

CAS-No.: 109-86-4 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

| | |
|--------------------|---|
| Product form | : Substance |
| | : |
| EC Index-No. | : 603-011-00-4 |
| EC-No. | : 203-713-7 |
| CAS-No. | : 109-86-4 |
| Product code | : 00203 |
| Formula | : CH ₃ OCH ₂ CH ₂ OH |
| Chemical structure | : CH ₃ OCH ₂ CH ₂ OH |
| Synonyms | : Methyl glycol |

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

1.2.1. Relevant identified uses

| | |
|----------------------------------|---|
| Industrial/Professional use spec | : Industrial For professional use only |
| Use of the substance/mixture | : Laboratory chemicals |

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBACHEMIE 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 Regulation (EC) No. 1272/2008 [CLP]

| | |
|--|--------|
| Flammable liquids, Category 3 | H226 |
| Acute toxicity (oral), Category 4 | H302 |
| Acute toxicity (dermal), Category 4 | H312 |
| Acute toxicity (inhal.), Category 4 | H332 |
| Reproductive toxicity, Category 1A | H360FD |

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.2; R60

Repr.Cat.2; R61

Xn; R20/21/22

R10

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02



GHS07



GHS08

Signal word (CLP) : Danger

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H360FD - May damage fertility. May damage the unborn child.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P280 - Wear protective clothing, face protection, eye protection.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : 2-METHOXYETHANOL AR/ACS
CAS-No. : 109-86-4
EC-No. : 203-713-7
EC Index-No. : 603-011-00-4

Full text of R- and H-statements: see section 16

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation | : Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention. |
| First-aid measures after skin contact | : Immediately call a POISON CENTER/doctor. Wash with plenty of water/.... Wash contaminated clothing before reuse. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. |

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

| | |
|-------------------------------------|--|
| Symptoms/effects | : May damage the unborn child. May damage fertility. |
| Symptoms/effects after inhalation | : Harmful if inhaled. |
| Symptoms/effects after skin contact | : Harmful in contact with skin. |
| Symptoms/effects 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 | : Carbon dioxide. Dry powder. Foam. Water spray. |
| Unsuitable extinguishing media | : Do not use extinguishing media containing water. |

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |
|--------------------------------|---|

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 open flames. 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. |
|----------------------|--|

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| Methods for cleaning up | : On land, sweep or shovel into suitable containers. Collect spillage. |
|-------------------------|--|

6.4. Reference to other sections

No additional information available

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

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 | : Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |

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. |
| Storage conditions | : Keep container tightly closed. Keep in fireproof place. |
| Incompatible materials | : Heat sources. |

7.3. Specific end use(s)

No additional information available

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 | : [In case of inadequate ventilation] wear respiratory protection. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Molecular mass | : 76.1 g/mol |
| Colour | : Colourless. |
| Odour | : pleasant odor. |
| Odour threshold | : No data available |
| pH | : 5 - 7 at 25 °C |
| Relative evaporation rate (butylacetate=1) | : 1 |
| Melting point | : -85 °C |
| Freezing point | : No data available |
| Boiling point | : 124 - 125 |

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

| | |
|----------------------------------|---|
| Flash point | : 40 °C |
| Auto-ignition temperature | : 286 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable Flammable liquid and vapour. |
| Vapour pressure | : 10 hPa at 20 °C |
| Relative vapour density at 20 °C | : 2.63 |
| Relative density | : No data available |
| Density | : 0.96 g/cm ³ |
| Solubility | : Water: Miscible in water |
| Log Pow | : -0.8 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.025 - 0.245 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. 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 : Oral: Harmful if swallowed. Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled.

