# ETHYLENEDIAMINE DIHYDROCHLORIDE FOR SYNTHESIS MSDS

# CAS-No.: 333-18-6 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

| | | |
|---|---|---|
| Product form | : | Substance |
| | : | |
| CAS-No. | : | 333-18-6 |
| Product code | : | B-01161 |
| Formula | : | C2H8N2.2HCl |
| Chemical structure | : | $NH_2CH_2CH_2NH_2 \cdot 2HCl$ |
| Synonyms | : | 1,2-Diaminoethane Dihydrochloride |

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

**1.2.1. Relevant identified uses**

| | | |
|---|---|---|
| Industrial/Professional use spec | : | Industrial<br>For professional use only |

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Bio-Chem Chemicals
5455, Nicholson Road Science Market,
Ambala Cantt. 133001 Haryana (India)
+91-82952 41953
info@biofinechemical.com - www.biofinechemical.com

**1.4. Emergency telephone number**

| | | |
|---|---|---|
| Emergency number | : | +91 99921 51495 (10.00am - 06.30pm) (Office Hours) |

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

| | |
|---|---|
| Respiratory sensitisation, Category 1 | H334 |
| Acute toxicity (oral), Category 4 | H302 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Skin corrosion/irritation, Category 2 | H315 |
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 |
| Skin sensitisation, Category 1 | H317 |

Full text of H statements : see section 16

**Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]**

Xn; R22
R42
Xi; R36/37/38
R43

Full text of R-phrases: see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :

GHS08 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P261 - Avoid breathing fume, gas, spray, dust, vapours.
P280 - Wear protective gloves, protective clothing, face protection, eye protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER/doctor/...

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : ETHYLENEDIAMINE DIHYDROCHLORIDE For Synthesis

CAS-No. : 333-18-6

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

| | | |
|---|---|---|
| First-aid measures after inhalation | : | Allow the victim to rest. Assure fresh air breathing. |
| First-aid measures after skin contact | : | Wash with plenty of water/…. Wash contaminated clothing before reuse. |
| First-aid measures after eye contact | : | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion | : | Rinse mouth. Do not induce vomiting. |

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

| | | |
|---|---|---|
| Symptoms/effects after inhalation | : | May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. |
| Symptoms/effects after skin contact | : | Causes skin irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : | Causes serious eye irritation. |
| Symptoms/effects after ingestion | : | Harmful if swallowed. |

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

| | | |
|---|---|---|
| Suitable extinguishing media | : | Dry powder. Carbon dioxide. Water spray. Foam. |
| Unsuitable extinguishing media | : | Do not use a heavy water stream. |

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

| | | |
|---|---|---|
| Protection during firefighting | : | Do not enter fire area without proper protective equipment, including respiratory protection. |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

| | | |
|---|---|---|
| Emergency procedures | : | Evacuate unnecessary personnel. |

#### 6.1.2. For emergency responders

| | | |
|---|---|---|
| Protective equipment | : | Use personal protective equipment as required. |
| Emergency procedures | : | Ventilate area. |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

| | | |
|---|---|---|
| Methods for cleaning up | : | Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. |

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

| | | |
|---|---|---|
| Precautions for safe handling | : | Do not breathe vapours. Avoid contact with skin and eyes. Provide good ventilation in process area to prevent formation of vapour. |
| Hygiene measures | : | Do not eat, drink or smoke when using this product. |

### 7.2. Conditions for safe storage, including any incompatibilities

| | | |
|---|---|---|
| Storage conditions | : | Store in a well-ventilated place. Keep container tightly closed. Store in a dry place. |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

| | | |
|---|---|---|
| Hand protection | : | Protective gloves |
| Eye protection | : | Chemical goggles or safety glasses |
| Skin and body protection | : | Wear suitable protective clothing |
| Respiratory protection | : | [In case of inadequate ventilation] wear respiratory protection. |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Solid |
| Molecular mass | : | 133.02 g/mol |
| Colour | : | White crystalline. |
| Odour | : | No data available |
| Odour threshold | : | No data available |
| pH | : | No data available |
| Relative evaporation rate (butylacetate=1) | : | No data available |
| Melting point | : | > 300 °C |
| Freezing point | : | No data available |
| Boiling point | : | No data available |
| Flash point | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Vapour pressure | : | No data available |

| | | |
|---|---|---|
| Relative vapour density at 20 °C | : | No data available |
| Relative density | : | No data available |
| Solubility | : | Water: Insoluble in water |
| Log Pow | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosive properties | : | No data available |
| Oxidising properties | : | No data available |
| Explosive limits | : | No data available |

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No additional information available

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No additional information available

**10.4. Conditions to avoid**

Air contact. Direct sunlight. Moisture.

