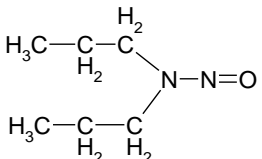


CHAPTER 4. CHEMICAL AND PHYSICAL INFORMATION

4.1 CHEMICAL IDENTITY

Data pertaining to the chemical identity of N-nitrosodi-n-propylamine are listed in Table 4-1.

Table 4-1. Chemical Identity of Nitrosodi-n-Propylamine

Characteristic	Information	Reference
Chemical name	1-Propanamine, N-nitroso-N-propyl	CAS 1988
Synonym(s) and registered trade name(s)	N-nitrosodipropylamine; N,N-dipropylnitrosamine; N-Nitroso-N-di-n-propylamine; NDPA; DPNA; DPN	HSDB 1988; SANSS 1988
Chemical formula	C ₆ H ₁₄ N ₂ O	CAS 1988
Chemical structure		SANSS 1988
CAS Registry	621-64-7	CAS 1988

CAS = Chemical Abstracts Services

4.2 PHYSICAL AND CHEMICAL PROPERTIES

The physical and chemical properties of N-nitrosodi-n-propylamine are presented in Table 4-2.

Table 4-2. Physical and Chemical Properties of N-Nitrosodi-n-Propylamine

Property	Information	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
Density at 20°C	0.9163	Weast 1983
Odor	No data	
Odor threshold:		
Water	No data	
Air	No data	

4. CHEMICAL AND PHYSICAL INFORMATION

Table 4-2. Physical and Chemical Properties of N-Nitrosodi-n-Propylamine

Solubility:		
Water at 23–25°C	9,894 mg/L	Mirvish et al. 1976
Organic solvents	Soluble in alcohol, ether, other organic solvents	IARC 1978; Weast 1983
Partition coefficients:		
Log K _{ow}	1.36	Hansch and Leo 1985
Log K _{oc}	2.11 (estimated)	Hansch and Leo 1985
Vapor pressure at 20°C	0.086 mm Hg (estimated)	Klein 1982
Henry's law constant at 20°C	1.47x10 ⁻⁶ atm·m ³ /mole (estimated from vapor pressure and water solubility data)	
Autoignition temperature	No data	
Flashpoint	No data	
Flammability limits in air	No data ^a	
Conversion factors		
ppm (v/v) to mg/m ³ in air (20°C)	ppm (v/v)x5.41=mg/m ³	
mg/m ³ to ppm (v/v) in air (20°C)	mg/m ³ x0.185=ppm (v/v)	
Explosive limits		

^aVapor probably does not form an explosive mixture with air at ordinary temperatures (OHM-TADS 1988).