



## BDMA - Material Safety Data Sheet

Product No. Benzyl dimethylamine, BDMA

Issue Date (12-17-08)

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### Section 1: Product and Company Identification

#### Product Name:

Synonym: N,N-Dimethylbenzenemethanamine, N-Benzyl dimethylamine, Dimethylbenzylamine, Benzyl-N,N-dimethylamine, N-(Phenylmethyl)dimethylamine, BDMA, Sumine 2015

Chemical Family: Aralkyl Amine

Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

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### Section 2: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>	NTP	IARC	OSHA regulated
Benzyl dimethylamine (103-83-3)	100	NE	NE	ND	ND	ND

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### Section 3: Hazard Identification

#### Emergency overview

Appearance: Colorless to light yellow liquid.

Immediate effects: Corrosive. Combustible liquid. A possible skin sensitizer. Toxic by inhalation, in contact with skin and if swallowed causes burns. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Potential health effects

Primary Routes of entry: Inhalation, ingestion and skin contact.

Signs and Symptoms of Overexposure: ND

Eyes: Severely irritating to the eyes.

Skin: Corrosive, contact with skin may result in strong irritation and burns.

Ingestion: May be harmful if swallowed and causes burns.

Inhalation: Breathing vapors or mist will cause irritation to the respiratory tracts and mucous membrane.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: No

See Toxicological Information (Section 11)

**Potential environmental effects**

See Ecological Information (Section 12)

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**Section 4: First Aid Measures**

**If accidental overexposure is suspected**

Eye(s) Contact: Immediately flush eyes with plenty of water for at least 15 minutes, holding eyelids apart. Get medical attention if irritation or other symptoms occur.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Use soap if available. Remove contaminated clothing or shoes after flushing has begun. Get prompt medical attention. Thoroughly wash contaminated clothing and shoes or discard in a manner

Inhalation: Remove to fresh air. If not breathing give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: Dilute with milk or water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

**Note to physician**

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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**Section 5: Fire Fighting Measures**

Flash Point: 130.0°F or 54.44°C Closed Cup: 127.4°F /53°C

Flammable Limits: Lower: 0.9%, Upper: 6.3%

Auto-ignition point: 410°C

Fire Extinguishing Media: CO<sub>2</sub>, dry chemical, alcohol foam, water spray.

Special Fire Fighting Procedures: Evacuate area and fight from safe distance. Wear self contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear. Can burn in fire releasing toxic vapors.

Unusual Fire and Explosion Hazards: Vapors may travel a considerable distance and flashback to the source.

Hazardous combustion products: Emits toxic fumes under fire conditions.

DOT Class: Corrosive, flammable liquid.

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**Section 6: Accidental Release Measures**

Steps to be Taken in Case Material is Released or Spilled: This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Prevent skin and eye contact. See Section 8. For small spills: Absorb spill with inert material (e.g., dry sand or vermiculite) then place in a chemical storage container for disposal. For large spill: Shut off leak, if safe to do so. Clean up spills immediately, observing precautions in protective equipment section, see Section 8. Contain spilled liquid with sand, vermiculite or earth. Retain all contaminated water for removal and

treatment.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

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### **Section 7: Handling and Storage**

Precautions to be Taken in Handling and Storage: Use with adequate ventilation. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because they may contain residues. Avoid contact with eyes and skin. Avoid breathing vapors. Keep away from ignition sources. Store in accordance with OSHA regulations and NEPA guidelines. Keep container closed when not in use.

Storage temperature: Room temperature.

Storage Pressure: ND

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### **Section 8: Exposure Controls / Personal Protection**

#### **Engineering Controls**

Ventilation required: Use fume hood. Use process enclosures, local exhaust ventilation, or other engineering controls to control sources of dust, mist or vapor.

#### **Personal Protection Equipment**

Respiratory protection: Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use and limitations. Use a positive pressure air supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded.

Follow respiratory protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Protective gloves: Wear impervious gloves.

Skin protection: Wear chemical protective clothing, overalls, aprons or boots as need to prevent contact with skin.

Eye protection: Wear splash-proof chemical goggles and a face shield.

