

METHANOL
CAS NO 67-56-1

MATERIAL SAFETY DATA SHEET
SDS/MSDS

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

1.1 Product identifiers

Product name : Methanol

CAS-No. : 67-56-1

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
Ansari Road Daryaganj
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 2), H225
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Specific target organ toxicity - single exposure (Category 1), H370

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)

H225
H301 + H311 + H331
H370

Highly flammable liquid and vapour.
Toxic if swallowed, in contact with skin or if inhaled.
Causes damage to organs.

| | |
|------------------------------------|---|
| Precautionary statement(s) P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P280 | Wear protective gloves/ protective clothing. |
| P302 + P352 + P312 | IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell. |
| P304 + P340 + P311 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor. |
| P370 + P378 | In case of fire: Use dry powder or dry sand to extinguish. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| 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

| | | |
|------------------|---|-------------------|
| Synonyms | : | Methyl alcohol |
| Formula | : | CH ₄ O |
| Molecular weight | : | 32.04 g/mol |
| CAS-No. | : | 67-56-1 |
| EC-No. | : | 200-659-6 |
| Index-No. | : | 603-001-00-X |

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

| Component | | Classification | Concentration |
|-----------------|--------------|--|---------------|
| Methanol | | | |
| CAS-No. | 67-56-1 | Flam. Liq. 2; Acute Tox. 3; | <= 100 % |
| EC-No. | 200-659-6 | STOT SE 1; H225, H301, | |
| Index-No. | 603-001-00-X | H331, H311, H370 | |
| | | Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371; | |

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

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

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

Notes to physician

Dizziness Drowsiness metabolic acidosis Blurred vision Seizures. Coma Blindness death

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

Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

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 non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national 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

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. Keep in a cool, well-ventilated place.

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

Derived No Effect Level (DNEL)

| Application Area | Exposure routes | Health effect | Value |
|------------------|-----------------|----------------------------|--------------|
| Workers | Skin contact | Long-term systemic effects | 40mg/kg BW/d |

| | | | |
|-----------|--------------|----------------------------|-----------------------|
| Consumers | Skin contact | Long-term systemic effects | 8mg/kg BW/d |
| Consumers | Ingestion | Long-term systemic effects | 8mg/kg BW/d |
| Workers | Skin contact | Acute systemic effects | 40mg/kg BW/d |
| Consumers | Skin contact | Acute systemic effects | 8mg/kg BW/d |
| Consumers | Ingestion | Acute systemic effects | 8mg/kg BW/d |
| Workers | Inhalation | Acute systemic effects | 260 mg/m ³ |
| Workers | Inhalation | Acute local effects | 260 mg/m ³ |
| Workers | Inhalation | Long-term systemic effects | 260 mg/m ³ |
| Workers | Inhalation | Long-term local effects | 260 mg/m ³ |
| Consumers | Inhalation | Acute systemic effects | 50 mg/m ³ |
| Consumers | Inhalation | Acute local effects | 50 mg/m ³ |
| Consumers | Inhalation | Long-term systemic effects | 50 mg/m ³ |
| Consumers | Inhalation | Long-term local effects | 50 mg/m ³ |

Predicted No Effect Concentration (PNEC)

| Compartment | Value |
|-------------------------------|-------------|
| Soil | 23.5 mg/kg |
| Marine water | 15.4 mg/l |
| Fresh water | 154 mg/l |
| Fresh water sediment | 570.4 mg/kg |
| Onsite sewage treatment plant | 100 mg/kg |

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

Face shield and safety glasses 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 AXBEK (EN 14387) respirator cartridges as a backup to engine 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: liquid Colour: colourless |
| b) Odour | pungent |
| c) Odour Threshold | No data available |
| d) pH | No data available |

| | |
|---|--|
| e) Melting point/freezing point | Melting point/range: -98 °C |
| f) Initial boiling point and boiling range | 64.7 °C |
| g) Flash point | 9.7 °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: 36 %(V) Lower explosion limit: 6 %(V) |
| k) Vapour pressure | 97.7 mmHg at 20.0 °C 410.0 mmHg at 50.0 °C 169.27 hPa at 25.0 °C |
| l) Vapour density | 1.11 |
| m) Relative density | 0.791 g/mL at 25 °C |
| n) Water solubility | completely miscible |
| o) Partition coefficient: n-octanol/water | log Pow: -0.77 |
| p) Auto-ignition temperature | 455.0 °C at 1,013 hPa |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | Not explosive |
| t) Oxidizing properties | The substance or mixture is not classified as oxidizing. |

