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| 1-METHYL PIPERAZINE CAS NO 109-01-3 | MATERIAL SAFETY DATA SHEET SDS/MSDS |
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifiers**
 Product name : 1-Methyl Piperazine
 CAS-No. : 109-01-3
- 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 -110002
 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
 Flammable liquids (Category 3), H226
 Acute toxicity, Inhalation (Category 3), H331
 Acute toxicity, Dermal (Category 4), H312
 Skin corrosion (Category 1B), H314
 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)
 H226 : Flammable liquid and vapour.
 H312 : Harmful in contact with skin.
 H314 : Causes severe skin burns and eye damage.
 H331 : Toxic if inhaled.

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|--------------------------------|--|
| Precautionary statement(s) | |
| P261 | Avoid breathing vapours. |
| 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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

| | | |
|------------------|---|---|
| Formula | : | C ₅ H ₁₂ N ₂ |
| Molecular weight | : | 100.16 g/mol |
| CAS-No. | : | 109-01-3 |
| EC-No. | : | 203-639-5 |

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

| Component | | Classification | Concentration |
|---------------------------|-----------|--|---------------|
| 1-Methylpiperazine | | | |
| CAS-No. | 109-01-3 | Flam. Liq. 3; Acute Tox. 3; | <= 100 % |
| EC-No. | 203-639-5 | Acute Tox. 4; Skin Corr. 1B; H226, H331, H312, H314 | |

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.

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).

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.

hygroscopic Moisture sensitive.

Storage class (TRGS 510): Flammable liquids

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, Flame retardant antistatic protective clothing., 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|---|
| a) Appearance | Form: clear, liquid Colour: light yellow |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | 138 °C - lit. |
| g) Flash point | 39 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | 3.46 - (Air = 1.0) |
| m) Relative density | 0.903 g/cm ³ at 25 °C |
| n) Water solubility | No data available |

- | | |
|---|-------------------|
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | No data available |
| 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

Relative vapour density 3.46 - (Air = 1.0)

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

Acids, Acid chlorides, Acid anhydrides, Strong oxidizing agents, Carbon dioxide (CO₂)

10.6 Hazardous decomposition products

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

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 - 2,553 mg/kg(1-Methylpiperazine)

LC50 Inhalation - Mouse - 2 h - 2.7 mg/l(1-Methylpiperazine)

Remarks: Behavioral:Excitement. Lungs, Thorax, or Respiration:Dyspnea.

LD50 Dermal - Rabbit - 1,344 mg/kg(1-Methylpiperazine)

LD50 Intraperitoneal - Mouse - 150 mg/kg(1-Methylpiperazine)

Skin corrosion/irritation

Skin - Rabbit(1-

Methylpiperazine) Result:

Severe skin irritation

Serious eye damage/eye

irritation Eyes - Rabbit(1-

Methylpiperazine) Result: Severe

eye irritation

Respiratory or skin sensitisation

No data available(1-Methylpiperazine)

Germ cell mutagenicity

No data available(1-Methylpiperazine)

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(1-Methylpiperazine)

Specific target organ toxicity - single exposure

No data available(1-Methylpiperazine)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(1-Methylpiperazine)

Additional Information

RTECS: TM1225000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Aspiration or inhalation may cause chemical pneumonitis., spasm, inflammation and edema of the bronchi, Acute symptoms of overexposure include:, burning sensation, Cough, wheezing, laryngitis, Headache, Nausea, Vomiting(1-Methylpiperazine)

SECTION 12: Ecological information**12.1 Toxicity**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(1-Methylpiperazine)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

