

# SAFETY DATA SHEET

Mexican official standard NOM-018-STPS-2015

## Diethylene Glycol

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Print Date: 02/19/2025          |
| 2.3     | 02/12/2025     | 800001033914 | Date of last issue: 30.07.2024  |
|         |                |              | Date of first issue: 13.07.2009 |

### SECTION 1. IDENTIFICATION OF THE HAZARDOUS PRODUCT OR MIXTURE AND THE SUPPLIER OR MANUFACTURER

Product name : Diethylene Glycol

Product code : U1237, U1239

Synonyms : 2,2' Dihydroxy diethyl ether, bis (2-hydroxyethyl) ether, DEG, Diglycol, Digol, Ethylene diglycol

CAS-No. : 111-46-6

#### Manufacturer or supplier's details

Company : **Shell Chemical LP**  
PO Box 576  
HOUSTON TX 77001  
USA

SDS Request : +52 (55) 3223 9057

Customer Service : +52 (55) 5089 5792, +52 (55) 5089 5790

#### Emergency telephone number

Chemtrec Domestic (24 hr) : SETIQ ANIQ 800 002 1400 (Rep. Mexicana), +52 (55) 5559 1588 (local e internacional)

Chemtrec International (24 hr) : CHEMTREC +1 (703) 527-3887 (Internacional)

#### Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate.

Restrictions on use : This product must not be used in applications other than the above without first seeking the advice of the supplier., Do not use in the manufacture or preparation of foods or pharmaceuticals., Keep out of reach of children and pets., Do not use in theatrical fogs or other artificial smoke generator applications., Do not use in aircraft deicing applications.  
This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier.

### SECTION 2. HAZARDS IDENTIFICATION

Acute toxicity (Oral) : Category 4

#### GHS label elements

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Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

**PHYSICAL HAZARDS:**  
Not classified as a physical hazard under GHS criteria.  
**HEALTH HAZARDS:**  
H302 Harmful if swallowed.  
**ENVIRONMENTAL HAZARDS:**  
Not classified as an environmental hazard under GHS criteria.

Precautionary statements

:

**Prevention:**

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response:**

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.  
P330 Rinse mouth.

**Storage:**

No precautionary phrases.

**Disposal:**

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

**Other hazards which do not result in classification**

Slightly irritating to the skin.  
Slightly irritating to respiratory system.  
Slightly irritating to the eye.  
Vapours may be irritating to the eye.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

:

Substance

**Hazardous components**

| Chemical name     | Synonyms          | CAS-No.  | Concentration (% w/w) |
|-------------------|-------------------|----------|-----------------------|
| Diethylene glycol | 2,2'-oxydiethanol | 111-46-6 | 95 - 100              |

**Further information**

Contains:

| Chemical name | Identification number | Concentration (% w/w) |
|---------------|-----------------------|-----------------------|
| Ethenediol    | 107-21-1              | <=0.15                |

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### SECTION 4. FIRST AID MEASURES

|  |  |
|--|--|
| General advice   | : Not expected to be a health hazard when used under normal conditions.  |
| If inhaled   | : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.   |
| In case of skin contact  | : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.<br>If persistent irritation occurs, obtain medical attention.  |
| In case of eye contact   | : Flush eye with copious quantities of water.<br>Remove contact lenses, if present and easy to do. Continue rinsing.<br>If persistent irritation occurs, obtain medical attention.   |
| If swallowed   | : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Rinse mouth.   |
| Most important symptoms and effects, both acute and delayed                | : Not considered to be an inhalation hazard under normal conditions of use.<br>Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.<br>No specific hazards under normal use conditions.<br>Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.<br>Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.<br>Ingestion may result in nausea, vomiting and/or diarrhoea.<br>High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.<br>Kidney toxicity may be recognized by blood in the urine or increased or decreased urine flow. Other signs and symptoms can include nausea, vomiting, abdominal cramps, diarrhoea, lumbar pain shortly after ingestion, and possibly narcosis and death. |
| Protection of first-aiders   | : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.  |
| Indication of any immediate medical attention and special treatment needed | : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT!<br>Call a doctor or poison control center for guidance.<br>Treat symptomatically.<br>May cause significant renal, respiratory, and CNS toxicity.<br>May cause significant acidosis.  |

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### SECTION 5. FIREFIGHTING MEASURES