9.2 Other safety information

| | |
|-------------------------|-----------|
| Minimum ignition energy | 0.14 mJ |
| Conductivity | < 1 µS/cm |
| Relative vapour density | 1.11 |

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

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

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

LDLO Oral - Human - 143 mg/kg(Methanol)

Remarks: Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

LD50 Oral - Rat - 1,187 - 2,769 mg/kg(Methanol)

LC50 Inhalation - Rat - 4 h - 128.2 mg/l(Methanol)

LC50 Inhalation - Rat - 6 h - 87.6 mg/l(Methanol)

LD50 Dermal - Rabbit - 17,100 mg/kg(Methanol)

Skin corrosion/irritation

Skin - Rabbit(Methanol)

Result: No skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit(Methanol)

Result: No eye irritation

Respiratory or skin sensitisation

Maximisation Test - Guinea pig(Methanol)

Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test(Methanol)

S. typhimurium Result:

negative

in vitro assay(Methanol)

fibroblast

Result: negative

Mutation in mammalian somatic cells.

Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)(Methanol)

Mouse - male and female

Result: negative

Carcinogenicity

Carcinogenicity- Rat- Inhalation(Methanol)

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

Damage to fetus not classifiable(Methanol)

Fertility classification not possible from current data.(Methanol)

Specific target organ toxicity - single exposure

Causes damage to organs.(Methanol)

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification(Methanol)

Additional Information

RTECS: PC1400000

Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures., Methyl alcohol may be fatal or cause blindness if swallowed.(Methanol)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Methanol)

SECTION 12: Ecological information

12.1 Toxicity

| | |
|---|---|
| Toxicity to fish | mortality LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 15,400.0 mg/l - 96 h(Methanol) NOEC - <i>Oryzias latipes</i> - 7,900 mg/l - 200 h(Methanol) |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - <i>Daphnia magna</i> (Water flea) - > 10,000.00 mg/l - 48 h(Methanol) |
| Toxicity to algae | Growth inhibition EC50 - <i>Scenedesmus capricornutum</i> (fresh water algae) - 22,000.0 mg/l - 96 h(Methanol) |

12.2 Persistence and degradability

| | |
|---------------------------------|---|
| Biodegradability | aerobic - Exposure time 5 d(Methanol) Result: 72 % - rapidly biodegradable |
| Biochemical Oxygen Demand (BOD) | 600 - 1,120 mg/g(Methanol) |
| Chemical Oxygen Demand (COD) | 1,420 mg/g(Methanol) |
| Theoretical oxygen demand | 1,500 mg/g(Methanol) |

12.3 Bioaccumulative potential

| | |
|-----------------|---|
| Bioaccumulation | <i>Cyprinus carpio</i> (Carp) - 72 d at 20 °C - 5 mg/l(Methanol) Bioconcentration factor (BCF): 1.0 |
|-----------------|---|

12.4 Mobility in soil

Will not adsorb on soil.(Methanol)

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

| | |
|-----------------------------------|--|
| Additional ecological information | Avoid release to the environment. |
| Stability in water | at 19 °C 83 - 91 % - 72 h(Methanol) Remarks: Hydrolyses on contact with water.Hydrolyses readily. |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

| | | | |
|--|---------------------------|--|---------------|
| 14.1 UN number | | | |
| ADR/RID: 1230 | IMDG: 1230 | | IATA: 1230 |
| 14.2 UN proper shipping name | | | |
| ADR/RID: METHANOL | | | |
| IMDG: METHANOL | | | |
| IATA: Methanol | | | |
| 14.3 Transport hazard class(es) | | | |
| ADR/RID: 3 (6.1) | IMDG: 3 (6.1) | | IATA: 3 (6.1) |
| 14.4 Packaging group | | | |
| ADR/RID: II | IMDG: II | | IATA: II |
| 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

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

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

| | |
|-----------------------|---|
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H301 + H311 + H331 | Toxic if swallowed, in contact with skin or if inhaled. |
| H311 | Toxic in contact with skin. |
| H331 | Toxic if inhaled. |
| H370 | Causes damage to organs. |
| H371 | May cause damage to organs. |

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.