$\rho = a - bT$		Temperature range °K	Reference	Uncertainty estimate (percent)
	a	$b \cdot 10^3$			
K_2SO_4	2.4697	0.4473	1348 −1411	[178]	0.4
Rb_2SO_4	3.442	.665	1359 −1818	[25]	(1)
Cs_2SO_4	Quadratic equation*		1309 −1803	[25]	(1)
Ag_2SO_4	5.843	1.089	953 −1043	[226]	(0.8)
Pr_4NBF_4	1.2467	0.6415	525.6− 547.3	[190, 221]	(1)
Pr_4NPF_6	1.2433	.3224	513 − 545	[190, 221]	(1)
Pr_4NBPh_4	Quadratic equation*		482 − 512	[190, 221]	(1)
Bu_4NBr	1.287	0.7039	392 − 408	[190, 221]	(1)
Bu_4NI	1.446	.8388	420 − 435	[190, 221]	(1)
Bu_4NBF_4	1.1906	.5812	436 − 539	[190, 221]	(1)
Bu_4NPF_6	1.3252	.6557	529 − 548	[190, 221]	(1)
Bu_4NBPh_4	1.1435	.4945	514.3− 540.4	[190, 221]	(1)
Hex_4NBF_4	1.1296	.5772	375 − 491	[190, 221]	(1)
(*n*-Amyl)$_4$NSCN	1.0744	.53662	325.2− 383.2	[172]	.....
Na_2MoO_4	3.407	.629	116 −1681	[26]	.....
K_2MoO_4	Quadratic equation*		1203 −1795	[25]	.....
Na_2WO_4	4.629	0.797	1025 −1774	[26]	.....
K_2WO_4	Quadratic equation*		1198 −1794	[25]	.....
$K_2Cr_2O_7$	2.753	0.695	693 − 808	[25]	.....
KSCN	1.9581	.800	447 −	[110]	.....
NaOH	2.068	.4784	623 − 723	[37]	.....
KOH	2.013	.4396	673 − 873	[37]	.....
$LiClO_3$	2.3936	.75702	406.3− 426.6	[175]	.....
$LiClO_4$	2.337	.612	534 − 644	[177]	.....

*Quadratic Equations: $\rho = a + bT + cT^2$

	a	$b \cdot 10^3$	$c \cdot 10^6$	Temperature range °K	Reference	Uncertainty estimate (percent)
$AlCl_3$	−5.711383	28.59744	−0.2953960	480.1− 623.2	[149]	.....
B_2O_3	2.03833	−0.667971	.208005	723 −1673	[201]	0.8
B_2O_3	1.82216	−.345772	.0871571	1410 −1890	[144]	.8
Cs_2SO_4	3.116	.586	−.494	1309.2−1803.2	[25]	(1)
Pr_4NBPh_4	0.14613	3.70736	−4.29706	482 − 512	[190, 221]	(1)
K_2MoO_4	2.888	−0.283	−0.128	1203.8−1795.5	[25]	.....
K_2WO_4	4.419	−1.233	.162	1198.2−1793.5	[25]	.....

TABLE 177. *Equivalent conductance*
$\Lambda = A_\Lambda e^{-E_\Lambda/RT}$ ($ohm^{-1}cm^2equiv^{-1}$)

Salt	A_Λ($ohm^{-1}cm^2equip^{-1}$)	E_Λ(cal mol^{-1})	s($ohm^{-1}cm^2$ $equiv^{-1}$)	s%
LiF	320.71	2143.3	0.303	0.23
NaF	344.7	2964.	.1187	.10
KF	480.27	3354.9	.188	.16
CsF	817.76	4068.2	.118	.97
LiCl	508.2	2015	.0847	.048
NaCl	544.6	2990	.0870	.057
KCl	548.0	3415.2	.109	.092
RbCl	754.1	4401	.192	.19
CsCl	1102	5110	.25	.26
$BeCl_2$	$5.3567 \cdot 10^{13}$	50479	.0169	21.6
$MgCl_2$	263.7	4363	.105	0.28
$CaCl_2$	675.3	5285	.0344	.046
$SrCl_2$	689.6	5646	.0247	.036
$BaCl_2$	772.5	6004	.0195	.025
YCl_3	959.2	8827	.276	1.8
$LaCl_3$	469.4	5678	.277	0.63
$CaCl_3$	460.7	6078.0	.188	.58
$ThCl_4$	395.0	6764	.273	1.2
$MnCl_2$	169.53	2694.3	.265	.59
CuCl	153.6	650.4	.968	.84
AgCl	268.22	1252.3	.279	0.21
$ZnCl_2$	$5.3419 \cdot 10^{7}$	24343	.040	18
(593–672 °K)				
$ZnCl_2$	48591	15153	.062	3.3
(672–825 °K)				
$ZnCl_2$	6096.5	11785	.080	0.94
(825–970 °K)				
$CdCl_2$	224.4	2499	.0200	.035
HgCl	353.5	3469	.00732	.017
$HgCl_2$	0.1775	5626.7	$8.5 \cdot 10^{-5}$	4.2
InCl	1208	3528	0.205	0.39
$InCl_2$	288.4	3687	.389	2.37
$InCl_3$	4.112	−2181	.0580	0.426
TlCl	546.0	3421.0	.363	.43
$SnCl_2$	361.8	2726.9	4.95	7.4
$PbCl_2$	588.1	4093	0.301	0.53
$BiCl_3$	32.36	981.3	1.58	9.6
LiBr	585.3	2117	0.32*	0.17
NaBr	622.7	3228	.179	.12
KBr	591.1	3747	.578	.53
RbBr	611.1	4171	.800	.91
CsBr	1169	5533	.317	.42
$MgBr_2$	385.5	5404	.101	.29
$CaBr_2$	506.7	4901	.053	.087
$SrBr_2$	806.5	6183	.44	1.0
$BaBr_2$	691.8	6153	.0390	0.068
$LaBr_3$	2652	10296	.0874	.32
$NdBr_3$	3973	11749	.101	.67
AgBr	210.2	1104	.108	1.0

TABLE 177. *Equivalent conductance*—Continued
$\Lambda = A_\Lambda e^{-E_\Lambda/RT}$ ($ohm^{-1}cm^2equiv^{-1}$)

Salt	A_Λ($ohm^{-1}cm^2equiv^{-1}$)	E_Λ(cal mol^{-1})	s($ohm^{-1}cm^2$ $equiv^{-1}$)	s%
$ZnBr_2$	35684	14604	0.325	21.0
$CdBr_2$	243.4	3226	.0263	0.06
$HgBr_2$	0.31052	4065.3	$8.6 \cdot 10^{-4}$	7.0
$InBr_3$	6.766	91.0	0.0259	.38
TlBr	425.8	3510.8	.0982	.16
$PbBr_2$	660.8	4559	.265	1.0
$BiBr_3$	16.67	535.6	1.30	10
LiI	569.5	1809.9	0.0659	0.04
NaI	694.5	3221	.0127	.0085
KI	541.2	3442	.758	.68
RbI	568.1	3999	.378	.45
CsI	1125	5450	.378	.48
MgI_2	751.1	6752	.081*	.29
CaI_2	440.3	4617	.421	.69
SrI_2	610.1	5409	.57*	1.3
BaI_2	831.2	6367	.25*	0.50
AlI_3	118670	11160	.121	7.2
AgI	239.9	1475	.122	0.10
ZnI_2	17880	12636	.222	3.3
CdI_2	1109.0	6365	.448*	2.2
HgI_2	0.07345	−3114.3	.0313	3.3
GaI_2	771.8	5121	.453	7.7
InI_3	18.26	1779.9	.233	4.6
Li_2CO_3	754.5	4438	.140	0.15
Na_2CO_3	550.2	4199	.035	.040
K_2CO_3	544.6	4650	.0175	.021
$NaNO_2$	685.7	2949	.108	.15
KNO_2	776.99	3267.2	.0617	.075
$Ba(NO_2)_2$	10217	8103.9	.0601	.80
$LiNO_3$	967.8	3589	.0515	.095
$NaNO_3$	705.6	3215	.0160	.028
KNO_3	657.4	3577	.0832	.14
$RbNO_3$	515.7	3496	.226	.57
$CsNO_3$	552.4	3688	.00503	.019
$AgNO_3$	587.9	2898	.178	.45
$TlNO_3$	633.25	3348.3	.0843	.35
SnS	25730	13618	18.2	1.4
PbS	338.66	−4867.0	12.3	0.61
Sb_2S_3	14940	12846	0.247	1.4
Bi_2S_3	89320	−55.18	10.6	0.012
Li_2SO_4	394.8	2932	0.482	.42
Na_2SO_4	550.19	4507.0	.0077	.092
K_2SO_4	814.95	4721.6	.070	.05
Rb_2SO_4	471.72	4956.6	.00709	.009
Cs_2SO_4	387.47	4528.7	.0067	.018
Ag_2SO_4	199.04	3188.5	.0223	.032
Pr_4NBF_4	2973.9	4884.8	.0108	.035
Pr_4NPF_6	7610.3	6070.0	$3.24 \cdot 10^{-3}$	.013
Bu_4NBr	817140	11041	$1.29 \cdot 10^{-4}$	.017

TABLE 177. *Equivalent conductance*—Continued
$\Lambda = A_\Lambda e^{-E_\Lambda/RT}$ ($ohm^{-1}cm^2equiv^{-1}$)

Salt	A_Λ($ohm^{-1}cm^2equiv^{-1}$)	E_Λ(cal mol^{-1})	s($ohm^{-1}cm^2$ $equiv^{-1}$)	s%
Bu_4NI	136940	9394.2	0.047	2.0
Bu_4NPF_6	4743.7	5954.3	.041	0.22
Bu_4NBPh_4	6841.1	6893.0	$1.62 \cdot 10^{-3}$	.018
(n-Amyl)$_4$NSCN	577470	9882.2	0.0532	13
Na_2MoO_4	779.9	5713	.142*	0.23
Na_2WO_4	381.7	4491	.0352	.060
KSCN	7874	6082	.00708	.053
NaOH	668.2	3120	.0128	.020
KOH	520.2	2467	.490	.50
$K_2Cr_2O_7$	6052	8141	.0144	.056
$LiClO_3$	9394.7	6072.1	.218	3.2