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

| | |
|---|---|
| Skin corrosion/irritation | : Not classified pH: 5 - 7 at 25 °C |
| Serious eye damage/irritation | : Not classified pH: 5 - 7 at 25 °C |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : May damage fertility. May damage the unborn child. |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : 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

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

2-METHOXYETHANOL AR/ACS (109-86-4)

| | |
|---------|------|
| Log Pow | -0.8 |
|---------|------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

2-METHOXYETHANOL AR/ACS (109-86-4)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

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) : 1188
UN-No. (IMDG) : 1188
UN-No. (IATA) : 1188
UN-No. (ADN) : 1188
UN-No. (RID) : 1188

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ETHYLENE GLYCOL MONOMETHYL ETHER
Proper Shipping Name (IMDG) : ETHYLENE GLYCOL MONOMETHYL ETHER
Proper Shipping Name (IATA) : Ethylene glycol monomethyl ether
Proper Shipping Name (ADN) : ETHYLENE GLYCOL MONOMETHYL ETHER
Proper Shipping Name (RID) : ETHYLENE GLYCOL MONOMETHYL ETHER
Transport document description (ADR) : UN 1188 ETHYLENE GLYCOL MONOMETHYL ETHER, 3, III, (D/E)
Transport document description (IMDG) : UN 1188 ETHYLENE GLYCOL MONOMETHYL ETHER, 3, III (38°C c.c.)
Transport document description (IATA) : UN 1188 Ethylene glycol monomethyl ether, 3, III
Transport document description (ADN) : UN 1188 ETHYLENE GLYCOL MONOMETHYL ETHER, 3, III
Transport document description (RID) : UN 1188 ETHYLENE GLYCOL MONOMETHYL ETHER, 3, III

14.3. Transport hazard class(es)

ADR

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



IMDG

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



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



ADN

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

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) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T2
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Operation (ADR) : S2
Hazard identification number (Kemler No.) : 30
Orange plates : 
Tunnel restriction code (ADR) : D/E

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

| | |
|---|---|
| EAC code | : •2Y |
| - Transport by sea | |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T2 |
| Tank special provisions (IMDG) | : TP1 |
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-D |
| Stowage category (IMDG) | : A |
| Flash point (IMDG) | : 38°C c.c. |
| Properties and observations (IMDG) | : Colourless liquid. Flashpoint: 38°C c.c. Explosive limits: 1.8% to 20% Miscible with water. |
| MFAG-No | : 127 |
| - Air transport | |
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y344 |
| PCA limited quantity max net quantity (IATA) | : 10L |
| PCA packing instructions (IATA) | : 355 |
| PCA max net quantity (IATA) | : 60L |
| CAO packing instructions (IATA) | : 366 |
| CAO max net quantity (IATA) | : 220L |
| ERG code (IATA) | : 3L |
| - Inland waterway transport | |
| Classification code (ADN) | : F1 |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Carriage permitted (ADN) | : T |
| Equipment required (ADN) | : PP, EX, A |
| Ventilation (ADN) | : VE01 |
| Number of blue cones/lights (ADN) | : 0 |
| - Rail transport | |
| Classification code (RID) | : F1 |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T2 |
| Portable tank and bulk container special provisions (RID) | : TP1 |
| Tank codes for RID tanks (RID) | : LGBF |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Colis express (express parcels) (RID) | : CE4 |
| Hazard identification number (RID) | : 30 |

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

Not applicable

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
2-Methoxyethanol is on the REACH Candidate List
2-METHOXYETHANOL AR/ACS is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV; ID No. 107)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : 2-METHOXYETHANOL AR/ACS is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : 2-METHOXYETHANOL AR/ACS is listed

Denmark

Class for fire hazard : Class II-1
Store unit : 5 liter
Classification remarks : R10 <H226;H302+H312+H332;H360FD>; 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
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

2-METHOXYETHANOL AR/ACS

Safety Data Sheet

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

| | |
|---------------------------|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Repr. 1A | Reproductive toxicity, Category 1A |
| H226 | Flammable liquid and vapour. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H332 | Harmful if inhaled. |
| H360FD | May damage fertility. May damage the unborn child. |
| R10 | Flammable |
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed |
| R60 | May impair fertility |
| R61 | May cause harm to the unborn child |
| 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