
1. PRODUCT AND COMPANY IDENTIFICATION

Product name : MEG_MONO_ETHYLENE_GLYCOL

Recommended use of the chemical and restrictions on use

Recommended use : Monomer
Raw material for industry

Restrictions on use : No data available

Manufacturer or supplier's details

Company : Lotte Chemical Corporation

Address : 51, Lotte Tower, Boramae-ro 5-gil,
Dongjak-Gu, Seoul, 156-711 Korea

Emergency telephone number : Head-Office 82-2-829-4192
Yeosu Plant 82-61-688-2021
Daesan Plant 82-41-689-5800
Ulsan Plant 82-52-278-3421

2. HAZARDS IDENTIFICATION

GHS Classification

Serious eye damage/eye irritation : Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure : Category 1 (Central nervous system, Kidney, Respiratory Tract, Heart)

Specific target organ toxicity - repeated exposure : Category 1 (Central nervous system, Respiratory Tract, Heart)

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs (Central nervous system, Kidney, Respiratory Tract, Heart).
H372 Causes damage to organs (Central nervous system, Respiratory Tract, Heart) through prolonged or repeated exposure.

Precautionary statements

General Information:

None

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash the contact area thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection/ face protection.

P281 Use personal protective equipment as required.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container (according to the description in the related regulation).

Other hazards which do not result in classification

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

| Chemical Name | Common Name | CAS-No. | Concentration (%) |
|-----------------|-----------------|----------|-------------------|
| ethane-1,2-diol | ethane-1,2-diol | 107-21-1 | >= 95 ~ <= 100 |

4. FIRST AID MEASURES

| | |
|-------------------------|--|
| General advice | : No hazards which require special first aid measures. |
| In case of eye contact | : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. |
| In case of skin contact | : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. |
| If inhaled | : Move to fresh air in case of accidental inhalation of |

dust or fumes from overheating or combustion.

If symptoms persist, call a physician.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : None known.

Protection of first-aiders : No data available

Notes to physician : No data available

5. FIREFIGHTING MEASURES

Suitable and unsuitable extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No data available

Specific hazards during firefighting : No data available

Hazardous combustion products : No data available

Specific extinguishing methods : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : No data available

Environmental precautions : No special environmental precautions required.

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

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Advice on safe handling : For personal protection see section 8.
No special handling advice required.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

Recommended storage temperature : No data available

Storage period : No data available

Packaging material : No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|-----------------|--------------------------|----------------------------------|--|---------|
| ethane-1,2-diol | ethane-1,2-diol (Vapour) | C (Vapour and mist) | 40 ppm 100 mg/m ³ | KR OEL |
| | | C (Aerosol only) | 100 mg/m ³ | ACGIH |
| | | C | 50 ppm 125 mg/m ³ | OSHA PO |

Engineering measures : No data available

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Safety glasses

Hand protection

Remarks : For prolonged or repeated contact use protective gloves.

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : viscous liquid

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| | |
|------------------------------|-------------------------|
| Melting point/freezing point | : -13 ° C |
| Boiling point/boiling range | : 198 ° C |
| Flash point | : 111 ° C |
| Upper/Lower explosion limit | |
| Upper explosion limit | : 15.3 %(V) |
| Lower explosion limit | : 3.2 %(V) |
| Vapour pressure | : 0.07 hPa |
| Solubility(ies) | |
| Water solubility | : completely miscible |
| Density | : 1.1 g/cm ³ |
| Auto-ignition temperature | : 398 ° C |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Chemical stability and possibility of hazardous reactions | : Stable under recommended storage conditions. No decomposition if stored and applied as directed. No hazards to be specially mentioned. |
| Conditions to avoid | : No data available |
| Incompatible materials | : No data available |
| Hazardous decomposition products | : No data available |

11. TOXICOLOGICAL INFORMATION

| | |
|--|---------------------|
| Information on likely routes of exposure | : No data available |
|--|---------------------|

Health hazard information

Acute toxicity

Components:

ethane-1,2-diol:

Acute oral toxicity : LD50 (Rat): 4,000 mg/kg

Acute dermal toxicity : LD50 (Rat): 10,600 mg/kg

Skin corrosion/irritation**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Serious eye damage/eye irritation**Product:**

Remarks: According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

STOT – single exposure

No data available

STOT – repeated exposure

No data available

Aspiration toxicity

No data available

Further information**Product:**

Remarks: No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****ethane-1,2-diol:**

Toxicity to fish : LC50 (Fish): 8,050 mg/l
Exposure time: 96 h

Toxicity to daphnia and : EC50 (Crustaceans): 41,100 mg/l
other aquatic inverte- Exposure time: 48 h
brates

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Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (aglae)): 6,500 mg/l
Exposure time: 96 h

Persistence and degradability

Components:

ethane-1,2-diol:

Biochemical Oxygen Demand : Biochemical oxygen demand
(BOD) 0.78 mg/l

Chemical Oxygen Demand : 1.19 mg/l
(COD)

BOD/COD : BOD/COD: 6.6 %

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological : There is no data available for this product.
information

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal precautions

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

International Regulation

UNRTDG

Not regulated as a dangerous good

IATA-DGR

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Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

UN number : Not applicable
Proper shipping name : Not applicable
Class : Not applicable
Subsidiary risk : Not applicable
Packing group : Not applicable
Labels : Not applicable
EmS Code : Not applicable
Marine pollutant : Not applicable

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

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

Special precautions for user

Not applicable

15. REGULATORY INFORMATION

National regulatory information

Industrial Safety and Health Act

Harmful Substances Prohibited from Manufacturing

Not relevant

Harmful Substances Required Permission for Manufacture

Not relevant

Controlled Hazardous Substances

| Chemical Name | CAS-No. | Threshold limits (%) |
|-----------------|----------|----------------------|
| Ethylene glycol | 107-21-1 | ≥ 1 Vol-% |

Controlled Substances Subject to Environment Monitoring

| Chemical Name | CAS-No. | Threshold limits (%) |
|-----------------|----------|----------------------|
| Ethylene glycol | 107-21-1 | ≥ 1 % |

Controlled Substances Subject to Health Examination

| Chemical Name | CAS-No. | Threshold limits (%) |
|-----------------|----------|----------------------|
| Ethylene glycol | 107-21-1 | ≥ 1 % |

Toxic Chemicals Control Act

Toxic Chemicals

Not relevant

Observational chemicals

Not relevant

Restricted Chemicals

Not relevant

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Prohibited Chemicals

Not relevant

Toxic Release Inventory

Not relevant

Accident Precaution Chemicals

Not relevant

Dangerous Substances Safety Management Act

Classification : Group 4, Flammable liquids, Type 3 petroleums, Water soluble liquid

Hazard rank : Hazardous rank III

Designated Quantity : 4000 litre

Safety Warning : Keep away from fire

Wastes Control Act

Industrial waste

Follow article 13 of the act to dispose the product waste

Other requirements in domestic and other countries

No data available

16. OTHER INFORMATION

Sources of key data used : No data available to compile the Safety Data Sheet

Revision number and date

Number of Revision : 1.1

Revision Date : 2015/03/03

Other information : No data available

Date format : yyyy/mm/dd

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