TABLE 178. *Viscosity—Best equations*

Salt	Best equation	Temperature range, °K	s Centipoise	Reference	Uncertainty estimate (percent)
BeF_2	$\eta = 1.756 \cdot 10^{-7} \exp(58466/RT)$	846.9–1252.2	$3.08 \cdot 10^6$	[225]	3.0
LiCl	$\eta = 3.306 \cdot 10^{-2} \exp(7007/RT)$	902.9–1082.9	0.0092	[121]	1.0
NaCl	$\eta = 81.9007 - 0.185538\ T + 1.42786 \cdot 10^{-3}T^2 - 3.70073 \cdot 10^{-8}T^3$	1085.9–1243.2	.0057	[121]	1.0
KCl	$\eta = 55.5632 - 0.127847\ T + 9.99580 \cdot 10^{-5}T^2 - 2.62035 \cdot 10^{-8}T^3$	1056.5–1202.0	.0132	[102]	1.5
RbCl	$\eta = 40.8082 - 9.61807 \cdot 10^{-2}T + 7.83918 \cdot 10^{-5}T^2 - 2.16855 \cdot 10^{-8}T^3$	1005.2–1148.2	.0058	[121]	1.0
CsCl	$\eta = 30.0396 - 7.09298 \cdot 10^{-2}T + 5.80038 \cdot 10^{-5}T^2 - 1.60636 \cdot 10^{-8}T^3$	928.0–1110.2	.0067	[121]	1.0
$CaCl_2$	$\eta = 619.541 - 1.54489\ T + 1.29259 \cdot 10^{-3}T^2 - 3.61856 \cdot 10^{-7}T^3$	1058.7–1242.6	.0738	[109]	4.0
$SrCl_2$	$\eta = 4.401 \cdot 10^{-4} \exp(20655/RT)$	1150.5–1258.6	.0706	[109]	(4.0)
$BaCl_2$	$\eta = 1.643 \cdot 10^{-3} \exp(20029/RT)$	1261.4–1313.9	.0651	[109]	4.0
$LaCl_3$	$\eta = 2.061 \cdot 10^{-2} \exp(13049/RT)$	1183 –1276	.....	[137]	(1.0)
$TiCl_4$	$\eta = 4.952 \cdot 10^{-2} \exp(1643/RT)$	293 – 333	.0095	[204]	(1.0)
CuCl	$\eta = 50.4565 - 0.140175\ T + 1.37677 \cdot 10^{-4}T^2 - 4.66667 \cdot 10^{-8}T^3$	773.2– 973.2	.0012	[47]	(2.0)
AgCl	$\eta = 6.91305 - 4.47411 \cdot 10^{-3}T - 6.49368 \cdot 10^{-6}T^2 + 5.41584 \cdot 10^{-9}T^3$	723.2– 973.2	.0033	[72]	1.5
$ZnCl_2$	.....	593.2– 673.2	.....	[98]	(8.0)
$CdCl_2$	$\eta = 24.05 \cdot 10^{-2} \exp(3912/RT)$	863.2– 963.2	.0075	[53]	1.5
$HgCl_2$	$\eta = -4341.632 + 22.96096\ T - 4.043872 \cdot 10^{-2}T^2 + 2.372690 \cdot 10^{-5}T^3$	554.0– 579.3	.0080	[103]	(3.0)
$AlCl_3$	$\eta = 10.5980 - 5.14676 \cdot 10^{-2}T + 8.59674 \cdot 10^{-5}T^2 - 4.86480 \cdot 10^{-8}T^3$	461.5– 549.2	.00159	[149]	(1.0)
$GaCl_3$	$\eta = 42.1652 - 0.251746\ T + 5.13276 \cdot 10^{-4}T^2 - 3.53160 \cdot 10^{-7}T^3$	355.9– 519.7	.0120	[149]	2.0
$SnCl_4$	$\eta = 3.187 \cdot 10^{-2} \exp(1928/RT)$	273 – 423	.0059	[147]	1.5
$PbCl_2$	$\eta = 5.619 \cdot 10^{-2} \exp(6762/RT)$	773.2– 973.2	.0091	[72]	1.5
$BiCl_3$	$\eta = 37.87 \cdot 10^{-2} \exp(4693/RT)$	533.2– 613.2	.2205	[16]	(1.5)
LiBr	$\eta = 6.868 \cdot 10^{-2} \exp(5355/RT)$	862.2–1046.2	.0180	[102]	2.0
NaBr	$\eta = 64.3240 - 0.152525\ T + 1.23215 \cdot 10^{-4}T^2 - 3.34241 \cdot 10^{-8}T^3$	1053.7–1212.7	.0040	[102]	1.0
KBr	$\eta = 128.399 - 0.334905\ T + 2.94450 \cdot 10^{-4}T^2 - 8.66540 \cdot 10^{-8}T^3$	1017.8–1181.2	.0056	[102]	1.0
RbBr	$\eta = 51.9396 - 0.131564\ T + 1.4887 \cdot 10^{-4}T^2 - 3.39298 \cdot 10^{-8}T^3$	959.7–1139.5	.0046	[102]	(1.0)
AgBr	$\eta = 37.1747 - 0.100768\ T + 9.80868 \cdot 10^{-5}T^2 - 3.25971 \cdot 10^{-8}T^3$	713.2– 873.2	.0067	[72]	1.5
$ZnBr_2$	one point only	673.2	.....	[98]	(3.0)
$CdBr_2$	$\eta = -110.000 + 0.409042\ T - 4.84560 \cdot 10^{-4}T^2 + 1.87613 \cdot 10^{-7}T^3$	853.2– 949.2	.0072	[53]	(1.5)
$HgBr_2$	$\eta = 1.801 \cdot 10^{-2} \exp(5040/RT)$	528.2– 548.2	.0078	[58]	1.5
$AlBr_3$	$\eta = 3.491 \cdot 10^{-2} \exp(3123/RT)$	373 – 523	.00152	[138]	1.5
$PbBr_2$	$\eta = 112.439 - 0.329572\ T + 3.31646 \cdot 10^{-4}T^2 - 1.12536 \cdot 10^{-7}T^3$	698.2–1023.2	.0191	[142]	1.0
LiI	$\eta = 17.1272 - 3.14251 \cdot 10^{-2}T + 1.54596 \cdot 10^{-5}T^2 - 1.34806 \cdot 10^{-11}T^3$	723.2– 923.2	.0095	[47]	(5.0)
NaI	$\eta = 7.171 \cdot 10^{-2} \exp(5673/RT)$	946.4–1107.8	.0085	[122]	1.0
KI	$\eta = 9.836 \cdot 10^{-2} \exp(5343/RT)$	975.1–1165.2	.0085	[122]	1.0
RbI	$\eta = 35.1934 - 8.85769 \cdot 10^{-2}T + 7.79282 \cdot 10^{-5}T^2 - 2.34005 \cdot 10^{-8}T^3$	922.2–1126.4	.0037	[122]	(1.0)
CsI	$\eta = 41.8211 - 0.101156\ T + 8.49570 \cdot 10^{-5}T^2 - 2.42543 \cdot 10^{-8}T^3$	910.2–1126.9	.0163	[122]	(1.5)

TABLE 178. *Viscosity—Best equations*—Continued

Salt	Best equation	Temperature range, °K	s Centipoise	Reference	Uncertainty estimate (percent)
AgI	$\eta = 116.161 - 0.333640\ T + 3.30383 \cdot 10^{-4} T^2 - 1.10721 \cdot 10^{-7} T^3$	878.2–1100.2	0.0577	[24]	(2.5)
HgI_2	$\eta = 4.00 \cdot 10^{-2} \exp(4531/RT)$	541.2– 631.2	.0367	[103]	3.0
Li_2CO_3	$\eta = -5259.12 + 14.8091\ T - 1.38581 \cdot 10^{-2} T^2 + 4.31294 \cdot 10^{-6} T^3$	1046.2–1122.2	.1022	[107]	3.0
Na_2CO_3	$\eta = 3.832 \cdot 10^{-5} \exp(26260/RT)$	1152.3–1245.2	.0112	[107]	3.0
K_2CO_3	$\eta = 1.161 \cdot 10^{-5} \exp(29487/RT)$	1186.2–1257.2	.0207	[107]	3.0
$LiNO_2$	$\eta = -14909.1 + 87.5812T - 0.171073\ T^2 + 1.11184 \cdot 10^{-4} T^3$	502.7– 527.2	.0354	[207]	1.0
$NaNO_2$	$\eta = 187.118 - 0.876094\ T + 1.41024 \cdot 10^{-3} T^2 - 7.71608 \cdot 10^{-7} T^3$	563 – 613	.0187	[207]	1.0
KNO_2	$\eta = 864.798 - 3.61760\ T + 5.06274 \cdot 10^{-3} T^2 - 2.36530 \cdot 10^{-6} T^3$	686.8– 725.4	.0055	[125]	(1.5)
$RbNO_2$	$\eta = 8.754 \cdot 10^{-2} \exp(4495/RT)$	712 – 758	.0054	[207]	(1.0)
$CsNO_2$	$\eta = -182.963 + 0.828051\ T - 1.21823 \cdot 10^{-3} T^2 + 5.90224 \cdot 10^{-7} T^3$	688 – 739	.0080	[207]	(1.0)
$LiNO_3$	$\eta = 20.4645 + 1.34189 \cdot 10^{-2} T - 1.31061 \cdot 10^{-4} T^2 + 1.06106 \cdot 10^{-7} T^3$	533.2– 702.2	.1143	[38]	3.5
$NaNO_3$	$\eta = 10.41 \cdot 10^{-2} \exp(3886/RT)$	589.2– 731.2	.0282	[38]	1.5
KNO_3	$\eta = 50.1676 - 0.164572\ T + 1.86335 \cdot 10^{-4} T^3 - 7.12497 \cdot 10^{-8} T^3$	621.2– 815.2	.0234	[38]	1.5
$RbNO_3$	$\eta = 190.972 - 0.791802\ T + 1.11940 \cdot 10^{-3} T^2 - 5.33333 \cdot 10^{-7} T^3$	598 – 698	.00717	[139]	(1.0)
$CsNO_3$	$\eta = 41.3159 + 0.21403\ T - 3.32966 \cdot 10^{-4} T^{-2} + 1.65583 \cdot 10^{-7} T^{-3}$	698.2– 776.2	.033	[228]	4.5
$AgNO_3$	$\eta = 81.7743 - 0.336741\ T + 4.80289 \cdot 10^{-4} T^2 - 2.32448 \cdot 10^{-7} T^3$	530.0– 593.4	.0054	[69]	1.0
$TlNO_3$	$\eta = -26.2068 + 0.276304\ T - 7.00275 \cdot 10^{-4} T^2 + 5.31820 \cdot 10^{-7} T^3$	492.5– 553.7	.00876	[191]	(1.0)
B_2O_3	$\eta = 97913.6 - 135.257\ T + 6.32685 \cdot 10^{-2} T^2 - 9.97755 \cdot 10^{-6} T^3$	1410 –1893	70.8	[137]	8.0
SiO_2	$\eta = 2.52255 \cdot 10^{8} - 294897\ T + 114.935\ T^2 - 1.49316 \cdot 10^{-2} T^3$	2208 –2595	55.9	[205]	6.0
GeO_2	$\eta = 1.316 \cdot 10^{-4} \exp(74254/RT)$	1423 –1773	$7.61 \cdot 10^{5}$	[140]	5.0
GeO_2	$\eta = 1.967 \cdot 10^{-3} \exp(65143/RT)$	1745 –1991	8380	[137]	1.5
As_2O_3	$\eta = 1.679 \cdot 10^{-2} \exp(22211/RT)$	601 – 703	7680	[202]	.....
Pr_4NBF_4	$\eta = 539.745 - 2.88873\ T + 5.20040 \cdot 10^{-3} T^2 - 3.13987 \cdot 10^{-6} T^3$	522.8– 546.7	0.00032	[190]	.....
Pr_4NPF_6	$\eta = 900.654 - 4.87945\ T + 8.87944 \cdot 10^{-3} T^2 - 5.41472 \cdot 10^{-6} T^3$	517.5– 541.9	.00031	[190]	.....
Pr_4NBPh_4	$\eta = 2348.89 - 12.9447\ T + 2.39385 \cdot 10^{-2} T^2 - 1.48320 \cdot 10^{-5} T^3$	483.5– 529.2	.0166	[190]	.....
Bu_4NBF_4	$\eta = 1099.50 - 6.25565\ T + 1.19468 \cdot 10^{-2} T^2 - 7.64127 \cdot 10^{-6} T^3$	435.4– 539.1	.0446	[190]	.....
Bu_4NPF_6	$\eta = 3.173 \cdot 10^{-3} \exp(7159/RT)$	529.4– 554.1	.00351	[190]	.....
Bu_4NBPh_4	$\eta = 1.588 \cdot 10^{-3} \exp(8235/RT)$	516.8– 541.8	.00638	[190]	.....
Hex_4NBF_4	$\eta = 1.806 \cdot 10^{-4} \exp(9841/RT)$	376.0– 502.8	2.90	[190]	.....
(n-Amyl)$_4$NSCN	$\eta = 116917 - 941.774\ T + 2.53276\ T^2 - 2.27331 \cdot 10^{-3} T^3$	325.2– 383.2	3.93	[172]	.....
NaSCN	$\eta = 526.399 - 2.49292\ T + 3.96856 \cdot 10^{-3} T^2 - 2.11546 \cdot 10^{-6} T^3$	578.0– 634.1	0.0128	[112]	(1.5)
KSCN	$\eta = 1935.08 - 11.1776\ T + 2.16788 \cdot 10^{-2} T^2 - 1.40826 \cdot 10^{-5} T^3$	448.8– 523.8	.0899	[112]	(1.5)
NaOH	$\eta = 164.771 - 0.614833\ T + 7.80340 \cdot 10^{-4} T^2 - 3.33334 \cdot 10^{-7} T^3$	623.2– 823.2	.0359	[37]	(1.5)
KOH	$\eta = 52.7561 - 0.166134\ T + 1.80314 \cdot 10^{-4} T^2 - 6.66494 \cdot 10^{-8} T^3$	673.2– 873.2	.0120	[37]	(1.5)
$K_2Cr_2O_7$	$\eta = 79.5667 - 0.110600\ T - 1.12662 \cdot 10^{-5} T^2 + 4.25741 \cdot 10^{-8} T^3$	670.2– 780.2	.0084	[8]	1.5
$NaPO_3$	$\eta = 2.412 \cdot 10^{-2} \exp(19899/RT)$	916 –1029	55.2	[200]	.....
$LiClO_3$	$\eta = 13199.6 - 88.4573\ T + 0.198361\ T^2 - 1.48684 \cdot 10^{-4} T^3$	404.9– 440.0	0.446	[175]	.....

