

## 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 KoreaEmergency 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.

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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

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**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.

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**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.

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**7. HANDLING AND STORAGE**

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

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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

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**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.

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**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

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Solubility(ies)  
Water solubility : soluble

Density : 1.1197 g/cm<sup>3</sup>

Auto-ignition temperature : 229 ° C

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**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

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**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/irritation****Product:**

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 irritation****Product:**

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

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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

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**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.

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### 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.

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### 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

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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

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**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 : 1.2

Revision Date : 2016/01/18

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.