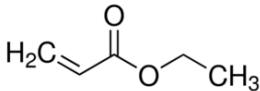


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

| | |
|--------------------|---|
| Product form | : Mixture |
| EC no | : 205-438-8 |
| CAS No | : 140-88-5 |
| Product code | : 0139D |
| Chemical structure | :  |
| Synonyms | : Acrylic acid ethyl ester |

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC

F; R11
Xn; R20/21/22
Xi; R36/37/38
R43

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard symbols :



F - Highly flammable
Xn - Harmful

R-phrases :

R11 - Highly flammable
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed
R36/37/38 - Irritating to eyes, respiratory system and skin
R43 - May cause sensitisation by skin contact

S-phrases :

S16 - Keep away from sources of ignition - No smoking
S33 - Take precautionary measures against static discharges
S36/37 - Wear suitable protective clothing and gloves
S9 - Keep container in a well-ventilated place

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Immediately call a POISON CENTER or doctor/physician. Specific measures (see ... on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see ... on this label). If skin irritation or rash occurs:
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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

- Symptoms/injuries after inhalation : May cause an allergic skin reaction. May cause respiratory irritation. Harmful if inhaled.

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| | |
|--------------------------------------|----------------------------------|
| Symptoms/injuries after skin contact | : Harmful in contact with skin. |
| Symptoms/injuries after eye contact | : Causes serious eye irritation. |
| Symptoms/injuries after ingestion | : Harmful if swallowed. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|---|
| Suitable extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|--|
| Fire hazard | : Flammable solid. |
| Explosion hazard | : May form flammable/explosive vapour-air mixture. |

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. |
|--------------------------------|--|

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|--|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking. |
|------------------|--|

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|--|
| Protective equipment | : Use personal protective equipment as required. |
| Emergency procedures | : Stop release. |

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| Methods for cleaning up | : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. |
|-------------------------|--|

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapours are flammable. |
| Precautions for safe handling | : No naked lights. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|--------------------|---|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment. |
| Storage conditions | : Heat sources. Direct sunlight. Keep in fireproof place. Keep container tightly closed. |

7.3. Specific end use(s)

No additional information available

ETHYL ACRYLATE FOR SYNTHESIS

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

| | |
|--------------------------|--------------------------------------|
| Hand protection | : protective gloves |
| Eye protection | : Chemical goggles or safety glasses |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection | : Wear respiratory protection |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : Liquid |
| Molecular mass | : 100.12 g/mol |
| Colour | : Colourless to Light yellow. |
| Odour | : penetrating lachrymator. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : -72 °C |
| Freezing point | : No data available |
| Boiling point | : 99.4 °C |
| Flash point | : -2 °C |
| Auto-ignition temperature | : 355 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable Flammable solid |
| Vapour pressure | : 41 hPa at 20 °C |
| Relative vapour density at 20 °C | : 3.45 |
| Relative density | : 0.918 at 25 °C |
| Density | : 0.923 g/cm ³ |
| Solubility | : Water: Partially soluble in cold water |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |

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| | |
|----------------------|-----------------------|
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.018 - 0.128 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Flammable solid. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful by inhalation, in contact with skin and if swallowed.

Irritation : Irritating to eyes, respiratory system and skin.

Corrosivity : Not classified

Sensitisation : May cause sensitisation by skin contact.

Repeated dose toxicity : Not classified

Carcinogenicity : Not classified

Mutagenicity : Not classified

Toxicity for reproduction : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1917
UN-No. (IMDG) : 1917
UN-No.(IATA) : 1917
UN-No.(ADN) : 1917
UN-No. (RID) : 1917

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ETHYL ACRYLATE, STABILIZED
Proper Shipping Name (IMDG) : ETHYL ACRYLATE, STABILIZED
Proper Shipping Name (IATA) : ETHYL ACRYLATE, STABILIZED
Proper Shipping Name (ADN) : ETHYL ACRYLATE, STABILIZED
Proper Shipping Name (RID) : ETHYL ACRYLATE, STABILIZED
Transport document description (ADR) : UN 1917 ETHYL ACRYLATE, STABILIZED, 3, II, (D/E)
Transport document description (IMDG) : UN 1917 ETHYL ACRYLATE, STABILIZED, 3, II (16°C c.c.)
Transport document description (IATA) : UN 1917 ETHYL ACRYLATE, STABILIZED, 3, II
Transport document description (ADN) : UN 1917 ETHYL ACRYLATE, STABILIZED, 3, II
Transport document description (RID) : UN 1917 ETHYL ACRYLATE, STABILIZED, 3, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3

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IMDG

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3

Danger labels (ADN) : 3



RID

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

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14.6. Special precautions for user

- Overland transport

| | |
|---|---------------------|
| Classification code (ADR) | : F1 |
| Limited quantities (ADR) | : 1L |
| Excepted quantities (ADR) | : E2 |
| Packing instructions (ADR) | : P001, IBC02, R001 |
| Mixed packing provisions (ADR) | : MP19 |
| Portable tank and bulk container instructions (ADR) | : T4 |
| Portable tank and bulk container special provisions (ADR) | : TP1 |
| Tank code (ADR) | : LGBF |
| Vehicle for tank carriage | : FL |
| Transport category (ADR) | : 2 |
| Special provisions for carriage - Operation (ADR) | : S2, S20 |
| Hazard identification number (Kemler No.) | : 339 |
| Orange plates | : |



| | |
|-------------------------------|--------|
| Tunnel restriction code (ADR) | : D/E |
| EAC code | : •3WE |

- Transport by sea

| | |
|---------------------------------|-------------|
| Limited quantities (IMDG) | : 1 L |
| Excepted quantities (IMDG) | : E2 |
| Packing instructions (IMDG) | : P001 |
| IBC packing instructions (IMDG) | : IBC02 |
| Tank instructions (IMDG) | : T4 |
| Tank special provisions (IMDG) | : TP1, TP13 |
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-D |
| Stowage category (IMDG) | : B |
| Stowage and handling (IMDG) | : SW2 |
| Flash point (IMDG) | : 16°C c.c. |
| MFAG-No | : 129P |

- Air transport

| | |
|--|--------|
| PCA Excepted quantities (IATA) | : E2 |
| PCA Limited quantities (IATA) | : Y341 |
| PCA limited quantity max net quantity (IATA) | : 1L |
| PCA packing instructions (IATA) | : 353 |
| PCA max net quantity (IATA) | : 5L |
| CAO packing instructions (IATA) | : 364 |
| CAO max net quantity (IATA) | : 60L |
| ERG code (IATA) | : 3i |

- Inland waterway transport

| | |
|---------------------------|-------|
| Classification code (ADN) | : F1 |
| Limited quantities (ADN) | : 1 L |
| Excepted quantities (ADN) | : E2 |
| Carriage permitted (ADN) | : T |

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Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 339

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

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15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

| | |
|-----------|--|
| R11 | Highly flammable |
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R43 | May cause sensitisation by skin contact |
| F | Highly flammable |
| Xi | Irritant |
| Xn | Harmful |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product