TABLE 179. *Specific conductance-exponential equations*

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
LiF	$\kappa = 15.287 \exp(-1287.4/RT)$	1148.2–1310.2	0.035	[86]	12
NaF	$\kappa = 10.49 \exp(-1904/RT)$	1276 –1411	.00992	[86]	3.5
KF	$\kappa = 10.002 \exp(-2325.9/RT)$	1132.2–1285.2	.0212	[86]	12
CsF	$\kappa = 12.890 \exp(-3245.0/RT)$	1010 –1125	.0457	[182]	5
CuF_2	.....	.....	.....	[86]	.....
AgF	.....	.....	.....	[86]	.....
ZnF_2	.....	.....	.....	[86]	.....
PbF_2	.....	.....	.....	[86]	.....
MnF_2	.....	.....	.....	[86]	.....
LiCl	$\kappa = 2.580 \exp(-1469/RT)$	917 –1056	.0015*	[62, 79]	0.7
NaCl	$\kappa = 2.204 \exp(-1981/RT)$	1079 –1294	.0024*	[79]	.8
KCl	$\kappa = 6.9475 \exp(-2414/RT)$	1063 –1198	.00469	[79]	.6
RbCl	$\kappa = 8.621 \exp(-3440/RT)$	1003 –1197	.0039*	[82]	3.5
CsCl	$\kappa = 11.698 \exp(-4293/RT)$	926 –1170	.0064*	[82]	5.0
$BeCl_2$	$\kappa = 6.690 \cdot 10^{12} \exp(-52349/RT)$	718 – 761	$7.06 \cdot 10^{-4}$	[186]	(50)
$MgCl_2$	$\kappa = 7.374 \exp(-3899/RT)$	987 –1252	0.00583	[94]	1
$CaCl_2$	$\kappa = 19.628 \exp(-4749/RT)$	1046 –1291	.00587	[94]	2.5
$SrCl_2$	$\kappa = 17.792 \exp(-4987/RT)$	1146 –1357	.0012	[94]	4.0
$BaCl_2$	$\kappa = 17.479 \exp(-5274/RT)$	1233 –1359	.00254	[94]	9.0
$ScCl_3$	$\kappa = 2.309 \exp(-3162/RT)$	1213 –1264	.....	[30]	10
YCl_3	$\kappa = 32.755 \exp(-8624/RT)$	973 –1148	.024*	[35]	.....
$LaCl_3$	$\kappa = 12.623 \exp(-4812/RT)$	1146 –1260	.....	[83]	10
$CeCl_3$	$\kappa = 13.107 \exp(-5366.2/RT)$	1101 –1204	$8.81 \cdot 10^{-3}$	[119]	15
$PrCl_3$	$\kappa = 36.17 \exp(-8258/RT)$	1097 –1238	0.0032	[32]	15
$NdCl_3$	$\kappa = 28.58 \exp(-7934/RT)$	1048 –1173	.0061*	[32]	.....
$GdCl_3$	$\kappa = -22.247 \exp(7300.6/RT)$	902.2– 971.2	.00525	[171]	20
$DyCl_3$	$\kappa = 31.50 \exp(-8387.5/RT)$	952.2–1003.2	.00602	[171]	20
$HoCl_3$	$\kappa = 23.29 \exp(-8078.3/RT)$	1020.2–1092.2	.00371	[171]	20
$ErCl_3$	$\kappa = 18.85 \exp(-7887.8/RT)$	1074.2–1112.2	.000210	[171]	20
$ThCl_4$	$\kappa = 10.25 \exp(-6063/RT)$	1087 –1195	.0217*	[32]	.....
UCl_4	$\kappa = 166.7 \exp(-10360/RT)$	843 – 893	.0108*	[32]	.....
$MnCl_2$	$\kappa = 4.9986 \exp(-2246.6/RT)$	923 –1123	.0135	[192]	20
CuCl	$\kappa = 4.238 \exp(-196.56/RT)$	746 –1430	$7.67 \cdot 10^{-2}$	[189]	5
AgCl	.....	.....	.....	[166]	.....
$ZnCl_2$	$\kappa = 1.2127 \cdot 10^{6} \exp(-23747/RT)$	593.3– 672.5	$1.72 \cdot 10^{-3}$	[94]	30

TABLE 179. *Specific conductance-exponential equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
$ZnCl_2$	$\kappa = 1577.4 \exp(-15013/RT)$	672.5– 824.7	$2.61 \cdot 10^{-3}$	[94]	5
$ZnCl_2$	$\kappa = 184.26 \exp(-11531/RT)$	824.7– 969.7	$4.08 \cdot 10^{-3}$	[94]	5
$CdCl_2$	$\kappa = 1.849 \exp(-2050/RT)$	845 –1082	0.0021*	[94]	0.6
HgCl	$\kappa = 5.255 \exp(-2644/RT)$	802 – 819	.00604	[35]	.....
$HgCl_2$	$\kappa = 1.1911 \cdot 10^{-3} \exp(-3781.5/RT)$	559 – 802	$8.08 \cdot 10^{-6}$	[189]	3
InCl	$\kappa = 24.148 \exp(-3314/RT)$	498 – 624	0.0192*	[34]	.....
$InCl_2$	$\kappa = 6.405 \exp(-3314/RT)$	508 – 780	.0416*	[34]	.....
$InCl_3$	$\kappa = 0.045 \exp(-3862/RT)$	859 – 967	.0124*	[34]	.....
TlCl	$\kappa = 8.683 \exp(-2853.4/RT)$	720 –1169	.0234	[189]	0.7
$SnCl_2$	$\kappa = 7.432 \exp(-2095.1/RT)$	529 –1235	.201	[189]	4
$PbCl_2$	$\kappa = 15.55 \exp(-3629/RT)$	773 – 923	.0130	[97]	5
$BiCl_3$	$\kappa = 0.772 \exp(-572/RT)$	502 – 898	.0720	[114]	2.3
$TeCl_2$	$\kappa = 66.19 \exp(-6933/RT)$	479 – 578	.0526*	[32]	.....
$TeCl_4$	$\kappa = 7.734 \exp(-4246/RT)$	509 – 589	.0161	[32]	.....
LiBr	$\kappa = 12.98 \exp(-1666/RT)$	831 –1022	.0052	[82]	.....
NaBr	$\kappa = 9.097 \exp(-2324/RT)$	1017 –1229	.00322	[82]	1.3
KBr	$\kappa = 6.256 \exp(-2691/RT)$	1011 –1229	.0096*	[82]	1.5
RbBr	$\kappa = 6.174 \exp(-3247/RT)$	969 –1179	.0131*	[82]	.....
CsBr	$\kappa = 11.185 \exp(-4757/RT)$	917 –1131	.0068*	[82]	.....
$MgBr_2$	$\kappa = 2.149 \exp(-4915/RT)$	987 –1244	.0042*	[94]	.....
$CaBr_2$	$\kappa = 12.320 \exp(-4475/RT)$	1014 –1291	.00397	[94]	.....
$SrBr_2$	$\kappa = 3.022 \exp(-5905/RT)$	929 –1186	.0177*	[94]	.....
$BaBr_2$	$\kappa = 13.539 \exp(-5441/RT)$	1126 –1338	.00588	[94]	.....
$LaBr_3$	$\kappa = 106.15 \exp(-10353/RT)$	1050 –1185	.....	[83]	23
$PrBr_3$	$\kappa = 16.62 \exp(-6888.2/RT)$	1000 –1043	.00181	[171]	20
$NdBr_3$	$\kappa = 106.67 \exp(-11351/RT)$	963 –1143	.0075*	[83]	23
$GdBr_3$	$\kappa = 10.48 \exp(-6740.4/RT)$	1073 –1115	.00133	[171]	20
CuBr	$\kappa = 6.342 \exp(-1416/RT)$	764 – 823	.00533	[41]	.....
AgBr	$\kappa = 5.183 \exp(-831/RT)$	723 –1073	.00600	[100, 72]	0.5
$ZnBr_2$	$\kappa = 7.012 \cdot 10^2 \exp(-13963/RT)$	671 – 913	.0644*	[94]	18
$CdBr_2$	$\kappa = 5.488 \exp(-2749/RT)$	849 –1055	.0021*	[94]	.....
$HgBr_2$	$\kappa = 1.0836 \cdot 10^{-3} \exp(-1663.0/RT)$	528 – 853	$6.88 \cdot 10^{-5}$	[189]	1.5
$InBr_3$	$\kappa = 0.101 \exp(-727/RT)$	709 – 813	0.0067*	[34]	.....
TlBr	$\kappa = 6.184 \exp(-2941.6/RT)$	745 –1127	$9.55 \cdot 10^{-3}$	[189]	1
$PbBr_2$	$\kappa = 16.726 \exp(-4290/RT)$	655 – 765	0.0083*	[7]	2.7
$BiBr_3$	$\kappa = 0.2384 \exp(251/RT)$	496 – 998	.057	[114]	.....

TABLE 179. *Specific conductance-exponential equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
LiI	$\kappa = 10.113 \exp(-1411/RT)$	756 - 877	0.0047	[227]	5.0
NaI	$\kappa = 8.292 \exp(-2423/RT)$	936 -1187	.00622	[82]	3.5
KI	$\kappa = 5.698 \exp(-2839/RT)$	959 -1184	.0151*	[79]	0.9
RbI	$\kappa = 5.082 \exp(-3235/RT)$	929 -1158	.0069*	[82]	.....
CsI	$\kappa = 2.147 \exp(-4588/RT)$	932 -1137	.0077*	[82]	.....
MgI_2	$\kappa = 13.070 \exp(-6333/RT)$	910 -1176	.0047*	[94]	.....
CaI_2	$\kappa = 2.060 \exp(-4042/RT)$	1059 -1287	.0079*	[94]	.....
SrI_2	$\kappa = 10.990 \exp(-4932/RT)$	821 -1270	.0174*	[94]	.....
BaI_2	$\kappa = 13.767 \exp(-5831/RT)$	991 -1292	.0088*	[94]	.....
AlI_3	$\kappa = 0.12807 \exp(-10449/RT)$	464 - 543	.1365*	[35]	.....
LaI_3	$\kappa = 9.118 \exp(-6359/RT)$	1069 -1144	.0008*	[106]	.....
CeI_3	$\kappa = 7.746 \exp(-6055/RT)$	1069 -1133	.0008*	[106]	.....
PrI_3	.....	.....	.....	[106]	.....
NdI_3	$\kappa = 6.336 \exp(-5908/RT)$	1072 -1115	.0008*	[106]	.....
AgI	$\kappa = 4.674 \exp(-1146/RT)$	823 -1073	.111	[11, 35]	12
ZnI_2	$\kappa = 2.832 \cdot 10^2 \exp(-12000/RT)$	718 - 870	.0289	[94]	1.5
CdI_2	$\kappa = 23.613 \exp(-6240/RT)$	675 - 913	.0286*	[94]	4.5
HgI_2	$\kappa = 2.2417 \cdot 10^{-3} \exp(5422.4/RT)$	532 - 905	$3.20 \cdot 10^{-3}$	[189]	2.5
GaI_2	$\kappa = 1756 \exp(-5060/RT)$	423 - 623	0.0930*	[105]	.....
InI_3	$\kappa = 0.3098 \exp(-1473.8/RT)$	504 - 880	$6.07 \cdot 10^{-3}$	[189]	6
TlI	$\kappa = 4.816 \exp(-3126.7/RT)$	721 -1333	0.0152	[189]	1.5
PbI_2	$\kappa = 1.100 \exp(-4478/RT)$	676 - 873	.0064*	[108]	.....
BiI_3	$\kappa = 0.753 \exp(-1332/RT)$	686 - 775	.0059*	[104]	.....
Li_2CO_3	$\kappa = 29.34 \exp(-3954/RT)$	1018 -1118	.00198*	[101]	.....
Na_2CO_3	$\kappa = 13.758 \exp(-3527/RT)$	1138 -1240	.00420	[101]	1.5
K_2CO_3	$\kappa = 11.027 \exp(-3941/RT)$	1184 -1279	.0017	[101]	1.5
$LiNO_2$	$\kappa = 44.82 \exp(-4165.0/RT)$	502.7- 527.2	.000620	[207]	6
$NaNO_2$	$\kappa = 13.2 \exp(-2600/RT)$	554 - 723	.....	[66]	1.6
KNO_2	$\kappa = 9.428 \exp(2682.7/RT)$	713.1- 743.1	$7.67 \cdot 10^{-4}$	[207]	6
$RbNO_2$	$\kappa = 10.66 \exp(-3436.2/RT)$	712.2- 758.2	0.00358	[207]	6
$CsNO_2$	$\kappa = 6.905 \exp(-3075.1/RT)$	688.2- 739.2	$7.59 \cdot 10^{-4}$	[207]	6
$Ba(NO_2)_2$	.....	.....	.....	.....	.....
$LiNO_3$	.....	.....	.....	[116]	.....
$NaNO_3$	$\kappa = 12.103 \exp(-2905/RT)$	583 - 691	0.0012*	[61, 7]	1
KNO_3	$\kappa = 8.520 \exp(-3137/RT)$	613 - 880	.0078*	[66]	0.8
$RbNO_3$	$\kappa = 6.302 \exp(-3117/RT)$	592 - 766	.0082*	[26]	6

