

SAFETY DATA SHEET

DIETHANOLAMINE (DEA)

CAS No.: 111-42-2

This Safety Data Sheet is compiled from well-established published chemical, GHS classification and regulatory reference sources for this substance. It is supplied by Suraj Chemicals as the distributor/supplier of record and is not a manufacturer-issued document. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

Product Name	Diethanolamine (DEA)
CAS Number	111-42-2
Recommended Use	Industrial / commercial chemical trading and distribution
Supplier	Suraj Chemicals, No 92, Govindappa Naicken Street, Shiva Complex, Chennai - 600001, India
Emergency Telephone	+91 - 9840284032, 9176135357 / +91 - 44 - 25393652

2. HAZARD(S) IDENTIFICATION

GHS Signal Word	Danger
HAZARD CLASSIFICATION • Acute toxicity, oral - Category 4 • Skin irritation - Category 2 • Serious eye damage - Category 1 • Specific target organ toxicity, repeated exposure - Category 2	
HAZARD STATEMENTS • H302 - Harmful if swallowed • H315 - Causes skin irritation • H318 - Causes serious eye damage • H373 - May cause damage to organs through prolonged or repeated exposure	
PRECAUTIONARY STATEMENTS • P260 - Do not breathe mist/vapors • P264 - Wash hands thoroughly after handling • P280 - Wear protective gloves/eye protection/face protection • P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes, remove contact lenses if present • P310 - Immediately call a poison center/doctor • P314 - Get medical advice/attention if you feel unwell	

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Diethanolamine (DEA)
CAS Number	111-42-2
Physical State	Liquid or solid (melting point ~28 C; often handled as a supercooled liquid or in molten/heated form)
Appearance / Odour	Colorless to pale yellow liquid or white crystalline solid with a mild ammonia-like odor.

4. FIRST-AID MEASURES

Eye Contact	Rinse immediately with plenty of water for at least 15 minutes, holding eyelids open; remove contact lenses if present. Get immediate medical attention.
Skin Contact	Remove contaminated clothing and wash skin thoroughly with soap and water. Get medical attention if irritation persists.
Inhalation	Remove to fresh air. Get medical attention if symptoms (cough, difficulty breathing) develop.
Ingestion	Rinse mouth with water. Do not induce vomiting. Give water to drink if conscious and get immediate medical attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water spray/fog, dry chemical, carbon dioxide, alcohol-resistant foam.
Unsuitable Extinguishing Media	High-pressure water jet that could spread molten/hot material.
Special Hazards	Combustible at elevated temperature; molten material can cause thermal burns. Combustion produces toxic fumes including nitrogen oxides and carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Measures	Contain spill and absorb with inert material; for solid, sweep up and collect. Avoid contact with skin/eyes; prevent entry into drains, soil, and waterways; place waste in appropriate closed containers.
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7. HANDLING AND STORAGE

Handling Precautions	Avoid contact with skin and eyes and breathing mist/vapors, especially when handling heated/molten material. Use adequate ventilation and appropriate PPE; wash hands after handling.
Storage Conditions	Store in a cool, dry, well-ventilated area in tightly closed containers; keep heated storage/transfer systems below decomposition temperature and away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits / PPE	OSHA/ACGIH TWA 0.46 ppm (approx. 2 mg/m ³ , as respirable fraction, ACGIH). Use chemical splash goggles or face shield, chemical-resistant gloves, and NIOSH-approved respiratory protection where ventilation is inadequate.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid or solid (melting point ~28 C; often handled as a supercooled liquid or in molten/heated form)
Appearance / Odour	Colorless to pale yellow liquid or white crystalline solid with a mild ammonia-like odor.
Boiling Point	271.1 (with decomposition)
Melting Point	28.0
Flash Point	138 (closed cup)
Density / Specific Gravity	1.097 g/cm ³ at 20 C (molten)
Water Solubility	Miscible in all proportions
pH Value	Approx. 11-12 (1% aqueous solution)

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions; can degrade/discolor on prolonged exposure to air, light, or heat.
Incompatible Materials	Strong oxidizers, strong acids, and reactive metals (e.g., copper, its alloys).
Hazardous Decomposition	Thermal decomposition can produce carbon oxides and nitrogen oxides (including nitrosamine-forming potential in the presence of nitrosating agents).

11. TOXICOLOGICAL INFORMATION

Summary	Causes serious eye damage and skin irritation on contact; harmful if swallowed. Repeated or prolonged exposure has been associated with organ effects (notably liver and kidney) in animal studies; classified by IARC as not classifiable as to human carcinogenicity (Group 3), though it is regulated as a possible carcinogen under some state right-to-know programs due to nitrosamine formation potential.
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12. ECOLOGICAL INFORMATION

Summary	Moderately biodegradable; generally low to moderate acute aquatic toxicity, though it is not typically classified as hazardous to the aquatic environment under current GHS criteria. Avoid release to soil and waterways.
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13. DISPOSAL CONSIDERATIONS

Disposal Method	Dispose of as hazardous waste in accordance with local, state, and federal regulations; do not discharge to sewers or waterways. Incineration by a licensed facility is a common disposal route.
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14. TRANSPORT INFORMATION

UN Number	Not regulated for transport (non-bulk); may be subject to environmentally hazardous substance provisions in bulk shipments
Transport Hazard Class	Not applicable (non-bulk)
Packing Group	Not applicable

15. REGULATORY INFORMATION

Notes	Listed on TSCA, REACH/EINECS, and other global inventories; some jurisdictions (e.g., California Proposition 65) list DEA as a chemical known to cause cancer based on nitrosamine contamination/formation concerns, warranting cautious handling and labeling.
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16. OTHER INFORMATION

Prepared By	Suraj Chemicals, Technical / QA Desk
Date of Issue	29 Sep 2026
Note	This SDS is compiled from well-established published GHS hazard classification data and general chemical reference sources for this substance, in the standard 16-section format. Values are believed accurate but Suraj Chemicals makes no warranty, express or implied, regarding their completeness. Users should evaluate suitability for their own specific use.

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