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MATERIAL SAFETY DATA SHEET (MSDS)

DIETHYLAMINE LR

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : DIETHYLAMINE LR

Product code : SS0102300500

Identification of the product : Diethylamine
 CAS No :109-89-7
 EC No :203-716-3
 Annex No :612-003-00-X

Chemical formula : C₄H₁₁N

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : F; R11
 Xn; R20/21/22
 C; R35

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302
 Acute toxicity, dermal - Category 4 - Warning (CLP : Acute Tox. 4) H312
 Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318
 Skin corrosion - Category 1A - Danger (CLP : Skin Corr. 1A) H314
 Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
2. Hazards identification -DSD (continued)

Physical hazards : Flammable liquids - Category 2 - Danger (CLP : Flam. Liq. 2) H225

2.2. Label elements
Labelling EC 67/548 or EC 1999/45
Symbol(s)

Symbol(s)

: F : Highly flammable
C : Corrosive

R Phrase(s)

: R11 : Highly flammable.
R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.
R35 : Causes severe burns.

S Phrase(s)

: S1/2 : Keep locked up and out of reach of children.
S3 : Keep in a cool place.
S16 : Keep away from sources of ignition - No smoking.
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29 : Do not empty into drains.
S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection.
S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

Contains

: Diethylamine

Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms

Signal words

: Danger

Hazard statements

: H225 : Highly flammable liquid and vapour.
H314 : Causes severe skin burns and eye damage.
H302 : Harmful if swallowed.
H312 : Harmful in contact with skin.
H332 : Harmful if inhaled.

Precautionary statements
• General

: P102: Keep out of reach of children.
P103: Read label before use.
P101: If medical advice is needed, have product container or label at hand.

• Prevention

: P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.
P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.
P280: Wear protective gloves, protective clothing, eye protection, face protection.

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MATERIAL SAFETY DATA SHEET (MSDS)

DIETHYLAMINE LR

2. Hazards identification -DSD (continued)

- P271: Use only outdoors or in a well-ventilated area.
 P260: Do not breathe dust, fume, gas, mist, vapours, spray.
 P233: Keep container tightly closed.
 P264: Wash thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
- **Response** : P302+P352: IF ON SKIN : Wash with plenty of soap and water.
 P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.
 P363: Wash contaminated clothing before reuse.
 P370+P378: In case of fire: Use for extinction.
- **Storage** : P403+P235: Store in well-ventilated place. Keep cool.
 P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : Diethylamine
- 2.3. Other hazards**
- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : Diethylamine
 CAS No :109-89-7
 EC No :203-716-3
 Annex No :612-003-00-X
 Substance.

Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
Diethylamine	100 %	109-89-7	203-716-3	612-003-00-X	----	F; R11 Xn, R20/21/22 C; R35 ----- Flam. Liq. 2 _ H225 Skin Corr. 1A+ _ H314 Eye Dam 1 _ H318 Acute Tox. 4 (skin) _ H312 Acute Tox. 4 (inhal) _ H332 Acute Tox. 4 (oral) _ H302

Contains no other components or impurities which will influence the classification of the product.

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
4. First aid measures
4.1. Description of first aid measures

Inhalation	: Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing. Specific treatment is urgent (see on this label).
Skin contact	: Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Specific treatment (see on this label).
Eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. Specific treatment (see on this label). Rinse cautiously with water for several minutes.
Ingestion	: Specific treatment (see on this label). Immediately call a POISON CENTER or doctor. Call a POISON CENTER or doctor if you feel unwell. Do NOT induce vomiting. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use	: Causes severe skin burns and eye damage. Causes serious eye damage. Repeated exposure to this material can result in absorption through skin causing significant health hazard. Danger of serious damage to health by prolonged exposure through inhalation. Swallowing a small quantity of this material will result in serious health hazard. Corrosive to respiratory tract.
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4.3. Indication of any immediate medical attention and special treatment needed

General information	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
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5. Fire-fighting measures
5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Surrounding fires	: Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Flammable class	: Highly flammable liquid and vapour.
Hazardous combustion products	: Under fire conditions, hazardous fumes will be present. Thermal decomposition generates : Corrosive vapours.

5.3. Advice for fire-fighters

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
5. Fire-fighting measures (continued)

- Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.
- Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

- For emergency responders** : Equip cleanup crew with proper protection. Ventilate area.
- Technical measures** : Use special care to avoid static electric charges.
- Special precautions** : Remove ignition sources. No naked lights. No smoking.
- For non-emergency personnel** : Evacuate unnecessary personnel.