TABLE 179. *Specific conductance-exponential equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
$CsNO_3$	$\kappa = 5.804 \exp(-3251/RT)$	688 - 764	0.00028	[84]	0.6
$AgNO_3$	$\kappa = 11.745 \exp(-2749/RT)$	483 - 603	.0053*	[60]	1.0
$TlNO_3$	$\kappa = 9.416 \exp(-3142.9/RT)$	485.5- 554.5	$1.81 \cdot 10^{-3}$	[191]	0.7
V_2O_5	$\kappa = 4.692 \cdot 10^4 \exp(-29422/RT)$	1140 -1237	0.058*	[68]	.....
CrO_3	$\kappa = 36.807 \exp(-43998/RT)$	491 - 535	.2381*	[68]	.....
MoO_3	$\kappa = 11.642 \exp(-5586/RT)$	1096 -1187	.0021	[76]	60
FeO	$\kappa = 6.1951 \exp(-41394/RT)$	1648 -1713	21.0	[159]	.....
FeO	$\kappa = 1482.3 \exp(-5347.7/RT)$	1713 -1773	1.16	[159]	.....
GeO_2	$\kappa = 29.758 \exp(-37957/RT)$	1389.2-1623.2	.....	[163]	20
PbO	$\kappa = 1.750 \cdot 10^5 \exp(-27629/RT)$	1164 -1260	0.010	[68]	.....
Sb_2O_3	$\kappa = 6.799 \cdot 10^3 \exp(-24716/RT)$	1101 -1161	.0529*	[68]	.....
Bi_2O_3	$\kappa = 2.654 \cdot 10^7 \exp(-40138/RT)$	1102 -1228	.0937*	[68]	.....
TeO_2	$\kappa = 1.454 \cdot 10^2 \exp(-9656/RT)$	1023 -1233	.0384	[68]	.....
CoS	$\kappa = 6.2884 \exp(-15494/RT)$	1461.2-1497.2	18.95	[155]	50
Cu_2S	$\kappa = 130294 \exp(-22050/RT)$	1402.2-1523.3	.....	[155]	40
Ag_2S	$\kappa = 41.5109 \exp(2569.13/RT)$	1105 -1352	0.783	[156]	50
GeS	$\kappa = 114.32 \exp(-15003/RT)$	873.2-1073.2	.00144	[155]	50
SnS	$\kappa = 6194 \exp(-13231/RT)$	1158.2-1411.2	.706	[155]	50
PbS	.....	.....	.....	[154]	.....
Sb_2S_3	$\kappa = 435.58 \exp(-12600/RT)$	830.2-1076.2	.0129	[155]	50
Bi_2S_3	$\kappa = 2717.9 \exp(420.0/RT)$	973.2-1198.2	5.23	[157]	.....
Li_2SO_4	.....	.....	.....	[1]	.....
Na_2SO_4	$\kappa = 11.8933 \exp(-3819.9/RT)$	1189 -1232	$1.19 \cdot 10^{-3}$	[226]	2
K_2SO_4	$\kappa = 7.949 \exp(-3828.2/RT)$	1341 -1360	$2.66 \cdot 10^{-3}$	[161]	3
Rb_2SO_4	$\kappa = 6.2394 \exp(-3977.23/RT)$	1340 -1395	$1.83 \cdot 10^{-3}$	[226]	(3)
Cs_2SO_4	$\kappa = 4.7018 \exp(-3685.6/RT)$	1287 -1355	$3.52 \cdot 10^{-3}$	[226]	(3)
Ag_2SO_4	$\kappa = 7.4568 \exp(-2754.15/RT)$	942 -1017	$2.03 \cdot 10^{-3}$	[226]	(3)
Pr_4NBF_4	$\kappa = 6.6731 \exp(-4472.7/RT)$	522.7- 554.6	$1.88 \cdot 10^{-3}$	[190, 221]	10
Pr_4NPF_6	$\kappa = 21.0096 \exp(-5902.52/RT)$	511.03- 545.15	$8.86 \cdot 10^{-5}$	[190, 221]	6
Bu_4NBr	$\kappa = 1926.41 \exp(-10818.4/RT)$	390.3- 407.7	$9.42 \cdot 10^{-6}$	[190, 221]	7
Bu_4NI	$\kappa = 281.56 \exp(-9082.1/RT)$	420.7- 440.1	$2.65 \cdot 10^{-4}$	[190, 221]	10
Bu_4NPF_6	$\kappa = 8.654 \exp(-5613.1/RT)$	529.5- 548.5	$1.22 \cdot 10^{-4}$	[190, 221]	6
Bu_4NBPh_4	$\kappa = 8.0270 \exp(-6587.0/RT)$	514.3- 540.4	$1.95 \cdot 10^{-5}$	[190, 221]	6
$(n\text{-Amyl})_4NSCN$	$\kappa = 1603.72 \exp(-9955.7/RT)$	325.2- 383.2	$7.8 \cdot 10^{-5}$	[172]	.....
Li_2MoO_4	.....	.....	.....	[117]	.....
Na_2MoO_4	$\kappa = 15.609 \exp(-5112/RT)$	1024 -1237	0.0049*	[76]	10

TABLE 179. *Specific conductance-exponential equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
Na_2WO_4	$\kappa = 7.541 \exp(-3931/RT)$	926 –1774	0.0060	[26]	.....
NaSCN	$\kappa = 43.0 \exp(-4740/RT)$	583 – 643	.....	[112]	.....
KSCN	$\kappa = 100 \exp(-5850/RT)$	.....	.....	[112]	.....
NaOH	.....	.....	.....	[37]	.....
KOH	.....	.....	.....	[37]	.....
$K_2Cr_2O_7$	$\kappa = 112.7 \exp(-8419/RT)$	.....	0.00137	[110]	8
UO_2Cl_2	.....	.....	.....	[64]	.....
LiH	$\kappa = 2.257 \exp(-47552/RT)$	958.2–1027	$8.58 \cdot 10^{-3}$	[165]	.....
$LiClO_3$	$\kappa = 166.87 \exp(-5849.9/RT)$	404.6– 446.7	$2.19 \cdot 10^{-3}$	[1]	.....

TABLE 180. *Specific conductance—Power series equations*

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
LiF	$\kappa = -15.0389 + 3.534 \cdot 10^{-3}T - 1.28145 \cdot 10^{-5}T^2$	1148.2–1310.2	0.0237	[86]	12
NaF	$\kappa = 1.4605 + 2.7374 \cdot 10^{-3}T$	1276 –1411	.0089	[86]	3.5
KF	$\kappa = -9.2728 \cdot 10^{-2}T + 3.0628 \cdot 10^{-3}T$	1132.2–1285.2	.0201	[86]	12
CsF	$\kappa = -1.47691 + 3.997 \cdot 10^{-3}T$	1010 –1125	.0456	[182]	5
CuF_2	$\kappa = 0.93 + 1.0 \cdot 10^{-3}T$	1270 –1370	.....	[86]	.....
AgF	$\kappa = -5.2 + 12.0 \cdot 10^{-3}T$	773 – 923	.....	[86]	.....
ZnF_2	$\kappa = -3.75 + 6.0 \cdot 10^{-3}T$	1173 –1223	.....	[86]	.....
PbF_2	$\kappa = 0.7 + 4.0 \cdot 13^{-3}T$	1123 –1273	.....	[86]	.....
MnF_2	$\kappa = 4.0 \cdot 10^{-3}T$	1223 –1273	.....	[86]	.....
LiCl	$\kappa = -2.0647 + 12.1271 \cdot 10^{-3}T - 3.7641 \cdot 10^{-6}T^2$	917.1–1056.5	.00074	[62, 79]	0.7
NaCl	$\kappa = -2.4975 + 8.0431 \cdot 10^{-3}T - 2.2227 \cdot 10^{-6}T^2$	1079 –1294	.00164	[79]	.8
KCl	$\kappa = -3.99005 + 9.0222 \cdot 10^{-3}T - 3.000 \cdot 10^{-6}T^2$	1063 –1198	.0030	[79]	.6
RbCl	$\kappa = -3.6290 + 7.3405 \cdot 10^{-3}T - 2.1918 \cdot 10^{-6}T^2$	1003 –1197	.00255	[82]	3.5
CsCl	$\kappa = -3.2034 + 6.0802 \cdot 10^{-3}T - 1.5216 \cdot 10^{-6}T^2$	926 –1170	.00280	[82]	5.0
$BeCl_2$	$\kappa = -0.075392 + 1.0576 \cdot 10^{-4}T$	718 – 761	$9.70 \cdot 10^{-5}$	[186]	50
$MgCl_2$	$\kappa = -0.6049 + 1.352 \cdot 10^{-3}T + 0.2911 \cdot 10^{-6}T^2$	987 –1252	0.00300	[94]	1