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- |   |  |
|---|--|
| Suitable extinguishing media                  | : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.   |
| Unsuitable extinguishing media                | : Do not use water in a jet.   |
| Specific hazards during fire-fighting         | : Material will not burn unless preheated.<br>Carbon monoxide may be evolved if incomplete combustion occurs.<br>Containers exposed to intense heat from fires should be cooled with large quantities of water.  |
| Specific extinguishing methods                | : Standard procedure for chemical fires.   |
| Further information                           | : Evacuate the area of all non-essential personnel.<br>Keep adjacent containers cool by spraying with water.   |
| Special protective equipment for firefighters | : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469). |
- 

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- |   |  |
|---|--|
| Personal precautions, protective equipment and emergency procedures | : Observe all relevant local and international regulations.<br>Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.<br>Local authorities should be advised if significant spillages cannot be contained.<br>Avoid contact with skin, eyes and clothing.   |
| Environmental precautions   | : Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.<br>Use appropriate containment to avoid environmental contamination.<br>Ventilate contaminated area thoroughly.   |
| Methods and materials for containment and cleaning up               | : Contain run-off from residue flush and dispose of properly.<br>Soak up residue with an absorbent such as clay, sand or other suitable material.<br><br>For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.<br>For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain |

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as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely

Additional advice : For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.  
For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

### SECTION 7. HANDLING AND STORAGE

Technical measures : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.  
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.  
Ensure that all local regulations regarding handling and storage facilities are followed.

Precautions that must be taken to ensure safe handling : Use local exhaust extraction over processing area.  
Handle and open container with care in a well-ventilated area.  
Do not empty into drains.  
When handling product in drums, safety footwear should be worn and proper handling equipment should be used.  
Handling Temperature:  
Ambient.

Avoidance of contact : Strong oxidising agents.  
Strong acids.  
Strong bases.

Product Transfer : Keep containers closed when not in use. Do not pressurize drum containers to empty.

Hygiene measures : Wash hands before eating, drinking, smoking and using the toilet.  
Launder contaminated clothing before re-use.

Conditions for safe storage, including any incompatibility : Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Further information on storage stability : Tanks must be clean, dry and rust-free.  
Keep container tightly closed.  
Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat.  
Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions.  
Drums should be stacked to a maximum of 3 high.

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Storage Temperature:  
Ambient.

Packaging material : Suitable material: Stainless steel., Mild steel., Carbon steel  
Unsuitable material: Data not available

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Specific use(s) : Not applicable

Ensure that all local regulations regarding handling and storage facilities are followed.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

| Components | CAS-No.  | Value type<br>(Form of exposure)        | Control parameters / Permissible concentration | Basis             |
|------------|----------|---|--|-------------------|
| Ethenediol | 107-21-1 | VLE-P (Only aerosol)                    | 100 mg/m3                                      | NOM-010-STPS-2014 |
| Ethenediol |          | TWA (Vapour)                            | 25 ppm   | ACGIH             |
| Ethenediol |          | STEL (Vapour)                           | 50 ppm   | ACGIH             |
| Ethenediol |          | STEL (Inhalable fraction, Aerosol only) | 10 mg/m3                                       | ACGIH             |

#### Biological occupational exposure limits

No biological limit allocated.

#### Monitoring Methods

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods <http://www.cdc.gov/niosh/>

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods <http://www.osha.gov/>

Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances <http://www.hse.gov.uk/>

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany <http://www.dguv.de/inhalt/index.jsp>

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L'Institut National de Recherche et de Sécurité, (INRS), France <http://www.inrs.fr/accueil>

**Engineering measures** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:  
Adequate ventilation to control airborne concentrations.  
Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.  
Eye washes and showers for emergency use.

### General Information

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.  
Define procedures for safe handling and maintenance of controls.  
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.  
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.  
Drain down system prior to equipment break-in or maintenance.  
Retain drain downs in sealed storage pending disposal or subsequent recycle.

### Personal protective equipment

**Respiratory protection** : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for the combination of organic gases and vapours and particles [Type A/Type P boiling point >65°C (149°F)].

**Hand protection**  
**Remarks**

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile

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rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

- Eye protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
- Skin and body protection : Skin protection is not ordinarily required beyond standard work clothes.  
It is good practice to wear chemical resistant gloves.
- Protective measures : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Thermal hazards : Not applicable

### Environmental exposure controls

- General advice : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.  
Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.  
Information on accidental release measures are to be found in section 6.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Slightly viscous liquid.
- Colour : colourless
- Odour : mild
- Odour Threshold : Data not available



