3. CHEMICAL AND PHYSICAL INFORMATION

3.1 CHEMICAL IDENTITY

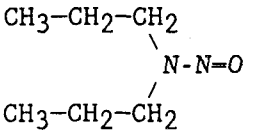
Data pertaining to the chemical identity of N-nitrosodi-n-propylamine are listed in Table 3-1.

3.2 PHYSICAL AND CHEMICAL PROPERTIES

The physical and chemical properties of N-nitrosodi-n-propylamine are presented in Table 3-2.

3. CHEMICAL AND PHYSICAL INFORMATION

TABLE 3-1. Chemical Identity of N-Nitrosodi-n-Propylamine

	Value	Reference
Chemical name	1-Propanamine, N-nitroso-N-propyl	CAS 1988
Synonyms	*N-nitrosodipropylamine*; N,N-dipropylnitrosamine; N-Nitroso-N-di-n-propylamine; NDPA; DPNA; DPN	*SANSS* 1988; HSDB 1988
Trade name(s)	Not available	
Chemical formula	$C_6H_{14}N_2O$	CAS 1988
Chemical structure		*SANSS* 1988
Identification numbers:		
CAS Registry	621-64-7	CAS 1988
NIOSH RTECS	JL9700000	RTECS 1988
EPA Hazardous Waste	U111	RTECS 1988
OHM-TADS	8300201	OHM-TADS 1988
DOT/UN/NA/IMCO	Not available	
HSDB	5108	HSDB 1988
NCI	Not available	

CAS = Chemical Abstract Service
NIOSH = National Institute for Occupational Safety and Health
RTECS = Registry of Toxic Effects of Chemical Substances
EPA = Environmental Protection Agency
OHM-TADS = Oil and Hazardous Materials - Technical Assistance Data Base
DOT/UN/NA/IMCO = Department of Transportation/United Nations/North America/International Maritime Consultive Organization
HSDB = Hazardous Substances Data Bank
NCI = National Cancer Institute

TABLE 3-2. Chemical and Physical Properties of N-Nitrosodi-n-Propylamine

Property	Value	Reference
Molecular weight	130.19	Weast 1983
Color	Yellow	IARC 1978
Physical state	Liquid	IARC 1978
Melting point	6.6°C (estimated) -12°C (estimated)	Lyman 1985 EPA 1986a
Boiling point	206°C	Weast 1983
Specific gravity, 20/4°C	0.9163	Weast 1983
Odor	Not available	
Odor threshold Water Air	 Not available Not available	
Solubility Water Organic solvents	 9,894 mg/L (23-25°C) Soluble in alcohol, ether, other organic solvents	 Mirvish et al. 1976 Weast 1983; IARC 1978
Partition coefficient Log octanol/water Log K_{oc}	 1.36 2.11 (estimated)	 Hansch and Leo 1985
Vapor pressure	0.086 mm Hg (20°C) (estimated)	Klein 1982
Henry's Law constant	1.47×10^{-6} atm-m^3/mole at 20°C (estimated from vapor pressure and water solubility data)	
Autoignition temperature	Not available	

TABLE 3-2 (continued)

Property	Value	Reference
Flashpoint	Not available	
Flammability limits in air	Not available[a]	
Conversion factors ppm (v/v) to mg/m^3 in air (20°C) mg/m^3 to ppm (v/v) in air (20°C)	ppm (v/v) x 5.41 = mg/m^3 mg/m^3 x 0.185 = ppm (v/v)	

[a]Vapor probably does not form an explosive mixture with air at ordinary temperatures (OHM-TADS 1988).