6.2. Environmental precautions

- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage
7.1. Precautions for safe handling

- Handling** : Handle empty containers with care because residual vapours are flammable. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Do not breathe dust, fume, gas, mist, vapours, spray. Avoid contact during pregnancy or while nursing. Wash thoroughly after handling.
- Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment.
- Special precautions** : No naked lights. No smoking.

7.2. Conditions for safe storage, including any incompatibilities

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
7. Handling and storage (continued)

Storage	: Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Do not store in corrodable metal. Ground/bond container and receiving equipment. Keep container tightly closed.
Storage regulation	: Comply with applicable regulations.
Storage - away from	: Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

Specific end use(s)	: None.
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8. Exposure controls/personal protection
8.1. Exposure controls

Personal protection	: Avoid all unnecessary exposure.
• Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
• Hand protection	: Wear protective gloves.
• Skin protection	: Wear suitable protective clothing.
• Eye protection	: Chemical goggles or face shield.
• Others	: When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits	: No data available.
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9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Liquid.
Colour	: Clear Colorless
Odour	: Fishy ammonical
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: -50°C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: Flammable. Highly flammable liquid and vapour.

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
9. Physical and chemical properties (continued)

Flash point [°C]	: (-28 °C)
Boiling point [°C]	: 55- 58°C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: 16,9
Vapour pressure [20°C]	: 195 mm Hg @ 20°C
Vapour pressure mm/Hg	: N/A
Vapour density	: 2,5
Density [g/cm3]	: 0,71
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Miscible.
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: Strong alkalis.
Viscosity at 40°C [mm2/s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: 10,10%
Explosion limits - lower [%]	: 1,80%
Oxidising properties	: No data available.

10. Stability and reactivity
10.1. Reactivity

Reactivity	: Not established.
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10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures. Open flame.
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MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
10. Stability and reactivity (continued)
10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.
 May release flammable gases.
 Thermal decomposition generates : Corrosive vapours.

11. Toxicological information
11.1. Information on toxicological effects
Acute toxicity

- Inhalation : Harmful if inhaled.
- Dermal : Harmful in contact with skin.
- Ingestion : Harmful if swallowed.

Corrosion

: Causes severe skin burns and eye damage.
 Causes serious eye damage.
 Corrosive to respiratory tract.

Irritation

: Based on available data, the classification criteria are not met.

Sensitization

: Based on available data, the classification criteria are not met.

Mutagenicity

: Based on available data, the classification criteria are not met.

Carcinogenicity

: Based on available data, the classification criteria are not met.

Toxic for reproduction

: Based on available data, the classification criteria are not met.

STOT-single exposure

: Based on available data, the classification criteria are not met.

STOT-repeated exposure

: Based on available data, the classification criteria are not met.

Aspiration hazard

: Based on available data, the classification criteria are not met.

12. Ecological information
12.1. Toxicity

Toxicity information : Not established.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
12. Ecological information (continued)

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations
13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Special precautions : Handle empty containers with care because residual vapours are flammable.

14. Transport information
14.1. Land transport (ADR-RID).

Proper shipping name : DIETHYLAMINE
 UN N° : 1154
 H.I. nr : 338
 ADR - Class : 3
 Labelling - Transport : 3 : Flammable liquid. 8 : Corrosive substance.



ADR - Classification code : FC
 ADR - Group : II
 ADR - Packing instructions : P001

MATERIAL SAFETY DATA SHEET (MSDS)
DIETHYLAMINE LR
14. Transport information (continued)

ADR - Limited Quantity : 1 L

ADR - Tunnel code



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only]

Proper shipping name : DIETHYLAMINE
 UN N° : 1154
 IMO-IMDG - Class or division : 3 : Flammable liquid. (8 : Corrosive substance.)
 IMO-IMDG - Packing group : II
 IMO- IMDG - Packing instructions : P001
 IMO-IMDG - Limited quantities : 1 L
 IMO-IMDG - Marine pollution : No
 EMS-Nr : F-E S-C

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : DIETHYLAMINE
 UN N° : 1154
 IATA - Class or division : 3 : Flammable liquid. (8 : Corrosive substance.)
 IATA - Packing group : II
 IATA - Passenger and Cargo Aircraft : ALLOWED
 - Passenger and Cargo - Packing : 352
 instruction
 - Passenger and Cargo - Maximum : 1 L
 Quantity/Packing
 IATA - Cargo only : ALLOWED
 - Cargo only - Packing instruction : 363
 - Cargo only - Maximum Quantity/ : 5 L
 Packing
 IATA - Limited Quantities : 0.5 L
 ERG-Nr : 3CH

15. Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

MATERIAL SAFETY DATA SHEET (MSDS)

DIETHYLAMINE LR

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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