

MATERIAL SAFETY DATA SHEET (MSDS) ETHANOLAMINE (MONO) LR (FOR SYNTHESIS)

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

| <u>1.1. Product identifier</u> Trade name | : ETHANOLAMINE (MONO) LR (FOR SYNTHESIS) |
|---|--|
| Product code Identification of the product | : SS0116502500 : 2-aminoethanol CAS No :141-43-5 EC No :205-483-3 Annex No :603-030-00-8 |
| 1.2. Relevant identified uses of the s | substance or mixture and uses advised against |
| Use | : Industrial. For professional use only. |
| 1.3. Details of the supplier of the saf | ety 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

: Xn; R20/21/22 C; R34

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

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

2.2. Label elements

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2. Hazards identification -DSD (continued)

Labelling EC 67/548 or EC 1999/45

Symbol(s)



| Symbol(s) | : C : Corrosive |
|--------------------------------------|---|
| R Phrase(s) | : R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed. R34 : Causes burns. |
| S Phrase(s) | S1/2: Keep locked up and out of reach of children. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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 | : 2-aminoethanol |
| Labelling Regulation EC 1272/2008 (C | <u>LP)</u> |
| Hazard pictograms | |
| Signal words | : Danger |
| Hazard statements | : 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 | P280: Wear protective gloves, protective clothing, eye protection, face protection. P271: Use only outdoors or in a well-ventilated area. P260: Do not breathe dust, fume, gas, mist, vapours, spray. 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. |



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| 2. Hazards identification -DSD (continued) | | | |
|---|--|--|--|
| Storage | : 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 | : 2-aminoethanol | | |
| 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 | C/ EC Ar | : 2-aminoethanol CAS No :141-43-5 EC No :205-483-3 Annex No :603-030-00-8 Substance. | | | | |
| Substance name 2-aminoethanol | Contents : 100 % | CAS No 141-43-5 | EC No 205-483-3 | Annex No 603-030-00-8 | REACH Ref. | Classification Xn; R20/21/22 C; R34 |

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

4. First aid measures

4.1. Description of first aid measures

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

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



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| 4. First aid measures (continued) | | | |
|---|---|--|--|
| 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. | | |
| 4.3. Indication of any immediate media | cal 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). | | |
| 5. Fire-fighting measures | | | |
| 5.1. Extinguishing media | | | |
| Suitable extinguishing media Unsuitable extinguishing media Surrounding fires | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. : Do not use a heavy water stream. : Use water spray or fog for cooling exposed containers. | | |

5.2. Special hazards arising from the substance or mixture

| Hazardous combustion products | : Under fire conditions, hazardous fumes will be present. Thermal decomposition generates : Corrosive vapours. |
|-------------------------------|---|
| 5.3. Advice for fire-fighters | |
| 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. |
|--------------------------------|--|
| 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. |



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6. Accidental release measures (continued)

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 | : Do not eat, drink or smoke when using this product. Do not breathe dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use only outdoors or in a well-ventilated area. |
| Technical protective measures | : Provide good ventilation in process area to prevent formation of vapour. |
| 7.2. Conditions for safe storage, in | cluding any incompatibilities |
| Storage | : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. Do not store in corrodable metal. |
| Storage regulation | : Comply with applicable regulations. |
| Storage - away from | : Strong bases. Strong acids. Sources of ignition. Direct sunlight. |
| 7.3. Specific end use(s) | |
| Specific end use(s) | : None. |

8. Exposure controls/personal protection

8.1. Exposure controls

| Personal protection | : Avoid all unnecessary exposure. |
|--|--|
| Respiratory protection | : In case of insufficient ventilation, wear suitable |
| Hand protection | : Wear protective gloves. |
| Skin protection | : Wear suitable protective clothing. |
| E | |

- Eye protection
- Others

- respiratory equipment.
 - : Chemical goggles or face shield.
 - : When using, do not eat, drink or smoke.
- 8.2. Control parameters



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8. Exposure controls/personal protection (continued)

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Physical state at 20 °C | : Liquid. |
|------------------------------------|----------------------|
| Colour | : Clear Colorless |
| Odour | : Ammonia odor |
| Odour threshold | : No data available. |
| pH value | : No data available. |
| Melting point [°C] | : 10 - 11 °C |
| Decomposition point [°C] | : N/A |
| Critical temperature [°C] | : N/A |
| Auto-ignition temperature [°C] | : 780 °C |
| Flammability (solid, gas) | : N/A |
| Flash point [°C] | : 86 °C |
| Boiling point [°C] | : 170 °C |
| Initial boiling point [°C] | : N/A |
| Final boiling point [°C] | : N/A |
| Evaporation rate | : <1 |
| Vapour pressure [20°C] | : 0.3 hPa at 20 °C |
| Vapour pressure mm/Hg | : N/A |
| Vapour density | : 2,1 |
| Density [g/cm3] | : 1,012 |
| Relative density, gas (air=1) | : N/A |
| Relative density, liquid (water=1) | : N/A |
| Solubility in water [% weight] | : Miscible in water |
| Solubility in water | : N/A |
| Log Pow octanol / water at 20°C | : No data available. |
| Solubility | : 12.1 |
| Viscosity at 40°C [mm2/s] | : N/A |
| | |
| 9.2. Other information | |
| Explosive properties | : N/A |
| Explosion limits - upper [%] | : 17% |
| Explosion limits - lower [%] | : 2,50% |
| Oxidising properties | : No data available. |
| | |