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|  |   |   |
|--|---|---|
| pH   | : | Not applicable                          |
| Melting point/freezing point   | : | -10 °C / 14 °F                          |
| Boiling point/boiling range  | : | 244 - 250 °C / 471 - 482 °F             |
| Flash point  | : | 149 °C / 300 °F                         |
|  |   | Method: Pensky-Martens closed cup       |
| Evaporation rate   | : | < 0.01                                  |
|  |   | Method: ASTM D 3539, nBuAc=1            |
| Flammability   |   |   |
| Flammability (solid, gas)  | : | Not applicable                          |
| Lower explosion limit and upper explosion limit / flammability limit |   |   |
| Upper explosion limit / Upper flammability limit                     | : | 10.8 %(V)                               |
| Lower explosion limit / Lower flammability limit                     | : | 1.6 %(V)                                |
| Vapour pressure  | : | < 1.3 Pa (20 °C / 68 °F)                |
| Relative vapour density  | : | 3.7                                     |
| Relative density   | : | 1.12                                    |
|  |   | Method: ASTM D4052                      |
| Density  | : | 1,116 g/cm <sup>3</sup> (20 °C / 68 °F) |
|  |   | Method: ASTM D4052                      |
| Solubility(ies)  |   |   |
| Water solubility   | : | completely soluble                      |
| Partition coefficient: n-octanol/water                               | : | log Pow: -1.98                          |
| Auto-ignition temperature  | : | 365 °C / 689 °F                         |
| Decomposition temperature  | : | Data not available                      |
| Viscosity  |   |   |
| Viscosity, dynamic   | : | Data not available                      |
| Viscosity, kinematic   | : | 33 mm <sup>2</sup> /s (20 °C / 68 °F)   |
|  |   | Method: ASTM D445                       |
| Explosive properties   | : | Not applicable                          |

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|                      |   |  |
|----------------------|---|--|
| Oxidizing properties | : | Data not available   |
| Surface tension      | : | Data not available   |
| Conductivity         | : | Electrical conductivity: > 10,000 pS/m   |
|                      |   | A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid, This material is not expected to be a static accumulator. |
| Molecular weight     | : | 106.12 g/mol   |
| Particle size        | : | Data not available   |

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### SECTION 10. STABILITY AND REACTIVITY

|                                    |   |  |
|------------------------------------|---|--|
| Reactivity                         | : | The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.   |
| Chemical stability                 | : | No hazardous reaction is expected when handled and stored according to provisions<br>Oxidises on contact with air.   |
| Possibility of hazardous reactions | : | None known.  |
| Conditions to avoid                | : | Extremes of temperature and direct sunlight.<br><br>Product cannot ignite due to static electricity.   |
| Incompatible materials             | : | Strong oxidising agents.<br>Strong acids.<br>Strong bases.   |
| Hazardous decomposition products   | : | Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. |

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### SECTION 11. TOXICOLOGICAL INFORMATION

|                      |   |  |
|----------------------|---|--|
| Basis for assessment | : | Information given is based on product testing.<br>Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s). |
|----------------------|---|--|

#### Information on likely routes of exposure

Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

#### Acute toxicity

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### Components:

#### **Diethylene glycol:**

- Acute oral toxicity : LD 50 (Rat, male and female): > 5,000 mg/kg  
Method: Literature data  
Remarks: Harmful if swallowed.  
There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 milliliters (1/2 cup). This material has also been shown to be toxic and potentially lethal by ingestion to cats and dogs.
- Acute inhalation toxicity : LC 50 (Rat): Exposure time: 4 h  
Test atmosphere: Aerosol  
Method: Literature data  
Remarks: LC50 greater than near-saturated vapour concentration.  
Based on available data, the classification criteria are not met.
- Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg  
Method: Literature data  
Remarks: Based on available data, the classification criteria are not met.

### **Skin corrosion/irritation**

#### Components:

#### **Diethylene glycol:**

Species: Rabbit  
Method: Literature data  
Remarks: Based on available data, the classification criteria are not met.

### **Serious eye damage/eye irritation**

#### Components:

#### **Diethylene glycol:**

Species: Rabbit  
Method: Literature data  
Remarks: Based on available data, the classification criteria are not met.

### **Respiratory or skin sensitisation**

#### Components:

#### **Diethylene glycol:**

Species: Guinea pig  
Method: Regulation (EC) No. 440/2008, Annex, B.6  
Remarks: Based on available data, the classification criteria are not met.

Method: Tested according to Annex V of Directive 67/548/EEC.

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### Germ cell mutagenicity

#### Components:

##### **Diethylene glycol:**

Genotoxicity in vitro

- : Method: OECD Test Guideline 471  
Remarks: Based on available data, the classification criteria are not met.
- : Method: OECD Test Guideline 473  
Remarks: Based on available data, the classification criteria are not met.
- : Method: OECD Test Guideline 476  
Remarks: Based on available data, the classification criteria are not met.
- : Method: OECD Test Guideline 479  
Remarks: Based on available data, the classification criteria are not met.