TABLE 180. *Specific conductance—Power series equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
$CaCl_2$	$\kappa = -2.71401 + 4.58035 \cdot 10^{-3}T - 7.23848 \cdot 10^{-8}T^2$	1046 –1291	.00573	[94]	2.5
$SrCl_2$	$\kappa = -2.1052 + 3.44860 \cdot 10^{-3}T + 1.13958 \cdot 10^{-7}T^2$	1146 –1357	.0068	[94]	4.0
$BaCl_2$	$\kappa = -3.29723 + 3.77582 \cdot 10^{-3}T + 3.97985 \cdot 10^{-7}T^2$	1233 –1359	.0561	[94]	9.0
$ScCl_3$	$\kappa = -2.890 + 2.796 \cdot 10^{-3}T$	1213 –1264	.....	.....	.....
YCl_3	$\kappa = -3.7071 + 5.9576 \cdot 10^{-3}T - 1.8199 \cdot 10^{-6}T^2$	973 –1148	.00428	[35]	.....
$LaCl_3$	$\kappa = -13.538 + 22.487 \cdot 10^{-3}T - 8.167 \cdot 10^{-6}T^2$	1146 –1260	.009	[83]	10
$CeCl_3$	$\kappa = -1.426 + 2.125 \cdot 10^{-3}T$	1123 –1223	.0006	[99]	18
$PrCl_3$	$\kappa = -2.624 + 3.134 \cdot 10^{-3}T$	1097 –1238	.0044	[32]	15
$NdCl_3$	$\kappa = -2.018 + 2.527 \cdot 10^{-3}T$	1048 –1173	.0024	[32]	.....
$GdCl_3$	$\kappa = -1.29018 + 1.84885 \cdot 10^{-3}T$	902.2– 971.2	.00586	[171]	20
$DyCl_3$	$\kappa = -1.37966 + 1.8417 \cdot 10^{-3}T$	952 –1003	.00483	[171]	20
$HoCl_3$	$\kappa = -1.40281 + 1.79896 \cdot 10^{-3}T$	1020 –1092	.00281	[171]	20
$ErCl_3$	$\kappa = -1.31353 + 1.6584 \cdot 10^{-3}T$	1074 –1112	.000150	[171]	20
$ThCl_4$	$\kappa = -13.1887 + 22.5705 \cdot 10^{-3}T - 9.0973 \cdot 10^{-6}T^2$	1087 –1195	.014	[32]	.....
UCl_4	$\kappa = -2.023 + 2.803 \cdot 10^{-3}T$	843 – 893	.00130	[32]	.....
$MnCl_2$	$\kappa = 1.572640 - 1.669355 \cdot 10^{-3}T + 1.698935 \cdot 10^{-6}T^2$	923 –1123	$3.66 \cdot 10^{-4}$	[192]	20
CuCl	$\kappa = -1.290779 + 1.2137306 \cdot 10^{-2}T - 9.126581 \cdot 10^{-6}T^2 + 2.196380 \cdot 10^{-9}T^3$	746 –1430	$6.40 \cdot 10^{-3}$	[189]	5
AgCl	$\kappa = -1.578 + 1.0697 \cdot 10^{-2}T - 4.51 \cdot 10^{-6}T^2$	753 –1013	$3.5 \cdot 10^{-3}$	[166]	0.7
$ZnCl_2$	$\kappa = 0.423433 - 1.53761 \cdot 10^{-3}T + 1.39393 \cdot 10^{-6}T^2$	593.3– 672.5	$4.66 \cdot 10^{-4}$	[94]	30
$ZnCl_2$	$\kappa = 1.51396 - 4.77073 \cdot 10^{-3}T + 3.79161 \cdot 10^{-6}T^2$	672.5– 824.7	$8.38 \cdot 10^{-4}$	[94]	5
$ZnCl_2$	$\kappa = 1.3084 - 4.33201 \cdot 10^{-3}T + 3.56250 \cdot 10^{-6}T^2$	824.7– 969.7	$1.60 \cdot 10^{-3}$	[94]	5
$CdCl_2$	$\kappa = -1.9571 + 6.1834 \cdot 10^{-3}T - 1.9576 \cdot 10^{-6}T^2$	845 –1082	$1.49 \cdot 10^{-4}$	[94]	0.6
HgCl	$\kappa = -0.653 + 2.062 \cdot 10^{-3}T$	802 – 819	0.00604	[35]	.....
$HgCl_2$	$\kappa = 2.060513 \cdot 10^{-3} - 1.061468 \cdot 10^{-5}T + 1.793902 \cdot 10^{-8}T^2 - 9.720443 \cdot 10^{-12}T^3$	559 – 705	$3.87 \cdot 10^{-7}$	[189]	3
InCl	$\kappa = -2.0281 + 5.2188 \cdot 10^{-3}T + 1.0942 \cdot 10^{-6}T^2$	498 – 624	0.0176	[34]	.....
$InCl_2$	$\kappa = -1.2783 + 3.6986 \cdot 10^{-3}T - 1.4444 \cdot 10^{-6}T^2$	508 – 780	.0074	[34]	.....
$InCl_3$	$\kappa = 1.184 - 0.883 \cdot 10^{-3}T$	859 – 967	.00235	[34]	.....
TlCl	$\kappa = -2.073997 + 4.839529 \cdot 10^{-3}T + 4.677176 \cdot 10^{-10}T^2 - 6.884975 \cdot 10^{-10}T^3$	720 –1169	$5.52 \cdot 10^{-3}$	[189]	0.7
$SnCl_2$	$\kappa = -4.734129 + 1.434825 \cdot 10^{-2}T - 7.776484 \cdot 10^{-6}T^2 + 8.757843 \cdot 10^{-10}T^3$	529 –1235	$4.41 \cdot 10^{-3}$	[189]	4
$PbCl_2$	$\kappa = -0.487664 + 11.2124 \cdot 10^{-3}T - 3.9156 \cdot 10^{-6}T^2$	773 – 923	0.00802	[97]	5
$BiCl_3$	$\kappa = -4.02343 + 1.6574 \cdot 10^{-2}T - 1.9059 \cdot 10^{-5}T^2 + 6.8368 \cdot 10^{-9}T^3$	502 – 898	$10.7 \cdot 10^{-4}$	[114]	2.3
$TeCl_2$	$\kappa = -0.2949 + 0.3715 \cdot 10^{-3}T + 0.6918 \cdot 10^{-6}T^2$	479 – 578	$8.0 \cdot 10^{-4}$	[32]	.....
$TeCl_4$	$\kappa = -0.6702 + 1.930 \cdot 10^{-3}T - 0.7617 \cdot 10^{-6}T^2$	509 – 589	$6.09 \cdot 10^{-4}$	[32]	.....
LiBr	$\kappa = -1.1362 + 8.6159 \cdot 10^{-3}T - 1.8612 \cdot 10^{-6}T^2$	831 –1022	0.00269	[82]	.....
NaBr	$\kappa = -0.1583 + 2.994 \cdot 10^{-3}T$	1017 –1229	.0085	[82]	7.0
KBr	$\kappa = -6.6001 + 13.1823 \cdot 10^{-3}T - 5.0051 \cdot 10^{-6}T^2$	1011 –1229	.00465	[82]	1.3

TABLE 180. *Specific conductance—Power series equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
RbBr	$\kappa = -5.6433 + 11.1780 \cdot 10^{-3}T - 4.3485 \cdot 10^{-6}T^2$	969 -1179	0.00248	[82]	.....
CsBr	$\kappa = -2.5553 + 4.7068 \cdot 10^{-3}T - 1.1218 \cdot 10^{-6}T^2$	917 -1131	.0025	[82]	.....
$MgBr_2$	$\kappa = -0.4257 + 0.5717 \cdot 10^{-3}T + 0.5784 \cdot 10^{-6}T^2$	987 -1244	$2.32 \cdot 10^{-4}$	[94]	.....
$CaBr_2$	$\kappa = -1.723 + 3.071 \cdot 10^{-3}T^2$	1014 -1291	0.0036	[94]	.....
$SrBr_2$	$\kappa = -4.0086 + 6.8056 \cdot 10^{-3}T - 1.7296 \cdot 10^{-6}T^2$	929 -1186	.00196	[94]	.....
$BaBr_2$	$\kappa = -2.4631 + 3.736 \cdot 10^{-3}T - 0.4410 \cdot 10^{-6}T^2$	1126 -1338	.00501	[94]	.....
$LaBr_3$	$\kappa = 4.7336 - 10.8289 \cdot 10^{-3}T + 6.700 \cdot 10^{-6}T^2$	1050 -1185	.003	[83]	23
$PrBr_3$	$\kappa = -1.3387 + 1.85745 \cdot 10^{-3}T$	1000 -1043	.00228	[171]	20
$NdBr_3$	$\kappa = 3.2271 - 7.6760 \cdot 10^{-3}T + 4.800 \cdot 10^{-6}T^2$	963 -1143	.0036	[83]	50
$GdBr_3$	$\kappa = -0.98898 + 1.3356 \cdot 10^{-3}T$	1073 -1115	.00109	[171]	20
CuBr	$\kappa = 0.265 + 2.92 \cdot 10^{-3}T$	764 - 823	.0045	[41]	.....
AgBr	$\kappa = 0.32105 + 4.8157 \cdot 10^{-3}T - 1.72064 \cdot 10^{-6}T^2$	723 -1073	.0038	[100, 72]	0.5
$ZnBr_2$	$\kappa = 1.2220 - 3.9416 \cdot 10^{-3}T + 3.1971 \cdot 10^{-6}T^2$	671 - 913	.0012	[94]	18
$CdBr_2$	$\kappa = -1.6351 + 4.1892 \cdot 10^{-3}T - 1.1777 \cdot 10^{-6}T^2$	849 -1055	.00161	[94]	.....
$HgBr_2$	$\kappa = 2.203887 \cdot 10^{-3} - 1.489099 \cdot 10^{-5}T + 3.099289 \cdot 10^{-8}T^2 - 1.913523 \cdot 10^{-11}T^3$	528 - 729	$8.65 \cdot 10^{-7}$	[189]	1.5
$InBr_3$	$\kappa = -0.1914 + 1.0056 \cdot 10^{-3}T - 0.7065 \cdot 10^{-6}T^2$	709 - 813	0.00178	[34]	.....
TlBr	$\kappa = -1.663401 + 4.171786 \cdot 10^{-3}T - 1.098403 \cdot 10^{-6}T^2$	745 -1127	$4.87 \cdot 10^{-3}$	[189]	1
$PbBr_2$	$\kappa = -3.4892 + 8.7490 \cdot 10^{-3}T - 3.7998 \cdot 10^{-6}T^2$	655 - 765	0.00164	[7]	2.7
$BiBr_3$	$\kappa = -1.99453 + 8.17416 \cdot 10^{-3}T - 8.99735 \cdot 10^{-6}T^2 + 3.02196 \cdot 10^{-9}T^3$	496 - 998	.00132	[114]	.....
LiI	$\kappa = -3.4283 + 1.4264 \cdot 10^{-2}T - 0.59652 \cdot 10^{-5}T^2$	756 - 877	.0026	[227]	5.0
NaI	$\kappa = -2.8948 + 7.5861 \cdot 10^{-3}T - 2.2381 \cdot 10^{-6}T^2$	936 -1187	.00263	[82]	3.5
KI	$\kappa = -6.1952 + 12.6232 \cdot 10^{-3}T - 5.0591 \cdot 10^{-6}T^2$	959 -1184	.0075	[79]	0.9
RbI	$\kappa = -2.5050 + 5.3229 \cdot 10^{-3}T - 1.8114 \cdot 10^{-6}T^2$	929 -1158	.00169	[82]	.....
CsI	$\kappa = -2.4630 + 4.5942 \cdot 10^{-3}T - 1.274910 \cdot 10^{-6}T^2$	932 -1137	$1.4 \cdot 10^{-4}$	[82]	.....
MgI_2	$\kappa = -0.7656 + 0.8785 \cdot 10^{-3}T + 0.4299 \cdot 10^{-6}T^2$	910 -1176	.0011	[94]	.....
CaI_2	$\kappa = -4.6282 + 8.2567 \cdot 10^{-3}T - 2.6610 \cdot 10^{-6}T^2$	1059 -1287	$5.5 \cdot 10^{-4}$	[94]	.....
SrI_2	$\kappa = -1.8747 + 3.3276 \cdot 10^{-3}T - 0.5169 \cdot 10^{-6}T^2$	821 -1270	0.00139	[94]	.....
BaI_2	$\kappa = -2.1845 + 3.3755 \cdot 10^{-3}T - 0.466 \cdot 10^{-6}T^2$	991 -1292	.0035	[94]	.....
AlI_3	$\kappa = -0.1721 \cdot 10^{-4} + 0.8131 \cdot 10^{-8}T + 0.6801 \cdot 10^{-10}T$	464 - 543	$.125 \cdot 10^{-6}$	[35]	.....
LaI_3	$\kappa = -0.9535 + 1.319 \cdot 10^{-3}T$	1069 -1144	.0003	[106]	.....
CeI_3	$\kappa = -0.8580 + 1.221 \cdot 10^{-3}T$	1069 -1133	.0003	[106]	.....
PrI_3	$\kappa = -0.7724 + 1.1304 \cdot 10^{-3}T$	1036 -1082	.0003	[106]	.....
NdI_3	$\kappa = 8.8789 \cdot 10^{-2} - 0.11090 \cdot 10^{-3}T$	1072 -1115	$7.1 \cdot 10^{-5}$	[106]	.....
AgI	$\kappa = 0.453699 + 2.38108 \cdot 10^{-3}T - 5.64079 \cdot 10^{-7}T^2$	823 -1073	0.124	[11, 35]	12
ZnI_2	$\kappa = 0.6723 - 2.6838 \cdot 10^{-3}T + 2.5446 \cdot 10^{-6}T^2$	718 - 870	.0011	[99]	1.5
CdI_2	$\kappa = -1.0841 + 1.7574 \cdot 10^{-3}T + 0.2449 \cdot 10^{-6}T^2$	675 - 913	.0020	[94]	4.5