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| 0. Stability and reactivity | | |
|--|---|--|
| 10.1. Reactivity | | |
| Reactivity | : Not established. | |
| 10.2. Chemical stability | | |
| Chemical stability | : Stable under recommended storage conditions. | |
| 10.3. Possibility of hazardous reactions | | |
| Hazardous reactions | : Not established. | |
| 10.4. Conditions to avoid | | |
| Conditions to avoid | : Direct sunlight. Extremely high or low temperatures. | |
| 10.5. Incompatible materials | | |
| Materials to avoid | : Strong acids. Strong bases. | |
| 10.6. Hazardous decomposition products | | |
| Hazardous decomposition products | : Fumes. Carbon monoxide. Carbon dioxide. 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. |



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| 11. Toxicological information (contin | 11. Toxicological information (continued) | |
|---|--|--|
| STOT-repeated exposure Aspiration hazard | : Based on available data, the classification criteria are not met. : Based on available data, the classification criteria are not met. | |
| 12. Ecological information | | |
| <u>12.1. Toxicity</u> | | |
| Toxicity information | : Not established. | |
| 12.2. Persistence - degradability | | |
| Persistence - degradability | : Biodegradable. | |
| 12.3. Bioaccumulative potential | | |
| Bioaccumulative potential | : Not established. | |
| <u>12.4. Mobility in soil</u> | | |
| Mobility in soil | : Not established. | |
| 12.5. Results of PBT and vPvB assessment | | |
| Results of PBT and vPvB assessment | t : 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. | |

14. Transport information

14.1. Land transport (ADR-RID)



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14. Transport information (continued)

| Proper shipping name | : ETHANOLAMINE or ETHANOLAMINE SOLUTION |
|----------------------------|--|
| UN N° | : 2491 |
| H.I. nr | : 80 |
| ADR - Class | : 8 |
| Labelling - Transport | : 8 : Corrosive substance. |
| ADR - Classification code | : C7 |
| ADR - Group | : III |
| ADR - Packing instructions | : P001 R001 LP001 |
| ADR - Limited Quantity | : 5 L |
| ADR - Tunnel code | : E : Passage forbidden through tunnels of category E. |

14.2. Sea transport (IMDG) [English only]

| Proper shipping name UN N° | : ETHANOLAMINE or ETHANOLAMINE SOLUTION : 2491 |
|----------------------------------|---|
| IMO-IMDG - Class or division | : 8 : Corrosive substance. |
| IMO-IMDG - Packing group | : 111 |
| IMO- IMDG - Packing instructions | : P001 LP01 |
| IMO-IMDG - Limited quantities | : 5 L |
| IMO-IMDG - Marine pollution | : No |
| EMS-Nr | : F-A S-B |

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

| Proper shipping name | : ETHANOLAMINE or ETHANOLAMINE SOLUTION |
|---|---|
| UN N° | : 2491 |
| IATA - Class or division | : 8 : Corrosive substance. |
| IATA - Packing group | : 111 |
| IATA - Passenger and Cargo Aircraft | : ALLOWED |
| - Passenger and Cargo - Packing instruction | : 852 |
| - Passenger and Cargo - Maximum Quantity/Packing | : 5 L |



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| IATA - Cargo only | : ALLOWED |
|---|-----------|
| - Cargo only - Packing instruction | : 856 |
| - Cargo only - Maximum Quantity/ Packing | : 60 L |
| IATA - Limited Quantites | : 1L |
| ERG-Nr | : 8L |

15. Regulatory information

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

| Safety, health and environmental regulations/legislation specific for th substance or mixture | : Ensure all national/local regulations are observed. e |
|---|--|
| REACH Restrictions - Annex XVII REACH Authorisation - Annex XIV | The components of this product are not subject to restrictions.The components of this product are not subject to authorization. |
| 15.2. Chemical Safety Assessment | |
| Chemical Safety Assessment | : It has not been carried out. |

16. Other information

| Revision | : Revision - See : * |
|--|---|
| Abbreviations and acronyms | : PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative |
| Sources of key data used | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 |
| List of relevant R phrases (heading 3) | : R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed. R34 : Causes burns. |
| List of full text of H-statements in section 3 | H302 : Harmful if swallowed. H312 : Harmful in contact with skin. H314 : Causes severe skin burns and eye damage. H318 : Causes serious eye damage. H332 : Harmful if inhaled. EUH071: Corrosive to respiratory tract. |
| Further information | : None. |
| | |



MATERIAL SAFETY DATA SHEET (MSDS)

ETHANOLAMINE (MONO) LR (FOR SYNTHESIS)

In accordance with REACH Regulation (CE) Nº 1907/2006 and with CLP Regulation (CE) Nº 1272/2008

DISCLAIMER:

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 the material by a properly trained person using this product.

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