



Effective Date: 01/01/13  
Replaces Revision: 12/22/10

NON-EMERGENCY TELEPHONE  
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE  
800-424-9300

## SDS – SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** N, N – DIMETHYLANILINE

**Synonyms:** Xylidine; N,N-Dimethylbenzenamine; Benzenamine,N,N-Dimethyl-; Dimethylphenylamine

**Chemical Formula:** C<sub>6</sub>H<sub>5</sub>N(CH<sub>3</sub>)<sub>2</sub>

**Recommended Use of the Chemical and Restrictions On Use:** Laboratory Reagent

**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, Oral (Category 3)  
Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 3)  
Skin irritation (Category 3)  
Eye irritation (Category 2A)  
Carcinogenicity (Category 2)  
Acute aquatic toxicity (Category 2)  
Chronic aquatic toxicity (Category 2)

**Risk Phrases:**

Symbol: T, N

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.

R40: Limited evidence of a carcinogenic effect.

R51/ 53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Label Elements:**

**Trade Name:** N, N – DIMETHYLANILINE

**Signal Word:** Danger



**Hazard Statements:**

H227: Combustible liquid.  
H301 + H311: Toxic if swallowed or in contact with skin.  
H316: Causes mild skin irritation.  
H319: Causes serious eye irritation.  
H331: Toxic if inhaled.  
H351: Suspected of causing cancer.  
H411: Toxic to aquatic life with long lasting effects.

**Precautionary Statements:**

P261: Avoid breathing dust / fume / gas / mist / vapors / spray.  
P273: Avoid release to the environment.  
P280: Wear protective gloves / protective clothing.  
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P311: Call a POISON CENTER or doctor / physician.

### 3. Composition / Information on Ingredients

**CAS Number:** 121-69-7  
**EC Number:** 204-493-5  
**Index Number:** 612-016-00-0  
**Molecular Weight:** 122 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Dimethylaniline	121-69-7	204-493-5	90 - 100%	Yes	Substance

### 4. First-aid Measures

In all cases, immediately call a POISON CENTER or doctor / physician.

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

**Ingestion:** DO NOT INDUCE VOMITING unless directed by a physician. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire-fighting Measures

**Fire:** Combustible Liquid and Vapor! Contact with strong oxidizers may cause fire. Flash point: 63C (145F) CC / Autoignition temperature: 371C (700F) / Flammable limits in air % by volume: lel: 1.0; uel: 7.0

**Explosion:** Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

**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. Fight fire from maximum distance.

## 6. Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 7. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**Environmental Precautions and Methods and Materials for Containment and Cleaning Up:** Contain and recover liquid when possible. Use non-sparking tools and equipment. Do not let product enter drains. Collect liquid in an appropriate container or 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! Use water spray to reduce vapors and dilute spills to nonflammable mixtures. 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:** Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. 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. Do not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

## 8. Exposure Controls / Personal Protection

### **Airborne Exposure Limits:**

OSHA Permissible Exposure Limit (PEL): 5 ppm (TWA)

ACGIH Threshold Limit Value (TLV): 5 ppm (TWA), 10 ppm (STEL) skin

**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, a half face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **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 a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

**Appearance:** Pale yellow to brown, oily liquid

**Odor:** Amine-like odor

**Odor Threshold:** Not determined

**pH:** 7.4 at 1.2 g/l at 20 C (68 F)

**% Volatiles by volume @ 21C (70F):** No information found

**Melting Point:** 2.5C (36F)

**Boiling Point / Boiling Range:** 193C (379F)

**Flash Point:** 63C (145F) CC  
**Evaporation Rate (BuAC=1):** <1  
**Flammability:** Extremely Flammable Liquid  
**Upper / Lower Flammability or Explosive Limits:** lel: 1.0; uel: 7.0  
**Vapor Pressure (mm Hg):** 0.52 @ 25C (77F)  
**Vapor Density (Air=1):** 4.2  
**Relative Density:** 0.956 @ 20C/4C  
**Solubility:** ca.1 g/l  
**Partition Coefficient: n-octanol / water:** log Pow: 2.62  
**Auto-ignition Temperature:** 371C (700F)  
**Decomposition Temperature:** No information found  
**Viscosity:** No information found

## 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, ignition sources and incompatibles.

**Incompatible Materials:** Dibenzoyl Peroxide, Diisopropyl Peroxydicarbonate. Contact with oxidizing agents may cause fire. Contact with acids may cause splattering. May attack plastics and rubber.

**Hazardous Decomposition Products:** Emits toxic fumes of Nitric oxides, Carbon oxides, and Aniline when heated to decomposition.

## 11. Toxicological Information

**Emergency Overview:** DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR. AFFECTS BLOOD, KIDNEYS, LIVER, CARDIOVASCULAR SYSTEM.

### Potential Health Effects:

**Inhalation:** May be fatal if excessively inhaled. Inhalation of vapors may cause systemic poisoning, symptom may parallel those from ingestion exposure.

**Ingestion:** May be fatal if excessively ingested. Can cause methemoglobinemia. May cause bluish skin, headache, nausea, vomiting, and dry throat. Prominent central nervous system depression can occur, with confusion, ataxia, vertigo, tinnitus, weakness, disorientation, lethargy, drowsiness, convulsions, and coma. Death may occur from cardiovascular collapse. May cause kidney and liver damage and blood disorders.

**Skin Contact:** May cause irritation, redness, and pain. Readily absorbed through the skin. Symptoms may parallel those from ingestion exposure.

**Eye Contact:** May cause irritation, redness, pain, and corneal damage.

**Chronic Exposure:** Repeated or prolonged exposure through any route of exposure may cause decreased appetite, with anemia, weight loss, nervous system effects, and kidney, liver, and bone marrow damage.

**Aggravation of Pre-existing Conditions:** Persons with impaired kidney, liver, or cardiovascular function or pre-existing blood disorders may be more susceptible to the effects of this material.

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

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

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

Ingredient	Known	Anticipated	IARC Category
Dimethylaniline (121-69-7)	No	No	3

**Acute Toxicity:**

Oral rat LD50: 1410 mg/kg; skin rabbit LD50: 1770 mg/kg

Skin rabbit standard Draize: 500 mg/24H, mild

Skin rabbit open Draize: 10 mg/24H open, mild

Investigated as a tumorigen and mutagen.

**12. Ecological Information****Ecotoxicity:**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 65.6 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (Water flea) - 5 mg/l - 48 h

**Persistence and Degradability:** When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day.

**Bioaccumulative Potential:**

Bioaccumulation Oryzias latipes - Bioconcentration factor (BCF): 13.6

**Mobility in Soil:** No information found.

**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 managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. 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:** UN2253

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

**Packing Group:** II



DOT

IMDG

IATA

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

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

**Maritime Transport IMDG/GGVSea**

**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:)** Not applicable

**Special Precautions for User:** No additional information

## 15. Regulatory Information

### Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Dimethylaniline (121-69-7)	Yes	Yes	Yes	Yes

### Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Dimethylaniline (121-69-7)	Yes	Yes	No	Yes

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

	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List Chemical	Catg.
Dimethylaniline (121-69-7)	No	No	Yes	No

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

	RCRA		TSCA
Ingredient	CERCLA	261.33	8(d)
Dimethylaniline (121-69-7)	100	No	Yes

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

**Australian Hazchem Code:** 3X

**Poison Schedule:** None allocated

## 16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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