TABLE 180. *Specific conductance—Power series equations*—Continued

Salt	Specific conductance (ohm^{-1} cm^{-1})	Temperature range, °K	s(ohm^{-1} cm^{-1})	Reference	Uncertainty estimate (percent)
HgI_2	$\kappa = 0.3033113 - 1.075096 \cdot 10^{-3}T + 1.411112 \cdot 10^{-2}T^2 - 6.651402 \cdot 10^{-10}T^3$	532 - 724	$1.61 \cdot 10^{-4}$	[189]	2.5
GaI_2	$\kappa = -0.4546 + 1.149 \cdot 10^{-3}T$	.....	0.0050	[105]	.....
InI_3	$\kappa = -0.4380474 + 1.734687 \cdot 10^{-3}T - 1.759083 \cdot 10^{-6}T^2 + 5.775249 \cdot 10^{-10}T^3$	504 - 880	$6.30 \cdot 10^{-4}$	[189]	6
TlI	$\kappa = -1.261276 + 3.023831 \cdot 10^{-3}T - 7.494862 \cdot 10^{-7}T^2$	721 -1333	$2.65 \cdot 10^{-3}$	[189]	1.5
PbI_2	$\kappa = -0.6501 + 1.0054 \cdot 10^{-3}T + 0.7888 \cdot 10^{-6}T^2$	676 - 873	0.0018	[108]	.....
BiI_3	$\kappa = -0.9306 + 3.0374 \cdot 10^{-3}T - 1.8477 \cdot 10^{-6}T^2$	686 - 775	$2.13 \cdot 10^{-3}$	[104]	.....
Li_2CO_3	$\kappa = 0.9877 - 1.3529 \cdot 10^{-3} + 4.3873 \cdot 10^{-6}T^2$	1018 -1118	$3.0 \cdot 10^{-4}$	[101]	.....
Na_2CO_3	$\kappa = -1.518 + 3.876 \cdot 10^{-3}T$	1138 -1240	0.0049	[101]	1.5
K_2CO_3	$\kappa = -1.339 + 2.876 \cdot 10^{-3}T$	1184 -1279	.0020	[101]	1.5
$LiNO_2$	$\kappa = -0.397585 - 1.51836 \cdot 10^{-3}T + 7.33374 \cdot 10^{-6}T^2$	502.7- 527.2	$4.14 \cdot 10^{-4}$	[207]	6
$NaNO_2$	.....	554 - 723.2	.....	[66]	.....
KNO_2	$\kappa = -4.167433 + 1.148389 \cdot 10^{-2}T - 5.451471 \cdot 10^{-6}T^2$	713.2- 743.2	$4.70 \cdot 10^{-4}$	[207]	6
$RbNO_2$	$\kappa = -4.54416 + 1.189408 \cdot 10^{-2}T - 5.890905 \cdot 10^{-6}T^2$	712.2- 758.2	0.0025	[207]	6
$CsNO_2$	$\kappa = -0.92278 + 2.39945 \cdot 10^{-3}T$	688.2- 739.2	$7.41 \cdot 10^{-4}$	[207]	6
$Ba(NO_2)_2$	$\kappa = -1.284 + 2.65 \cdot 10^{-3}T$	553.2- 573.2	0.00	[185]	6
$LiNO_3$	$\kappa = -1.5242 + 3.4674 \cdot 10^{-3}T + 1.8027 \cdot 10^{-6}T^2$	558 - 653	.001	[116]	0.4
$NaNO_3$	$\kappa = -1.5713 + 4.3835 \cdot 10^{-3}T$	583 - 691	$7.83 \cdot 10^{-4}$	[61, 7]	1
KNO_3	$\kappa = -1.4347 + 3.7376 \cdot 10^{-3}T - 0.57779 \cdot 10^{-6}T^2$	613 - 880	0.00369	[66]	0.8
$RbNO_3$	$\kappa = -1.3769 + 3.8156 \cdot 10^{-3}T - 1.2658 \cdot 10^{-6}T^2$	592 - 766	.00153	[26]	6
$CsNO_3$	$\kappa = -0.7610 + 1.887 \cdot 10^{-3}T$	688 - 764	.....	[84]	0.6
$AgNO_3$	$\kappa = -1.9314 + 6.2321 \cdot 10^{-3}T - 1.7924 \cdot 10^{-6}T^2$	483 - 603	.00111	[60]	1
$TlNO_3$	$\kappa = -0.906043 + 2.6094 \cdot 10^{-3}T$	485.5- 554.4	$9.59 \cdot 10^{-4}$	[191]	0.7
V_2O_5	$\kappa = -2.056 + 1.890 \cdot 10^{-3}T$	1140 -1237	0.00575	[68]	.....
CrO_3	$\kappa = -0.1952 + 0.4032 \cdot 10^{-3}T - 0.0391 \cdot 10^{-6}T^2$	491 - 535	$3.31 \cdot 10^{-7}$	[68]	.....
MoO_3	$\kappa = -1.445 + 2.135 \cdot 10^{-3}T$	1096 -1187	0.0028	[76]	60
FeO	$\kappa = 31771.7 + 36.3092\ T - 0.0102617\ T^2$	1648 -1713	16.1	[159]	.....
FeO	$\kappa = 171.25 + 0.27981\ T$	1713 -1773	1.18	[159]	.....
PbO	$\kappa = -18.244 + 16.599 \cdot 10^{-3}T$	1164 -1260	0.080	[68]	.....
Sb_2O_3	$\kappa = -1.086 + 1.062 \cdot 10^{-3}T$	1101 -1161	.0038	[68]	.....
Bi_2O_3	$\kappa = -11.668 + 10.764 \cdot 10^{-3}T$	1102 -1228	.0816	[68]	.....
TeO_2	$\kappa = 3.4046 - 9.86660 \cdot 10^{-3}T + 7.61227 \cdot 10^{-6}T$	1023 -1233	.0470	[68]	.....
FeS	$\kappa = 24462.0 - 30.289\ T + 9.9715 \cdot 10^{-3}T^2$	1469 -1493	.....	[154]	50
CoS	$\kappa = 7725.16 - 4.39348\ T$	1461.2-1497.2	20.72	[155]	50
NiS	$\kappa = 19337.0 - 20.810\ T + 6.000 \cdot 10^{-3}T^2$	1153.2-1398.2	.....	[154]	50
Cu_2S	$\kappa = 1923.06 - 2.8871\ T + 1.1055 \cdot 10^{-3}T^2$	1402.2-1523.3	1.44	[155]	40

TABLE 180. *Specific conductance—Power series equations*—Continued

Salt	Specific conductance ($ohm^{-1}\ cm^{-1}$)	Temperature range, °K	$s(ohm^{-1}\ cm^{-1})$	Reference	Uncertainty estimate (percent)
Ag_2S	$\kappa = 402.352 - 0.357742\ T + 1.03507 \cdot 10^{-4}T^2$	1105 -1352	0.791	[156]	50
GeS	$\kappa = 0.616343 - 1.56399 \cdot 10^{-3}T + 1.009032 \cdot 10^{-6}T^2$	873.2–1073.2	.00	[155]	50
SnS	$\kappa = 12.948 - 6.28321 \cdot 10^{-2}T + 7.81646 \cdot 10^{-5}T^2$	1158.2–1411.2	.363	[155]	50
PbS	$\kappa = 1815.4 - 2.2606\ T + 7.4254 \cdot 10^{-4}T^2$	1388.2–1490.2	.....	[154]	20
Sb_2S_3	$\kappa = 4.0712 - 1.12847 \cdot 10^{-2}T + 7.9857 \cdot 10^{-6}T^2$	830.2–1076.2	.00901	[155]	50
Bi_2S_3	$\kappa = 3955.2 - 0.598558\ T$	973.2–1198.2	4.87	[157]	.....
Li_2SO_4	$\kappa = -24.544 + 4.4630 \cdot 10^{-2}T - 1.7251 \cdot 10^{-5}T^2$	848 -1243	$2.68 \cdot 10^{-4}$	[115]	.....
Na_2SO_4	$\kappa = -1.4267 + 3.18583 \cdot 10^{-3}T$	1189 -1232	$1.26 \cdot 10^{-3}$	[226]	2
K_2SO_4	$\kappa = -23.5770 + 3.57269 \cdot 10^{-2}T - 1.24807 \cdot 10^{-5}T^2$	1341 -1360	$2.59 \cdot 10^{-3}$	[161]	3
Rb_2SO_4	$\kappa = -0.66619 + 1.54277 \cdot 10^{-3}T$	1340 -1395	$1.869 \cdot 10^{-3}$	[226]	(3)
Cs_2SO_4	$\kappa = -0.46852 + 1.22866 \cdot 10^{-3}T$	1287 -1355	$3.499 \cdot 10^{-3}$	[226]	(3)
Ag_2SO_4	$\kappa = -0.74866 + 2.61307 \cdot 10^{-3}T$	942 -1017	$2.457 \cdot 10^{-3}$	[226]	(3)
Pr_4NBF_4	$\kappa = -0.326452 + 7.96087 \cdot 10^{-4}T$	522.7- 554.6	$1.90 \cdot 10^{-3}$	[190, 221]	10
Pr_4NPF_6	$\kappa = -0.156384 + 7.32730 \cdot 10^{-5}T + 6.94502 \cdot 10^{-7}T^2$	511.03- 545.15	$1.77 \cdot 10^{-4}$	[190, 221]	6
Bu_4NBr	$\kappa = -2.91625 \cdot 10^{-2} + 7.89162 \cdot 10^{-5}T$	390.3- 407.7	$3.53 \cdot 10^{-5}$	[190, 221]	7
Bu_4NI	$\kappa = -6.48575 \cdot 10^{-2} + 1.66797 \cdot 10^{-4}T$	420.7- 440.13	$2.43 \cdot 10^{-4}$	[190, 221]	10
Bu_4NPF_6	$\kappa = -0.193219 + 4.43623 \cdot 10^{-4}T$	529.5- 548.5	$1.06 \cdot 10^{-4}$	[190, 221]	6
Bu_4NBPh_4	$\kappa = -3.74270 \cdot 10^{-2} + 2.05165 \cdot 10^{-5}T + 1.49552 \cdot 10^{-7}T^2$	514.3- 540.4	$4.47 \cdot 10^{-5}$	[190, 221]	6
(*n*-Amyl)$_4$NSCN	$\kappa = 0.0621247 - 3.93243 \cdot 10^{-4}T + 6.24733 \cdot 10^{-7}T^2$	325.2- 383.2	$2.77 \cdot 10^{-5}$	[172]	.....
Li_2MoO_4	$\kappa = -4.531 + 7.740 \cdot 10^{-3}T - 1.356 \cdot 10^{-6}T^2$	977 -1223	0.017	[117]	.....
Na_2MoO_4	$\kappa = -3.1705 + 5.2419 \cdot 10^{-3}T - 0.8970 \cdot 10^{-6}T^2$	1024 -1237	.00282	[76]	10
Na_2WO_4	$\kappa = -1.6253 + 3.11866 \cdot 10^{-3}T - 4.58768 \cdot 10^{-7}T^2$	926 -1774	.00637	[26]	.....
NaSCN	.....	583 - 643	.....	[112]	.....
NaOH	$\kappa = -3.23 + 9.0 \cdot 10^{-3}T$	593 - 723	.....	[37]	.....
KOH	$\kappa = -1.38 + 5.80 \cdot 10^{-3}T$	673 - 873	.....	[37]	.....
$K_2Cr_2O_7$	.....	.....	.....	[110]	.....
UO_2Cl_2	$\kappa = -0.273 + 0.371 \cdot 10^{-3}T$	851 - 953	.....	[64]	.....
LiH	$\kappa = 37.4709 - 7.75006 \cdot 10^{-2}T + 4.01119 \cdot 10^{-5}T$	958.2–1027	$9.89 \cdot 10^{-3}$	[165]	.....
$LiClO_3$	$\kappa = -0.95475 + 2.6390 \cdot 10^{-3}T$	404.6- 446.7	$1.99 \cdot 10^{-3}$	[174]	.....

