



MATERIAL SAFETY DATA SHEETS

199

Diethylene triamine

1. CHEMICAL IDENTITY

Chemical Name : Diethylene triamine

Chemical Classification: Corrosive

Trade Name :

Synonyms: bis (2-Aminoethyl) amine, N-(2 aminoethyl) ethylenedi amine, DETA, Aminoethylethanediamine

Formula : C₄H₁₃N₃

CAS No: 111-40-0

UN No: 2079

Regulated Identification

Shipping Name : Diethylenetriamine

Hazchem Code : 2X

Codes / Label : Class 8, Corrosive

Hazardous Waste ID No : 5

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
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1	Diethylene triamine	111-40-0	3
2			4

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 207

Physical State: Liquid

Appearance: Colorless to yellow liquid

Melting Pt °C: -39

Vapour Pressure @ 35°C mmHg: 0.232 mm Hg @ 25 deg C

Odour: Pungent, ammonia-like odour.

Vapour Density(Air =1): 3.56

Solubility in water at 30°C g/100ml: Very soluble

Others: Soluble in most hydrocarbons.

Specific Gravity (Water =1): 0.9586 @ 20 deg C/20 deg C

pH : Alkaline

3. FIRE / EXPLOSION HAZARD DATA

Flammability : Yes

LEL: 1.9

Flash Point °C in OC: 101.7

TDG Flammability:

UEL: 11.6

Flash Point °C in CC:

Autoignition Temperature °C : 398.9

Explosion sensitivity to impact:

Explosion sensitivity to static Electricity:

Hazardous Combustion Products : When heated to decomposition it emits NO_x.

Hazardous Polymerization : Will not occur.

Combustible Liquid: Yes

Explosive Material: No

Corrosive Material Yes

Flammable Material: No

Oxidiser : No

Others:

Pyrophoric Material: No

Organic Peroxide : No

4. REACTIVITY DATA

Chemical Stability : Stable

Incompatibility with other material : Oxidising materials, nitromethane, cellulose nitrate

Reactivity : Reacts with oxidisable materials. Mixture with nitromethane is a shock-sensitive explosive.

Hazardous : NOx, CO

Reaction Products

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, Ingestion, Skin and Eyes

Effects of Exposure / Symptoms:

High concentrations of vapours cause irritation of respiratory tract, nausea and vomiting. It is a severe skin and eye irritant. Repeated exposures can cause asthma and sensitization.

Emergency Treatment :

Inhalation: Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

Skin: Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Ingestion: Do not induce vomiting. 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.

LD50 (oral-rat) mg/kg: 1080 mg/kg

STEL:

LC50 (rat) mg/kg:

Odour Threshold: 10 ppm

Permissible Exposure Limit:

TLV (ACGIH) : 1 ppm

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	3	1	0	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Rubber gloves, impervious clothing, splash-proof goggles and cartridge type respirators effective for amines.

Handling : Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

Storage : Store in a cool, dry place. Protect from moisture, light and air for long term storage.

Precautions :

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Water spray, alcohol foam, carbon dioxide, dry chemical

Special Procedure : Do not get water inside containers. Use water spray to keep fire-exposed containers cool.

Unusual Hazards : Containers may explode in the heat of a fire.

EXPOSURE: First Aid Measures:

Inhalation: Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do not use mouth-to-mouth respiration.

Skin: Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Ingestion: Do not induce vomiting. 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.

Antidotes / Dosages:

SPILLS :

Steps To Be Taken : Use absorbent paper to pick up spilled material. Follow by washing surfaces with water and detergent.

Waste Disposal Method: Seal all wastes in vapour-tight plastic bags for eventual disposal.

8. ADDITIONAL INFORMATION / REFERENCES

The uses of diethylenetriamine are as solvent for sulphur, acid gases, various resins and dyes; as saponification agent for acidic materials, fuel component.

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :	Contact person
MAILING ADDRESS :	in Emergency :
TELEPHONE / TELEX NOS :	Local Bodies involved :
TELEGRAPHIC ADDRESS :	Standard Packing :
OTHERS :	Trem Card Details / Ref :

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Total No. of Pages: 3