

DEG

Version 1.2

Revision Date: 2016/01/18

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DEG

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 - repeated exposure : Category 2

Chronic aquatic toxicity : Category 4

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H319 Causes serious eye irritation.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H413 May cause long lasting harmful effects to aquatic life.

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.

P273 Avoid release to the environment.

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.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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 (%)
2,2'-oxydiethanol	2,2'-oxydiethanol	111-46-6	>= 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.

DEG

Version 1.2

Revision Date: 2016/01/18

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

Advice on safe handling : For personal protection see section 8.

DEG

Version 1.2

Revision Date: 2016/01/18

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**

No data available

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	: liquid
Melting point/freezing point	: -11 ° C
Boiling point/boiling range	: 244 ° C
Flash point	: 124 ° C
Upper/Lower explosion limit	
Vapour pressure	: 7.6 hPa

DEG

Version 1.2

Revision Date: 2016/01/18

Solubility(ies)
Water solubility : soluble

Density : 1.1197 g/cm3

Auto-ignition temperature : 229 ° 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:**2,2'-oxydiethanol:**

Acute oral toxicity : LD50 (Rabbit): 12,565 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 11,890 mg/kg

Skin corrosion/irritationProduct:

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

Components:**2,2'-oxydiethanol:**

Species: Rabbit

Result: Mild skin irritation

Serious eye damage/eye irritationProduct:

Remarks: According to the classification criteria of the European Union, the product

DEG

Version 1.2

Revision Date: 2016/01/18

is not considered as being an eye irritant.

Components:**2,2'-oxydiethanol:**

Species: Rabbit

Result: Mild eye irritation

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity**Components:****2,2'-oxydiethanol:**

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments.

STOT - single exposure

No data available

STOT - repeated exposure**Components:****2,2'-oxydiethanol:**

Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Aspiration toxicity

No data available

Further information**Product:**

Remarks: No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****2,2'-oxydiethanol:**

Toxicity to fish : LC50 (Fish): 32,000 mg/l

Exposure time: 96 h

Persistence and degradability

Components:

2,2'-oxydiethanol:

Biodegradability : Biodegradation: 31 %

Bioaccumulative potential

Components:

2,2'-oxydiethanol:

Bioaccumulation : Bioconcentration factor (BCF): 1,003

Mobility in soil

No data available

Other adverse effects

No data available

Product:

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

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

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

UN number : Not applicable

DEG

Version 1.2

Revision Date: 2016/01/18

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

Remarks	: Not classified as dangerous in the meaning of transport regulations.
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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

Not relevant

Controlled Substances Subject to Environment Monitoring

Not relevant

Controlled Substances Subject to Health Examination

Not relevant

Chemicals Control Act**Toxic Chemicals**

Not relevant

Observational chemicals

Not relevant

Restricted Chemicals

Not relevant

Prohibited Chemicals

Not relevant

Toxic Release Inventory

Not relevant

Accident Precaution Chemicals

Not relevant

DEG

Version 1.2

Revision Date: 2016/01/18

Dangerous Substances Safety Management Act

Classification : Group 4, Flammable liquids, Type 3 petroleum, 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 : 1.2

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Other information : No data available

Date format : yyyy/mm/dd

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.