TABLE 181. *Viscosity-exponential equations*

Salt	Viscosity (centipoise)	Temperature range °K	s Centipoise	Reference
BeF_2	$\eta = 1.756 \cdot 10^{-7} \exp (58466/RT)$	846.9–1252.2	$3.08 \cdot 10^6$	[225]
LiCl	$\eta = 3.306 \cdot 10^{-2} \exp (7007/RT)$	902.9–1082.9	0.0092	[121]
NaCl	$\eta = 1.860 \cdot 10^{-2} \exp (9308/RT)$	1085.9–1243.2	.0109	[121]
KCl	$\eta = 4.984 \cdot 10^{-2} \exp (6586/RT)$	1056.5–1202.0	.0167	[102]
RbCl	$\eta = 6.170 \cdot 10^{-2} \exp (6094/RT)$	1005.2–1148.2	.0064	[121]
CsCl	$\eta = 6.036 \cdot 10^{-2} \exp (5687/RT)$	928.0–1110.2	.0094	[121]
$CaCl_2$	$\eta = 1.088 \cdot 10^{-2} \exp (11997/RT)$	1058.7–1242.6	.087	[109]
$SrCl_2$	$\eta = 4.401 \cdot 10^{-4} \exp (20655/RT)$	1150.5–1258.6	.0706	[109]
$BaCl_2$	$\eta = 1.643 \cdot 10^{-3} \exp (20029/RT)$	1261.4–1313.9	.0651	[109]
$LaCl_3$	$\eta = 2.061 \cdot 10^{-2} \exp (13049/RT)$	1183 –1276	.....	[136]
$TiCl_4$	$\eta = 4.952 \cdot 10^{-2} \exp (1643/RT)$	293 – 333	.0095	[204]
CuCl	$\eta = 10.42 \cdot 10^{-2} \exp (5075/RT)$	773.2– 973.2	.0115	[47]
AgCl	$\eta = 30.98 \cdot 10^{-2} \exp (2915/RT)$	723.2– 973.2	.0059	[72]
$ZnCl_2$	$\eta = 2.476 \cdot 10^{-5} \exp (24843/RT)$	593.2– 673.2	578.8	[98]
$CdCl_2$	$\eta = 24.05 \cdot 10^{-2} \exp (3912/RT)$	863.2– 963.2	0.0075	[53]
$HgCl_2$	$\eta = 6.585 \cdot 10^{-2} \exp (3624/RT)$	554.0– 579.3	.0195	[103]
$AlCl_3$	$\eta = 7.928 \cdot 10^{-3} \exp (3528/RT)$	461.5– 549.2	.00199	[149]
$GaCl_3$	$\eta = 1.804 \cdot 10^{-2} \exp (3193/RT)$	355.9– 519.7	.0138	[149]
$SnCl_4$	$\eta = 3.187 \cdot 10^{-2} \exp (1928/RT)$	273 – 423	.0059	[147]
$PbCl_2$	$\eta = 5.619 \cdot 10^{-2} \exp (6762/RT)$	773.2– 973.2	.0091	[72]
$BiCl_3$	$\eta = 37.87 \cdot 10^{-2} \exp (4693/RT)$	533.2– 613.2	.2205	[16]
LiBr	$\eta = 6.868 \cdot 10^{-2} \exp (5355/RT)$	862.2 – 1046.2	.0180	[102]
NaBr	$\eta = 11.09 \cdot 10^{-2} \exp (5132/RT)$	1053.7–1212.7	.0127	[102]
KBr	$\eta = 9.083 \cdot 10^{-2} \exp (5161/RT)$	1017.8–1181.2	.0139	[102]
RbBr	$\eta = 11.58 \cdot 10^{-2} \exp (4863/RT)$	959.7–1139.5	.0076	[102]
AgBr	$\eta = 38.06 \cdot 10^{-2} \exp (3088/RT)$	713.2– 873.2	.0105	[72]
$ZnBr_2$	.....	673.2	.....	[98]
$CdBr_2$	$\eta = 18.93 \cdot 10^{-2} \exp (4556/RT)$	853.2– 949.2	.0102	[53]
$HgBr_2$	$\eta = 1.801 \cdot 10^{-2} \exp (5040/RT)$	528.2– 548.2	.0078	[58]
$AlBr_3$	$\eta = 3.491 \cdot 10^{-2} \exp (3123/RT)$	373 – 523	.00152	[138]
$PbBr_2$	$\eta = 16.51 \cdot 10^{-2} \exp (4855/RT)$	698.2–1023.2	.1115	[142]
LiI	$\eta = 11.51 \cdot 10^{-2} \exp (4423/RT)$	723.2– 923.2	.0078	[47]
NaI	$\eta = 7.171 \cdot 10^{-2} \exp (5673/RT)$	946.4–1107.8	.00847	[122]
KI	$\eta = 9.836 \cdot 10^{-2} \exp (5343/RT)$	975.1–1165.2	.00851	[122]
RbI	$\eta = 8.514 \cdot 10^{-2} \exp (5165/RT)$	922.2–1126.4	.00418	[122]
CsI	$\eta = 7.796 \cdot 10^{-2} \exp (5706/RT)$	910.2–1126.9	.0168	[122]
AgI	$\eta = 14.81 \cdot 10^{-2} \exp (5259/RT)$	878.2–1100.2	.0831	[24]
HgI_2	$\eta = 4.000 \cdot 10^{-2} \exp (4531/RT)$	541.2– 631.2	.0367	[103]
Li_2CO_3	$\eta = 1.406 \cdot 10^{-3} \exp (16893/RT)$	1046.2–1122.2	.1057	[107]
Na_2CO_3	$\eta = 3.832 \cdot 10^{-5} \exp (26260/RT)$	1152.2–1245.2	.0112	[107]
K_2CO_3	$\eta = 1.161 \cdot 10^{-5} \exp (29487/RT)$	1186.2–1257.2	.0207	[107]
$LiNO_2$	$\eta = 2.971 \cdot 10^{-3} \exp (8208/RT)$	502.7– 527.2	.0816	[207]
$NaNO_2$	$\eta = 4.876 \cdot 10^{-2} \exp (4680/RT)$	563 – 613	.192	[207]
KNO_2	$\eta = 16.45 \cdot 10^{-2} \exp (3424/RT)$	686.8– 725.4	.00767	[125]
$RbNO_2$	$\eta = 8.754 \cdot 10^{-2} \exp (4495/RT)$	712 – 758	.0054	[207]
$CsNO_2$	$\eta = 0.1058 \exp (4213/RT)$	688 – 739	.0082	[207]
$LiNO_3$	$\eta = 5.663 \cdot 10^{-2} \exp (5103/RT)$	533.2– 702.2	.2283	[38]
$NaNO_3$	$\eta = 10.40 \cdot 10^{-2} \exp (3886/RT)$	589.2– 731.2	.0282	[38]
KNO_3	$\eta = 8.384 \cdot 10^{-2} \exp (4301/RT)$	621.2– 815.2	.0278	[38]
$RbNO_3$	$\eta = 12.96 \cdot 10^{-2} \exp (3976/RT)$	598 – 698	.0395	[139]
$CsNO_3$	$\eta = 0.1284 \exp (3914/RT)$	698.2– 776.2	.0074	[228]

TABLE 181. *Viscosity-exponential equations*—Continued

Salt	Viscosity (centipoise)	Temperature range °K	s Centipoise	Reference
$AgNO_3$	$\eta = 11.59 \cdot 10^{-2} \exp (3620/RT)$	530.0– 593.4	0.0054	[69]
$TlNO_3$	$\eta = 8.430 \cdot 10^{-2} \exp (3657/RT)$	492.5– 553.7	.0141	[191]
B_2O_3	$\eta = 6.738 \exp (18695/RT)$	1410 –1893	162.	[137]
SiO_2	$\eta = 9.004 \cdot 10^{-4} \exp (89236/RT)$	2208 –2595	65,800	[205]
GeO_2	$\eta = 1.316 \cdot 10^{-4} \exp (74254/RT)$	1423 –1773	$7.610 \cdot 10^5$	[140]
GeO_2	$\eta = 1.967 \cdot 10^{-3} \exp (65143/RT)$	1745 –1991	8380.	[137]
As_2O_3	$\eta = 1.679 \cdot 10^{-2} \exp (22211/RT)$	601 – 703	7680.	[202]
Pr_4NBF_4	$\eta = 6.663 \cdot 10^{-3} \exp (6037/RT)$	522.8– 546.7	0.00147	[190]
Pr_4NPF_6	$\eta = 5.752 \cdot 10^{-3} \exp (6461/RT)$	517.5– 541.9	.00358	[190]
Pr_4NBPh_4	$\eta = 9.287 \cdot 10^{-4} \exp (8897/RT)$	483.5– 529.2	.0398	[190]
Bu_4NBF_4	$\eta = 0.2222 \exp (7245/RT)$	435.4– 539.1	.129	[190]
Bu_4NPF_6	$\eta = 3.173 \cdot 10^{-3} \exp (7159/RT)$	529.4– 554.1	.00351	[190]
Bu_4NBPh_4	$\eta = 1.588 \cdot 10^{-3} \exp (8235/RT)$	516.8– 541.8	.00638	[190]
Hex_4NBF_4	$\eta = 1.806 \cdot 10^{-4} \exp (9841/RT)$	376.0– 502.8	2.90	[190]
$(n\text{-Amyl})_4NSCN$	$\eta = 2.512 \cdot 10^{-5} \exp (10551/RT)$	325.2– 383.2	6.49	[172]
NaSCN	$\eta = 4.935 \cdot 10^{-2} \exp (4636/RT)$	578.0– 634.1	0.0223	[112]
KSCN	$\eta = 8.580 \cdot 10^{-3} \exp (6454/RT)$	448.8– 523.8	.1792	[112]
NaOH	$\eta = 7.211 \cdot 10^{-2} \exp (4937/RT)$	623.2– 823.2	.0881	[37]
KOH	$\eta = 2.295 \cdot 10^{-2} \exp (6177/RT)$	673.2– 873.2	.0201	[37]
$K_2Cr_2O_7$	$\eta = 8.051 \cdot 10^{-2} \exp (6879/RT)$	670.2– 780.2	.1537	[8]
$NaPO_3$	$\eta = 2.412 \cdot 10^{-2} \exp (19899/RT)$	916 –1029	63.3	[200]
$LiClO_3$	$\eta = 1.942 \cdot 10^{-3} \exp (7832/RT)$	404.9– 440.0	0.564	[175]

