



Effective Date: 07/01/15  
Replaces Revision: 05/01/13

NON-EMERGENCY TELEPHONE  
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE  
800-424-9300

## SDS – SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** N,N-DIETHYLANILINE

**Synonyms:** Benzenamine, N,N-Diethyl, DEA, N-Phenyldiethylamine

**Chemical Formula:** C<sub>10</sub>H<sub>15</sub>N

**Recommended Use of the Chemical and Restrictions On Use:** Industrial Use

**Manufacturer / Supplier:** Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

**Emergency Phone Number:** 24-Hour Chemtrec Emergency Telephone 800-424-9300

### 2. Hazard(s) Identification

**Classification of the Substance or Mixture:**

Flammable liquids (Category 4)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 3)

Acute toxicity, Oral (Category 3)

Acute aquatic toxicity (Category 2)

**WHMIS Classification:** Class D1 - Materials Causing Immediate and Serious Toxic Effects ≥1%

**Label Elements:** (Reference Section 16 for WHMIS 1998 Symbols)

**Signal Word:** Danger



**Hazard Statements:**

H227: Combustible liquid.

H301 + H311: Toxic if swallowed or in contact with skin.

H330: Fatal if inhaled.

H401: Toxic to aquatic life.

**Precautionary Statements:**

P260: Do not breathe dust / fume / gas / mist / vapors / spray.

P280: Wear protective gloves / protective clothing / eye protection / face protection.

P284: Wear respiratory protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor / physician.

### 3. Composition / Information on Ingredients

**CAS Number:** 91-66-7  
**EC Number:** 202-088-8  
**Index Number:** 612-054-00-8

	CAS No.	EC Number	Percent	Hazardous
N,N-Diethylaniline	91-66-7	202-088-8	100%	Yes

### 4. First-aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician.

**Ingestion:** Wash mouth out with water and call a physician. Never give anything by mouth to an unconscious person.

**Skin Contact:** Immediately wash skin with soap and copious amounts of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician.

**Eye Contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers. Call a physician.

### 5. Fire-fighting Measures

**Fire:** Emits toxic fumes of Carbon Monoxide, Carbon Dioxide, and Nitrogen Oxide under fire conditions.

**Explosion:** Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back.

**Fire Extinguishing Media:** Water spray. Carbon Dioxide, dry chemical powder, or appropriate foam.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

### 6. Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Safety shower and eyebath. Use only in a well-ventilated area. Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Readily absorbed through skin. Toxic. Irritant. Wash thoroughly after handling.

**Environmental Precautions and Methods and Materials for Containment and Cleaning Up:** Contain and recover liquid when possible. Do not let product enter drains. Absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

### 7. Handling and Storage

**Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities:** Keep container tightly closed in a cool, dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

## 8. Exposure Controls / Personal Protection

### **Airborne Exposure Limits:**

No occupational exposure limits have been established. Safe work practices should always be followed.

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):** If the exposure limit is exceeded and engineering controls are not feasible or in an emergency situation where the exposure is not known, use a full face piece positive-pressure, air-supplied respirator operated in a pressure-demand or other positive-pressure mode. For increased protection, use in combination with an auxiliary self-contained breathing apparatus operated in a pressure-demand or other positive-pressure mode. **WARNING:** Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

**Skin Protection:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:** Use chemical safety goggles and / or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

