METHACRYLIC ACID  
CAS NO 79-41-4  

MATERIAL SAFETY DATA SHEET  
SDS/MSDS

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

1.1 Product identifiers
Product name: Methacrylic Acid
CAS-No.: 79-41-4

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 Varadaan 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
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Category 1A), H314
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

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 + H332 Harmful if swallowed or if inhaled
H311 Toxic in contact with skin.

Page 1 of 7
H314  Causes severe skin burns and eye damage.
H335  May cause respiratory irritation.

Precautionary statement(s)
P261  Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280  Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330  IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310  IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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. Stench. Rapidly absorbed through skin.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms  :  2-Methylpropenoic acid
           :  2-Methacrylic acid

Formula  :  C₄H₆O₂
Molecular weight  :  86.09 g/mol
CAS-No.  :  79-41-4
EC-No.  :  201-204-4
Index-No.  :  607-088-00-5

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylpropenoic acid</td>
<td>Acute Tox. 4; Acute Tox. 3;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>79-41-4</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>201-204-4</td>
<td>Skin Corr. 1A; STOT SE 3;</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-088-00-5</td>
<td>H302, H332, H312, H314, H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concentration limits:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;= 1 %: STOT SE 3, H335;</td>
</tr>
</tbody>
</table>

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

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): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

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 engineer 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, liquid
Colour: colourless

b) Odour
No data available

c) Odour Threshold
No data available

d) pH
2.0 - 2.2 at 100 g/l at 20 °C

e) Melting point/freezing point
Melting point/range: 12 - 16 °C - lit.

f) Initial boiling point and boiling range
163 °C - lit.

g) Flash point
77 °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: 8.7 % (V)
Lower explosion limit: 1.6 % (V)

k) Vapour pressure
1 mmHg at 20 °C

l) Vapour density
2.97 - (Air = 1.0)

m) Relative density
1.015 g/cm3 at 25 °C

n) Water solubility
No data available
o) Partition coefficient: n-octanol/water  log Pow: 0.93
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  2.97 - (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
Amines, Strong bases, Strong acids, Oxidizing agents, Peroxides

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
No data available
LD50 Oral - Rat - male - 1,320 mg/kg(2-Methylpropenoic acid) (OECD Test Guideline 401)
LC50 Inhalation - Rat - 4 h - 0.9 - 4.7 mg/l(2-Methylpropenoic acid) (OECD Test Guideline 403)
Dermal: No data available
LD50 Dermal - Rabbit - 500 - 1,000 mg/kg(2-Methylpropenoic acid)

Skin corrosion/irritation
Skin - Rabbit(2-Methylpropenoic acid) Result: Causes severe burns. - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(2-Methylpropenoic acid) Result: Severe eye irritation (Draize Test)

Respiratory or skin sensitisation
- Guinea pig(2-Methylpropenoic acid)
Result: Does not cause skin sensitisation. (OECD Test Guideline 406)
Germ cell mutagenicity
No data available (2-Methylpropenoic acid)
Ames test (2-Methylpropenoic acid)
S. typhimurium
Result: negative
OECD Test Guideline 478 (2-Methylpropenoic acid)
Mouse - male
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-Methylpropenoic acid)

Specific target organ toxicity - single exposure
May cause respiratory irritation (2-Methylpropenoic acid)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available (2-Methylpropenoic acid)

Additional Information
Repeated dose toxicity - Rat - male and female - Inhalation - No observed adverse effect level - 100 mg/kg (2-Methylpropenoic acid)
RTECS: OZ2975000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea (2-Methylpropenoic acid)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated (2-Methylpropenoic acid)

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 85 mg/l - 96 h (2-Methylpropenoic acid)

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - > 130 mg/l - 48 h (2-Methylpropenoic acid)

12.2 Persistence and degradability
Biodegradability
aerobic - Exposure time 28 d (2-Methylpropenoic acid)
Result: 86 % - Readily biodegradable
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available (2-Methylpropenoic acid)

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
Harmful to aquatic life.
No data available
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: 2531  IMDG: 2531  IATA: 2531

14.2 UN proper shipping name
ADR/RID: METHACRYLIC ACID, STABILIZED
IMDG: METHACRYLIC ACID, STABILIZED
IATA: Methacrylic acid, stabilized

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

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
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.
H302 + H332  Harmful if swallowed or if inhaled
H311  Toxic in contact with skin.
H312  Harmful in contact with skin.
H314  Causes severe skin burns and eye damage.
H332  Harmful if inhaled.
H335  May cause respiratory irritation.

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.