TABLE 182. *Viscosity power series equations*

Salt	Viscosity (centipoise)	Temperature range °K	s Centipoise	Reference
BeF_2	$\eta = 2.38371 \cdot 10^{10} - 6.63685 \cdot 10^{7}T - 6.12351 \cdot 10^{4}T^2 - 18.7266T^3$	846.9–1252.2	$2.17 \cdot 10^{7}$	[225]
LiCl	$\eta = 67.5978 - 0.179904\ T + 1.64202 \cdot 10^{-4}T^2 - 5.07737 \cdot 10^{-8}T^3$	902.9–1082.9	0.0094	[121]
NaCl	$\eta = 81.9007 - 0.185538\ T + 1.42786 \cdot 10^{-3}T^2 - 3.70073 \cdot 10^{-8}T^3$	1085.9–1243.2	.0057	[121]
KCl	$\eta = 55.5632 - 0.127847\ T + 9.99580 \cdot 10^{-5}T^2 - 2.62035 \cdot 10^{-5}T^3$	1056.5–1202.0	.0132	[102]
RbCl	$\eta = 40.8082 - 9.61807 \cdot 10^{-2}T + 7.83918 \cdot 10^{-5}T^2 - 2.16855 \cdot 10^{-8}T^3$	1005.2–1148.2	.0058	[121]
CsCl	$\eta = 30.0396 - 7.09298 \cdot 10^{-2}T + 5.80038 \cdot 10^{-5}T^2 - 1.60636 \cdot 10^{-8}T^3$	928.0–1110.2	.0067	[121]
$CaCl_2$	$\eta = 619.541 - 1.54489\ T + 1.29259 \cdot 10^{-3}T^2 - 3.61856 \cdot 10^{-7}T^3$	1058.7–1242.6	.0738	[109]
$SrCl_2$	$\eta = 677.104 - 1.55719\ T + 1.20516 \cdot 10^{-3}T^2 - 3.13281 \cdot 10^{-7}T^3$	1150.5–1258.6	.0750	[109]
$BaCl_2$	$\eta = 76773.2 - 179.240\ T + 0.139496\ T^2 - 3.61884 \cdot 10^{-5}T^3$	1261.4–1313.9	.0899	[109]
$TiCl_4$	$\eta = 3.86794 - 1.42670 \cdot 10^{-2}T + 1.32794 \cdot 10^{-5}T^2$	293 – 333	.0	[204]
CuCl	$\eta = 50.4565 - 0.140175\ T + 1.37677 \cdot 10^{-4}T^2 - 4.66667 \cdot 10^{-8}T^3$	773.2– 973.2	.0012	[47]
AgCl	$\eta = 6.91305 - 4.47411 \cdot 10^{-3}T - 6.49368 \cdot 10^{-6}T^2 + 5.41584 \cdot 10^{-9}T^3$	723.2– 973.2	.0033	[72]
$ZnCl_2$	$\eta = 5935513 - 27386.5\ T + 42.1217\ T^2 - 2.15935 \cdot 10^{-2}T^3$	593.2– 673.2	181.3	[98]
$CdCl_2$	$\eta = -11.4379 + 6.44636 \cdot 10^{-2}T - 8.70654 \cdot 10^{-5}T^2 + 3.57878 \cdot 10^{-8}T^3$	863.2– 963.2	0.0102	[53]
$HgCl_2$	$\eta = -4341.63 + 22.9610\ T - 4.04387 \cdot 10^{-2}T + 2.37269 \cdot 10^{-5}T^3$	554.0– 579.3	.0080	[103]
$AlCl_3$	$\eta = 10.5980 - 5.14676 \cdot 10^{-2}T + 8.59674 \cdot 10^{-5}T^2 - 4.86480 \cdot 10^{-8}T^3$	461.5– 549.2	.00159	[149]
$GaCl_3$	$\eta = 42.1652 - 0.251746\ T + 5.13276 \cdot 10^{-4}T^2 - 3.53160 \cdot 10^{-7}T^3$	355.9– 519.7	.0120	[149]
$SnCl_4$	$\eta = 16.1457 - 0.114427\ T - 2.81889 \cdot 10^{-4}T^2 - 2.36114 \cdot 10^{-7}T^3$	273 – 423	.0067	[147]
$PbCl_2$	$\eta = 72.9309 - 0.175011\ T + 1.39742 \cdot 10^{-4}T^2 - 3.59013 \cdot 10^{-8}T^3$	773.2– 973.2	.0096	[72]
$BiCl_3$	$\eta = 1536.82 - 6.91223\ T + 1.05882 \cdot 10^{-2}T^2 - 5.47138 \cdot 10^{-6}T^3$	533.2– 613.2	.1592	[16]
LiBr	$\eta = 16.5192 - 3.27860 \cdot 10^{-2}T + 2.17960 \cdot 10^{-5}T^2 - 4.51486 \cdot 10^{-9}T^3$	862.2–1046.2	.0198	[102]
NaBr	$\eta = 64.3240 - 0.152525\ T + 1.23215 \cdot 10^{-4}T^2 - 3.34241 \cdot 10^{-8}T^3$	1053.7–1212.7	.0040	[102]
KBr	$\eta = 128.399 - 0.334905\ T + 2.94450 \cdot 10^{-4}T^2 - 8.66540 \cdot 10^{-8}T^3$	1017.8–1181.2	.0056	[102]
RbBr	$\eta = 51.9396 - 0.131564\ T + 1.14887 \cdot 10^{-4}T^2 - 3.39298 \cdot 10^{-8}T^3$	959.7–1139.5	.0046	[102]
AgBr	$\eta = 37.1747 - 0.100768\ T + 9.80868 \cdot 10^{-5}T^2 - 3.25971 \cdot 10^{-8}T^3$	713.2– 873.2	.0067	[72]
$ZnBr_2$	.....	673.2	.....	[98]
$CdBr_2$	$\eta = -110.000 + 0.409042\ T - 4.84560 \cdot 10^{-4}T^2 + 1.87613 \cdot 10^{-7}T^3$	853.2– 949.2	.0072	[53]
$HgBr_2$	.....	528.2– 548.2	.....	[58]
$AlBr_3$	$\eta = 52.8403 - 0.296704\ T + 5.71984 \cdot 10^{-4}T^2 - 3.73333 \cdot 10^{-7}T^3$	373 – 523	.0	[138]
$PbBr_2$	$\eta = 112.439 - 0.329572\ T + 3.31646 \cdot 10^{-4}T^2 - 1.12536 \cdot 10^{-7}T^3$	698.2–1023.2	.0191	[142]
LiI	$\eta = 17.1272 - 3.14251 \cdot 10^{-2}T + 1.54596 \cdot 10^{-5}T^2 - 1.34806 \cdot 10^{-11}T^3$	723.2– 923.2	.0095	[47]
NaI	$\eta = 55.2389 - 0.144406\ T + 1.30328 \cdot 10^{-4}T^2 - 3.99172 \cdot 10^{-8}T^3$	946.4–1107.8	.0090	[122]
KI	$\eta = 48.3150 - 0.119506\ T + 1.02512 \cdot 10^{-4}T^2 - 2.98741 \cdot 10^{-8}T^3$	975.1–1165.2	.0086	[122]
RbI	$\eta = 35.1934 - 8.85769 \cdot 10^{-2}T + 7.79282 \cdot 10^{-5}T^2 - 2.34005 \cdot 10^{-8}T^3$	922.2–1126.4	.0037	[122]
CsI	$\eta = 41.8211 - 0.101156\ T + 8.49570 \cdot 10^{-5}T^2 - 2.42543 \cdot 10^{-8}T^3$	910.2–1126.9	.0163	[122]
AgI	$\eta = 116.161 - 0.333640\ T + 3.30383 \cdot 10^{-4}T^2 - 1.10721 \cdot 10^{-7}T^3$	878.2–1100.2	.0577	[24]
HgI_2	$\eta = 134.514 - 0.629538\ T + 1.01199 \cdot 10^{-3}T^2 - 5.52269 \cdot 10^{-7}T^3$	541.6– 631.3	.0346	[103]

TABLE 182. *Viscosity power series equations*—Continued

Salt	Viscosity (centipoise)	Temperature range °K	*s* Centipoise	Reference
Li_2CO_3	$\eta = -5259.12 + 14.8091\ T - 1.38581 \cdot 10^{-2}T^2 + 4.31294 \cdot 10^{-6}T^3$	1046.2–1122.2	0.1022	[107]
Na_2CO_3	$\eta = 1464.54 - 3.44322\ T + 2.70982 \cdot 10^{-3}T^2 - 7.13260 \cdot 10^{-7}T^3$	1152.2–1245.2	.0114	[107]
K_2CO_3	$\eta = 2117.23 - 4.96107\ T + 3.88776 \cdot 10^{-3}T^2 - 1.01829 \cdot 10^{-6}T^3$	1186.2–1257.2	.0272	[107]
$LiNO_2$	$\eta = -14909.1 + 87.5812\ T - 0.171073\ T^2 + 1.11184 \cdot 10^{-4}T^3$	502.7– 527.2	.0354	[207]
$NaNO_2$	$\eta = 187.118 - 0.876094\ T + 1.41024 \cdot 10^{-3}T^2 - 7.71608 \cdot 10^{-7}T^3$	563 – 613	.0187	[207]
KNO_2	$\eta = 864.798 - 3.61760\ T + 5.06274 \cdot 10^{-3}T^2 - 2.36530 \cdot 10^{-6}T^3$	686.8– 725.4	.0055	[125c]
$RbNO_2$	$\eta = 20.5402 - 3.97313 \cdot 10^{-2}\ T + 1.54727 \cdot 10^{-5}T^2 - 5.55085 \cdot 10^{-9}T^3$	712 – 758	.0076	[207]
$CsNO_2$	$\eta = -182.963 + 0.828051\ T - 1.21823 \cdot 10^{-3}T^2 + 5.90224 \cdot 10^{-7}T^3$	688 – 739	.0080	[207]
$LiNO_3$	$\eta = 20.4645 + 1.34189 \cdot 10^{-2}\ T - 1.31061 \cdot 10^{-4}T^2 + 1.06106 \cdot 10^{-7}T^3$	533.2– 702.2	.1143	[38]
$NaNO_3$	$\eta = 74.1468 - 0.284133\ T - 3.77585 \cdot 10^{-4}T^2 - 1.70748 \cdot 10^{-7}T^3$	589.2– 731.2	.0284	[38]
KNO_3	$\eta = 50.1676 - 0.164572\ T - 1.86335 \cdot 10^{-4}T^2 - 7.12497 \cdot 10^{-8}T^3$	621.2– 815.2	.0234	[38]
$RbNO_3$	$\eta = 190.972 - 0.791802\ T - 1.11940 \cdot 10^{-3}T^2 - 5.33333 \cdot 10^{-7}T^3$	598 – 698	.00717	[139]
$CsNO_3$	$\eta = -41.3159 - 0.21403T - 3.32966 \cdot 10^{-4}T^2 + 1.65583 \cdot 10^{-7}T^3$	698.2– 776.2	.0033	[228]
$AgNO_3$	$\eta = 81.7743 - 0.336741\ T + 4.80289 \cdot 10^{-4}T^2 - 2.32448 \cdot 10^{-7}T^3$	530.0– 593.4	.0054	[69]
$TlNO_3$	$\eta = -26.2068 + 0.276304\ T - 7.00275 \cdot 10^{-4}T^2 + 5.31820 \cdot 10^{-7}T^3$	492.5– 553.7	.00876	[191]
B_2O_3	$\eta = 97913.6 - 135.257\ T + 6.32685 \cdot 10^{-2}T^2 - 9.97755 \cdot 10^{-6}T^3$	1410 –1893	70.8	[137]
SiO_2	$\eta = 2.52255 \cdot 10^{8} - 294897\ T + 114.935\ T^2 - 1.49316 \cdot 10^{-2}T^3$	2208 –2595	55.9	[205]
GeO_2	$\eta = 1.04032 \cdot 10^{10} - 1.87387 \cdot 10^{7}T + 11245.2\ T^2 - 2.24808\ T^3$	1423 –1773	$1.53 \cdot 10^{6}$	[140]
GeO_2	$\eta = 1.50831 \cdot 10^{8} - 2.31573 \cdot 10^{5}T + 118.726\ T^2 - 2.03212 \cdot 10^{-2}T^3$	1745 –1991	8570.	[137]
As_2O_3	$\eta = 8.03419 \cdot 10^{8} - 3.51322 \cdot 10^{6}T + 5128.29\ T^2 - 2.49820\ T^3$	601 – 703	15,900.	[202]
Pr_4NBF_4	$\eta = 539.745 - 2.88873\ T + 5.20040 \cdot 10^{-3}T^2 - 3.13987 \cdot 10^{-6}T^3$	522.8– 546.7	0.00032	[190]
Pr_4NPF_6	$\eta = 900.654 - 4.87945\ T + 8.87944 \cdot 10^{-3}T^2 - 5.41472 \cdot 10^{-6}T^3$	517.5– 541.9	.00031	[190]
Pr_4NBPh_4	$\eta = 2348.89 - 12.9447\ T + 2.39385 \cdot 10^{-2}T^2 - 1.48320 \cdot 10^{-5}T^3$	483.5– 529.2	.0166	[190]
Bu_4NBF_4	$\eta = 1099.50 - 6.25565\ T + 1.19468 \cdot 10^{-2}T^2 - 7.64127 \cdot 10^{-6}T^3$	435.4– 539.1	.0446	[190]
Bu_4NPF_6	$\eta = -80.3582 + 0.663637\ T - 1.54727 \cdot 10^{-3}T^2 + 1.11571 \cdot 10^{-6}T^3$	529.4– 554.1	.00450	[190]
Bu_4NBPh_4	$\eta = 1559.11 - 8.42660\ T + 1.52982 \cdot 10^{-2}T^2 - 9.31176 \cdot 10^{-6}T^3$	516.8– 541.8	.00949	[190]
Hex_4NBF_4	$\eta = 12888.7 - 83.1100\ T + 0.178817\ T^2 - 1.28290 \cdot 10^{-4}T^3$	376.0– 502.8	2.36	[190]
$(n\text{-Amyl})_4NSCN$	$\eta = 116917 - 941.774\ T + 2.53276\ T^2 - 2.27331 \cdot 10^{-3}T^3$	325.2– 383.2	3.93	[172]
NaSCN	$\eta = 526.399 - 2.49292\ T + 3.96856 \cdot 10^{-3}T^2 - 2.11546 \cdot 10^{-6}T^3$	578.0– 634.1	0.0128	[112]
KSCN	$\eta = 1935.08 - 11.1776\ T + 2.16788 \cdot 10^{-2}T^2 - 1.40826 \cdot 10^{-5}T^3$	448.8– 523.8	.0899	[112]
NaOH	$\eta = 164.771 - 0.614833\ T + 7.80340 \cdot 10^{-4}T^2 - 3.33334 \cdot 10^{-7}T^3$	623.2– 823.2	.0359	[37]
KOH	$\eta = 52.7561 - 0.166134\ T + 1.80314 \cdot 10^{-4}T^2 - 6.66494 \cdot 10^{-8}T^3$	673.2– 873.2	.0120	[37]
$K_2Cr_2O_7$	$\eta = 79.5667 - 0.110600\ T - 1.12662 \cdot 10^{-5}T^2 + 4.25741 \cdot 10^{-8}T^3$	670.2– 780.2	.0084	[8]
$NaPO_3$	$\eta = 82024.7 - 158.652\ T + 7.71136 \cdot 10^{-2}T^2$	916 –1029	55.2	[200]
$LiClO_3$	$\eta = 13199.6 - 88.4573\ T + 0.198361\ T^2 - 1.48634 \cdot 10^{-4}T^3$	404.9– 440.0	0.446	[175]

8. References

[References which are marked marginally have data for molten salt mixtures; *, specific conductance; †, density and ‡, viscosity.]

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10. Compound Index