**Appearance:** Yellow-tinted liquid

**Odor:** Amine odor

**Odor Threshold:** Not determined

**pH:** > 7 (Basic)

**Melting Point:** -38C (-36.4F)

**Boiling Point / Boiling Range:** 216.1C (421F)

**Flash Point:** 88C (190F) CC

**Evaporation Rate (BuAc=1):** No data available

**Flammability:** Flammable

**Upper / Lower Flammability or Explosive Limits:** No data available

**Vapor Pressure:** 19Pa at 20C

**Vapor Density (Air=1):** 5.2

**Relative Density:** 0.93g/cm<sup>3</sup>

**Solubility:** 0.014 g/100m at 25C

**Partition Coefficient: n-octanol / water:** log Pow: 3.31

**Auto-ignition Temperature:** 630C (1166F)

**Decomposition Temperature:** No data available

**Viscosity:** No data available

## 10. Stability and Reactivity

**Reactivity and / or Chemical Stability:** Stable under ordinary conditions of use and storage.

**Possibility of Hazardous Reactions and Conditions to Avoid:** Heat, flames, sparks, sunlight, incompatibles.

**Incompatible Materials:** Strong oxidizing agents, and strong acids. Store away from heat and direct sunlight.

**Hazardous Decomposition Products:** Toxic fumes of Carbon Monoxide, Carbon Dioxide, and Nitrogen Oxide.

## 11. Toxicological Information

### **Acute Toxicity:**

LC50 (inh, rat): 1,920 mg/m<sup>3</sup> / 4 hr

LD50 (oral, rat): 782 mg/kg

**Emergency Overview:** DANGER! MAY BE FATAL BY INHALATION, INGESTION, OR SKIN ABSORPTION. VAPOR OR MIST IS IRRITATING TO EYES, SKIN, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. TOXIC. IRRITANT. ABSORPTION INTO THE BODY LEADS TO FORMATION OF METHEMOGLOBIN WHICH IN SUFFICIENT CONCENTRATION CAUSES CYANOSIS (BLUISH DISCOLORATION OF SKIN.) ONSET MAY BE DELAYED 2 TO 4 HOURS OR LONGER. READILY ABSORBED THROUGH SKIN. EFFECTS CAUSE NEUROTOXIC EFFECTS.

**Potential Health Effects:**

**Inhalation:** May be fatal by inhalation. Vapor or mist is irritating to the mucous membranes and upper respiratory tract.

**Ingestion:** May be fatal by ingestion.

**Skin Contact:** May be fatal by skin absorption. Vapor or mist causes skin irritation. Readily absorbed through skin.

**Eye Contact:** Vapor or mist can cause irritation.

**Chronic Exposure:** This substance may have effects on the blood, resulting in anemia.

**Aggravation of Pre-existing Conditions:** No data available.

**Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:)** No data available.

**Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:)** No data available.

**Germ Cell Mutagenicity:** Genotoxicity in vitro - Hamster – ovary; Sister chromatid exchange

**Reproductive Toxicity:** No data available.

**Teratogenicity:** No data available.

**Aspiration Hazard:** No data available.

**Numerical Measures of Toxicity:** Cancer Lists: NTP Carcinogen

	Known	Anticipated	IARC Category
N,N-Diethylaniline (91-66-7)	No	No	None

## 12. Ecological Information

**Ecotoxicity:** The substance is toxic to aquatic organisms. It is strongly advised that this substance does not enter the environment. The substance may cause long-term effects in the aquatic environment.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** Bioaccumulation of this chemical may occur.

**Mobility in Soil:** No data available.

**Other adverse effects:** US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

### 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### 14. Transport Information

**UN Number:** UN2432

**UN Proper Shipping Name:** N,N-DIETHYLANILINE

**Packing Group:** III



**DOT**

**IMDG**

**IATA**

**Land Transport ADR/RID and GGVs/GGVE (Cross Border / Domestic)**

**Transport Hazard Class(es):** 6.1

**Maritime Transport**

**EMS Number:** F-A, S-A

**Transport Hazard Class(es):** 6.1

**Marine Pollutant:** No

**Air Transport ICAO-TI and IATA-DGR**

**Transport Hazard Class(es):** 6.1

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

**Special Precautions for User:** Warning: Toxic Substances

### 15. Regulatory Information

#### Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
N,N-Diethylaniline (91-66-7)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

#### Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
N,N-Diethylaniline (91-66-7)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

#### Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
N,N-Diethylaniline (91-66-7) WATER	No	No	No	No
Water (7732-18-5)	No	No	No	No

**Federal, State & International Regulations - Part 2**

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
N,N-Diethylaniline (91-66-7)	1000	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: No
SARA 311/312:	Acute: Yes	Chronic: Yes	Fire: Yes	Pressure: No
Reactivity: No		Mixture / Liquid		

**16. Other Information**

*Effective Date:* 07/01/15 – Added WHMIS 2015 Compliance, added WHMIS 1998 Symbols and TDG

*Replaces Revision:* 05/01/13 – GHS Compliant, 05/11/10 – Initial Release

**WHMIS 1998 Symbols - Reference**

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