**10.5. Incompatible materials**

No additional information available

**10.6. Hazardous decomposition products**

No additional information available

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

| | | |
|---|---|---|
| Acute toxicity | : | Oral: Harmful if swallowed. |
| Skin corrosion/irritation | : | Causes skin irritation. |
| Serious eye damage/irritation | : | Causes serious eye irritation. |
| Respiratory or skin sensitisation | : | May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. |
| Germ cell mutagenicity | : | Not classified |
| Carcinogenicity | : | Not classified |
| Reproductive toxicity | : | Not classified |
| STOT-single exposure | : | May cause respiratory irritation. |

| | | |
|---|---|---|
| STOT-repeated exposure | : | Not classified |
| Aspiration hazard | : | Not classified |
| Potential adverse human health effects and symptoms | : | Harmful if swallowed. |

**SECTION 12: Ecological information**

**12.1. Toxicity**

No additional information available

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

No additional information available

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Other adverse effects**

No additional information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

| | | |
|---|---|---|
| Product/Packaging disposal recommendations | : | Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

**14.1. UN number**

| | | |
|---|---|---|
| UN-No. (ADR) | : | Not applicable |
| UN-No. (IMDG) | : | Not applicable |
| UN-No. (IATA) | : | Not applicable |
| UN-No. (ADN) | : | Not applicable |
| UN-No. (RID) | : | Not applicable |

**14.2. UN proper shipping name**

| | | |
|---|---|---|
| Proper Shipping Name (ADR) | : | Not applicable |
| Proper Shipping Name (IMDG) | : | Not applicable |
| Proper Shipping Name (IATA) | : | Not applicable |

| | | |
|---|---|---|
| Proper Shipping Name (ADN) | : | Not applicable |
| Proper Shipping Name (RID) | : | Not applicable |

**14.3. Transport hazard class(es)**

**ADR**

| | | |
|---|---|---|
| Transport hazard class(es) (ADR) | : | Not applicable |

**IMDG**

| | | |
|---|---|---|
| Transport hazard class(es) (IMDG) | : | Not applicable |

**IATA**

| | | |
|---|---|---|
| Transport hazard class(es) (IATA) | : | Not applicable |

**ADN**

| | | |
|---|---|---|
| Transport hazard class(es) (ADN) | : | Not applicable |

**RID**

| | | |
|---|---|---|
| Transport hazard class(es) (RID) | : | Not applicable |

**14.4. Packing group**

| | | |
|---|---|---|
| Packing group (ADR) | : | Not applicable |
| Packing group (IMDG) | : | Not applicable |
| Packing group (IATA) | : | Not applicable |
| Packing group (ADN) | : | Not applicable |
| Packing group (RID) | : | Not applicable |

**14.5. Environmental hazards**

| | | |
|---|---|---|
| Dangerous for the environment | : | No |
| Marine pollutant | : | No |
| Other information | : | No supplementary information available |

**14.6. Special precautions for user**

**- Overland transport**

No data available

**- Transport by sea**

No data available

**- Air transport**

No data available

**- Inland waterway transport**

No data available

**- Rail transport**

No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15: Regulatory information**

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

**15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

ETHYLENEDIAMINE DIHYDROCHLORIDE For Synthesis is not on the REACH Candidate List
ETHYLENEDIAMINE DIHYDROCHLORIDE For Synthesis is not on the REACH Annex XIV List

### 15.1.2. National regulations

**Germany**

| | |
|---|---|
| Reference to AwSV | : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 535) |
| 12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV | : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance) |

**Netherlands**

| | |
|---|---|
| SZW-lijst van kankerverwekkende stoffen | : The substance is not listed |
| SZW-lijst van mutagene stoffen | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid | : The substance is not listed |
| NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling | : The substance is not listed |

**Denmark**

| | |
|---|---|
| Recommendations Danish Regulation | : Young people below the age of 18 years are not allowed to use the product |

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-statements:

| | |
|---|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Resp. Sens. 1 | Respiratory sensitisation, Category 1 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

| | |
|---|---|
| H335 | May cause respiratory irritation. |
| R22 | Harmful if swallowed |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R42 | May cause sensitization by inhalation |
| R43 | May cause sensitisation by skin contact |
| Xi | Irritant |
| Xn | Harmful |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*