



**1-(2-Amino Ethyl) Piperazine  
CAS No 140-31-8**

**MATERIAL SAFETY DATA SHEET  
SDS/MSDS**

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

**1.1 Product identifiers**

Product name : **1-(2-Amino Ethyl) Piperazine**

CAS-No. : 140-31-8

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

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

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi-10002  
INDIA

Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314  
Skin sensitisation (Category 1), H317  
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H311

Toxic in contact with skin.

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face 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.
P310	Immediately call a POISON CENTER/doctor.
Supplemental Hazard Statements	none

### 2.3 Other hazards - none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Formula	:	C <sub>6</sub> H <sub>15</sub> N <sub>3</sub>
Molecular weight	:	129.21 g/mol
CAS-No.	:	140-31-8
EC-No.	:	205-411-0
Index-No.	:	612-105-00-4

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>2-Piperazin-1-ylethylamine</b>		
CAS-No.	140-31-8	<= 100 %
EC-No.	205-411-0	
Index-No.	612-105-00-4	
	Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Aquatic Chronic 3; H302, H311, H314, H317, H412	

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

Use water spray to cool unopened containers.

## **SECTION 6: Accidental release measures**

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

### **6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Combustible liquids, corrosive

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## Personal protective equipment

### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: clear, viscous, liquid Colour: colourless
b) Odour	ammoniacal
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -19 °C at 1013.0 hPa
f) Initial boiling point and boiling range	218 - 222 °C
g) Flash point	92 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 9.4 %(V) Lower explosion limit: 1.1 %(V)
k) Vapour pressure	5.15 Pa at 20 °C
l) Vapour density	5.18
m) Relative density	0.985 g/mL at 25 °C
n) Water solubility	100 g/l at 20 °C - soluble
o) Partition coefficient: n-octanol/water	log Pow: -1.48 at 20 °C
p) Auto-ignition temperature	> 300 °C at 1,013 hPa
q) Decomposition temperature	No data available
r) Viscosity	No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

## 9.2 Other safety information

Dissociation constant 9.63 at 20.2 °C

Relative vapour density 5.18

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male - 2,097 mg/kg(2-Piperazin-1-ylethylamine)

LD50 Dermal - Rabbit - male - 866 mg/kg(2-Piperazin-1-ylethylamine)

#### Skin corrosion/irritation

Skin - Rabbit(2-Piperazin-1-ylethylamine)

Result: Corrosive - 4 h

#### Serious eye damage/eye irritation

Eyes - Rabbit(2-Piperazin-1-ylethylamine)

Result: Risk of serious damage to eyes.

#### Respiratory or skin sensitisation

Maximisation Test - Guinea pig(2-Piperazin-1-ylethylamine)

Result: May cause sensitisation by skin contact.

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Hamster(2-Piperazin-1-ylethylamine)

ovary

Result: negative

(2-Piperazin-1-ylethylamine)

Mouse - male and female

Result: negative

#### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

No data available(2-Piperazin-1-ylethylamine)

### Specific target organ toxicity - single exposure

No data available(2-Piperazin-1-ylethylamine)

### Specific target organ toxicity - repeated exposure

No data available

### Aspiration hazard

No data available(2-Piperazin-1-ylethylamine)

### Additional Information

RTECS: TK8050000

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - ca. 2,190 mg/l - 96 h(2-Piperazin-1-ylethylamine)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 58 mg/l - 48 h(2-Piperazin-1-ylethylamine) (OECD Test Guideline 202)
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata (algae) - 495 mg/l - 72 h(2-Piperazin-1-ylethylamine) (OECD Test Guideline 201)
Toxicity to bacteria	Respiration inhibition EC50 - Bacteria - 511 mg/l - 2 h(2-Piperazin-1-ylethylamine)

### 12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d(2-Piperazin-1-ylethylamine) Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301F)
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### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available(2-Piperazin-1-ylethylamine)

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Harmful to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2815

IMDG: 2815

IATA: 2815

