



MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT

MSDS Name: N,N-Diethylethanolamine, 99%
Synonyms: 2-Diethylaminoethanol, Beta-Diethylaminoethanol

For emergencies in the US, call CHEMTREC: 800-424-9300

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#: 100-37-8
Chemical Name: N,N-Diethylethanolamine
%: 99.0
EINECS#: 202-845-2
Hazard Symbols: XI
Risk Phrases: 10 36/37/38

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable. Irritating to eyes, respiratory system and skin. Hygroscopic.

Potential Health Effects

Eye: May cause eye irritation. May cause eye injury.
Skin: May cause severe skin irritation. May be harmful if absorbed through the skin.
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation: Vapors may cause dizziness or suffocation. May cause nausea and possible vomiting.
Chronic: None

SECTION 4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Antidote: None reported.

SECTION 5 - FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low



or confined areas.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do NOT get water inside containers. For large fires, use water spray, fog or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

SECTION 7 - HANDLING and STORAGE

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. flammables-area. Store protected from moisture.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	clear colorless to faint yellow
Odor:	unpleasant odor
pH:	Not available.
Vapor Pressure:	1.9 mbar @ 20 C



Vapor Density:	4.04
Evaporation Rate:	Not available.
Viscosity:	5mPa @ 20C
Boiling Point:	161 deg C @ 760.00mm Hg
Freezing/Melting Point:	-70 deg C
Autoignition Temperature:	260 deg C (500.00 deg F)
Flash Point:	60 deg C (140.00 deg F)
Explosion Limits, lower:	6.70 vol %
Explosion Limits, upper:	11.7 vol %
Decomposition Temperature:	
Solubility:	soluble
Specific Gravity/Density:	.8840g/cm3
Molecular Formula:	C6H15NO
Molecular Weight:	117.19

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants, exposure to moist air or water.

Incompatibilities with Other Materials:
Oxidizing agents, strong acids, copper, copper alloys, zinc, moisture.

Hazardous Decomposition Products:
Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#: CAS# 100-37-8: KK5075000

LD50/LC50: CAS# 100-37-8: Dermal, guinea pig: LD50 = 1 mL/kg; Draize test, rabbit, eye: 5 mg Severe; Inhalation, mouse: LC50 = 5000 mg/m3; Oral, rat: LD50 = 1300 mg/kg; Skin, rabbit: LD50 = 1260 uL/kg.

Carcinogenicity: N,N-Diethylethanolamine -Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.



Other Studies: Standard Draize Test: Administration into the eye (rabbit) = 5 mg/24H (Severe).

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Fathead Minnow: 1780 mg/L; 96 Hr.; Flowthrough

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Please refer to applicable shipping regulations.

SECTION 15 - REGULATORY INFORMATION

US FEDERAL

TSCA: CAS# 100-37-8 is listed on the TSCA inventory.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE: N,N-Diethylethanolamine can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases: R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases: S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection)
CAS# 100-37-8: 1



United Kingdom Occupational Exposure Limits

CAS# 100-37-8: OES-United Kingdom, TWA 10 ppm TWA; 49 mg/m³ TWA

Canada

CAS# 100-37-8 is listed on Canada's DSL List.

CAS# 100-37-8 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 100-37-8: OEL-AUSTRALIA:TWA 10 ppm (50 mg/m³); Skin
OEL-AUSTRIA:TWA 10 ppm (50 mg/m³); Skin OEL-BELGIUM:TWA 10 ppm (48
mg/m³); Skin OEL-DENMARK:TWA 10 ppm (50 mg/m³); Skin OEL-FINLAND:STEL
10 ppm (50 mg/m³); Skin OEL-FRANCE:TWA 10 ppm (50 mg/m³); Skin
OEL-GERMANY:TWA 10 ppm (50 mg/m³); Skin OEL-THE NETHERLANDS:TWA 10 ppm
(50 mg/m³); Skin OEL-THE PHILIPPINES:TWA 10 ppm (50 mg/m³); Skin
OEL-RUSSIA:STEL 5 mg/m³; Skin OEL-SWITZERLAND:TWA 10 ppm (50 mg/m³);
Skin OEL-UNITED KINGDOM:TWA 10 ppm (50 mg/m³); Skin OEL IN BULGARIA,
COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE,
VIETNAM check ACGI TLV

SECTION 16 - ADDITIONAL INFORMATION

ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL.

Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

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