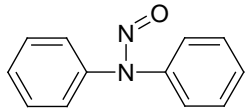


CHAPTER 4. CHEMICAL AND PHYSICAL INFORMATION

4.1 CHEMICAL IDENTITY

Information on the chemical identity of *N*-Nitrosodiphenylamine is provided in Table 4-1.

Table 4-1. Chemical Identity of *N*-Nitrosodiphenylamine

Characteristic	Information	Reference
Chemical name	<i>N</i> -Nitrosodiphenylamine	HSDB 1990
Synonym(s) and registered trade name(s)	Benzenamine; diphenyl- nitrosamine; diphenylamine, <i>N</i> -nitroso; <i>N</i> -nitroso- <i>N</i> -phenylaniline; diphenyl- <i>N</i> -nitrosamine; <i>N,N</i> -diphenyl- nitrosamine; NDPA; NDPHA; nitrous diphenylamide; Retarder J; Redax; Vulkalent A; Vultrol; Vulcatard A; Curetard A; Delac J; Naugard TJB; TJB	OHM/TADS 1990
Chemical formula	C ₁₂ H ₁₀ N ₂ O	HSDB 1990
Chemical structure		IARC 1982a
Identification numbers:		
CAS Registry	86-30-6	HSDB 1990

CAS = Chemical Abstracts Service

4.2 PHYSICAL AND CHEMICAL PROPERTIES

Information on the physical and chemical properties of *N*-Nitrosodiphenylamine is provided in Table 4-2.

Table 4-2. Physical and Chemical Properties of *N*-Nitrosodiphenylamine

Property	Information	Reference
Molecular weight	198.23	HSDB 1990
Color	Orange-brown; yellow	HSDB 1990
Physical state	Amorphous solid; plates	HSDB 1990
Melting point	66.5°C	HSDB 1990
Boiling point	No data	
Density at 25°C	1.23 g/cm ³	IARC 1982a
Odor	No data	

4. CHEMICAL AND PHYSICAL INFORMATION

Table 4-2. Physical and Chemical Properties of *N*-Nitrosodiphenylamine

Odor threshold:	No data	
Water		
Air		
Solubility:		
Water at 25°C	40 mg/L	EPA 1982a
Organic solvents	Miscible with acetone, benzene, ethanol, ethylene dichloride	HSDB 1990
Partition coefficients:		
Log K _{ow}	2.57–3.13	Banerjee et al. 1980
Log K _{oc}	2.92–3.26	Lyman et al. 1982
Vapor pressure at 25°C	0.1 mmHg	HSDB 1990
Henry's law constant at 25°C	6.6x10 ⁻⁴ atm·m ³ /mol	EPA 1982a
Autoignition temperature	No data	
Flashpoint	No data	
Flammability limits	No data	
Conversion factors	1 mg/L=123.5 ppm; 1 ppm=8.1 mg/m ³ at 25°C, 760 mmHg	Clayton 1978
Explosive limits	No data	