

3. CHEMICAL AND PHYSICAL INFORMATION

3.1 CHEMICAL IDENTITY

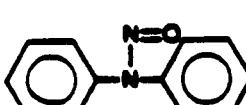
The chemical identity of *N*-nitrosodiphenylamine is shown in Table 3-1.

3.2 PHYSICAL AND CHEMICAL PROPERTIES

The physical and chemical properties of *N*-nitrosodiphenylamine are shown in Table 3-2.

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TABLE 3-1. Chemical Identity of *N*-Nitrosodiphenylamine

Characteristic	Information	Reference
Chemical name	<i>N</i> -Nitrosodiphenylamine	HSDB 1990
Synonym(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	OHM/TADS 1990
Registered trade name(s)	Retarder J; Redax; Vulkalet 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
NIOSH RTECS	JJ9800000	HSDB 1990
EPA hazardous waste	No data	
OHM/TADS	8300186	OHM/TADS 1990
DOT/UN/NA/IMCO shipping	No data	
HSDB	2875	HSDB 1990
NCI	C02880	HSDB 1990

CAS = Chemical Abstracts Services; DOT/UN/NA/IMCO = Department of Transportation/United Nations/North America/International Maritime Dangerous Goods Code; EPA = Environmental Protection Agency; HSDB = Hazardous Substances Data Bank; NCI = National Cancer Institute; NIOSH = National Institute for Occupational Safety and Health; OHM/TADS = Oil and Hazardous Materials/Technical Assistance Data System; RTECS = Registry of Toxic Effects of Chemical Substances

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TABLE 3-2. 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	
Odor threshold	No data	
Solubility:		
Water at 25°C	40 mg/L	EPA 1982a
Organic solvent(s)	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	6.6×10 ⁻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	

