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

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
Acute toxicity Corrosive to metals
Hazard statement(s)
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Avoid release to the environment.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

P305 + P351 + P338
Supplemental Hazard Statements
2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula: C₆H₁₅N₃
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
2-Piperazin-1-ylethylamine
CAS-No. 140-31-8 Acute Tox. 4; Acute Tox. 3; <= 100 %
EC-No. 205-411-0 Skin Corr. 1B; Skin Sens. 1;
Index-No. 612-105-00-4 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 (NOx)

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)

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
14.2 UN proper shipping name
ADR/RID: N-AMINOETHYLPIPERAZINE
IMDG: N-AMINOETHYLPIPERAZINE
IATA: N-Aminoethylpiperazine

14.3 Transport hazard class(es)
ADR/RID: 8
IMDG: 8
IATA: 8

14.4 Packaging group
ADR/RID: III
IMDG: III
IATA: III

14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

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.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.