Additional clothing and/or equipment: Eyewash stations or shower

#### **Exposure Guidelines**

See Composition/Information on Ingredients (Section 2)

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### **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Colorless to light yellow liquid.

Odor (threshold): Amine.

Specific Gravity (H<sub>2</sub>O=1): 0.89 @ 77°F.

Vapor Pressure (mm Hg): < 1 mm Hg

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Å

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 349.0°F or 176.1°C

Freezing point / melting point: -75°C

pH: 10 Å (20°C at concentration: 10g/liter)

Solubility in Water: Moderate 1.2 g /100 ml

Refractive Index: 1.502  
Molecular Weight: 135.2

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### **Section 10: Stability and Reactivity**

Stability: Stable

Conditions to Avoid: Exposure to oxidizing agents and acids. Prolong exposure to heat.

Materials to Avoid (Incompatibility): Strong oxidizing agents, acids, acid anhydrides, acid chlorides.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide and nitrogen oxides.

Hazardous Polymerization: Not prone to hazardous polymerization.

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### **Section 11: Toxicological Information**

Results of component toxicity test performed: BDMA: Oral (rat) LD50: 650 mg/kg, Dermal (rabbit) LD50: 1660 mg/kg, Inhalation (rat) LC50: 373 ppm/4 hr, Skin Irritancy, rabbit: 500 mg/4 hr- severe with local necrosis. Eye Irritancy, rabbit: 5 mg severe.

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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### **Section 12: Ecological Information**

Ecological Information: Acute Ecotoxicity Test: Test type: LC50 Fish (Pimephales promelas or Fathead minnow): 35.8-39.90 mg /L @ 96 hr. Test type: LC50 (Leuciscus idus): 10-22 mg/L @ 96 hr

Chemical Fate Information: ND

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### **Section 13 Disposal Considerations**

RCRA 40 CFR 261 Classification: ND

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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### **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Benzyl dimethylamine

Hazard Class: 8, 3

Packaging group: II

UN Number: UN2619

Limitations: NA

IATA: Proper shipping name: Benzyl dimethylamine

Hazard Class: 8, 3

Packing group: II

UN Number: UN2619

Limitations: NA

Domestic shipments only: NA

IMO: Proper shipping name: Benzyl dimethylamine

Class: 8, 3

UN Number: UN2619

Packing group: II  
EMS: ND  
MFAG: ND  
Marine Pollutant: No  
Canadian TDG: ND  
IMDG Page: ND  
Limitations: ND

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## **Section 15: Regulatory Information**

### **United States Federal Regulations**

MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.  
SARA Title III: Section 311/312: Chronic health hazard: No. Acute health hazard: Yes.  
Fire hazard: Yes. Sudden pressure: No. Reactivity hazard: No. Section 302: Extremely hazardous ingredients: None. Section 313 Toxic chemical ingredients: None.  
RCRA: ND  
TSCA: Reported in TSCA inventory  
CERCLA: None

### **State Regulations**

California Proposition 65: None  
NJ environmental Hazard Substance List, ingredients: None

### **International Regulations**

Canada WHMIS: DSL: Yes, NDSL: No  
Europe EINECS Numbers: EC NO: 203-149-1, EC Index NO: 612-074-00-7  
OEL = MAK  
OEL-Russia: STEL 5 mg/M<sup>3</sup>, Jan 1993  
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## **Section 16: Other Information**

Label Information: Corrosive, Flammable  
European Risk and Safety Phrases: R10 Flammable, R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R34 Cause burns. R52/53 Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36 Wear suitable protective clothing. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61 Avoid release to the environment. Refer to special instructions/safety data sheets  
European symbols needed: ND  
Canadian WHMIS Symbols: ND  
HMIS® Hazard Rating: Health: **3**; Flammability: **2**; Physical Hazard: **0** Personal Protection: See Section 8  
NFPA Hazard Rating: Health: **3**; Fire: **2**; Reactivity: **0**  
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

### **Abbreviations used in this document**

NE= Not established  
NA= Not applicable  
NIF= No Information Found

ND= No Data

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