Genotoxicity in vivo

- : Test species: Mouse  
Method: OECD Test Guideline 474  
Remarks: Based on available data, the classification criteria are not met.

Germ cell mutagenicity- Assessment

- : This product does not meet the criteria for classification in categories 1A/1B.

### Carcinogenicity

#### Components:

##### **Diethylene glycol:**

Species: Rat, (male and female)

Application Route: Oral

Method: Literature data

Remarks: Based on available data, the classification criteria are not met., Tumours produced in animals are not considered relevant to humans.

Carcinogenicity - Assessment

- : This product does not meet the criteria for classification in categories 1A/1B.

#### **IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

#### **NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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### Reproductive toxicity

#### Components:

##### **Diethylene glycol:**

Effects on fertility

:

Species: Mouse  
Sex: male and female  
Application Route: Oral

Method: Acceptable non-standard method.

Remarks: Based on available data, the classification criteria are not met.

Effects on foetal development

:

Species: Rabbit, female  
Application Route: Oral  
Method: OECD Test Guideline 414

Remarks: Based on available data, the classification criteria are not met.

Reproductive toxicity - Assessment

:

This product does not meet the criteria for classification in categories 1A/1B.

### STOT - single exposure

#### Components:

##### **Diethylene glycol:**

Remarks: Based on available data, the classification criteria are not met., Inhalation of vapours or mists may cause irritation to the respiratory system., Ingestion may cause drowsiness and dizziness.

### STOT - repeated exposure

#### Components:

##### **Diethylene glycol:**

Remarks: Based on available data, the classification criteria are not met.

### Repeated dose toxicity

#### Components:

##### **Diethylene glycol:**

Species: Rat, male and female  
Application Route: Oral  
Method: Acceptable non-standard method.  
Target Organs: No specific target organs noted

No observed adverse effect level: 300 mg/kg  
Exposure time: 98 Days

Lowest observed adverse effect level: 1500 mg/kg  
Exposure time: 98 Days

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Species: Dog, male  
Application Route: Dermal  
Method: OECD Test Guideline 410  
Target Organs: No specific target organs noted

No observed adverse effect level: 4440 mg/kg

Lowest observed adverse effect level: 8880 mg/kg

### Aspiration toxicity

#### Components:

##### **Diethylene glycol:**

Based on available data, the classification criteria are not met.

### Further information

#### Components:

##### **Diethylene glycol:**

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

## SECTION 12. ECOTOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on product testing.  
Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

### Ecotoxicity

#### Components:

##### **Diethylene glycol:**

Toxicity to fish (Acute toxicity) : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Method: Literature data.  
Remarks: Practically non toxic:

Method: Other guideline method.  
Remarks: LL/EL/IL50 > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Acute toxicity) : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Method: Other guideline method.  
Remarks: Practically non toxic:  
LL/EL/IL50 > 100 mg/l

Toxicity to algae (Acute toxicity) : EC50 (Scenedesmus quadricauda (Green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: Information given is based on data obtained from similar substances.

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Remarks: Practically non toxic:  
LL/EL/IL50 > 100 mg/l

- Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): > 40 mg/l  
Exposure time: 28 d  
Method: Information given is based on data obtained from similar substances.  
Remarks: NOEC/NOEL > 100 mg/l
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (Water flea)): > 100 mg/l  
Method: Information given is based on data obtained from similar substances.  
Remarks: NOEC/NOEL > 100 mg/l
- Toxicity to microorganisms (Acute toxicity) : EC20 (Activated sludge, domestic waste): > 1,000 mg/l  
Exposure time: 3 h  
Method: Test(s) equivalent or similar to OECD Guideline 209  
Remarks: Practically non toxic:  
LL/EL/IL50 > 100 mg/l

### Persistence and degradability

#### Components:

##### Diethylene glycol:

- Biodegradability : Biodegradation: 70 - 80 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
Remarks: Inherently biodegradable.

### Bioaccumulative potential

#### Components:

##### Diethylene glycol:

- Bioaccumulation : Remarks: Does not bioaccumulate significantly.

### Mobility in soil

#### Components:

##### Diethylene glycol:

- Mobility : Remarks: If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater.  
Dissolves in water.

### Other adverse effects

#### Components:

##### Diethylene glycol:

- Results of PBT and vPvB assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not consid-

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ered to be PBT or vPvB.

Additional ecological information : Data not available

### SECTION 13. INFORMATION ON PRODUCT DISPOSAL

#### Disposal methods

- Waste from residues : Recover or recycle if possible.  
It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.  
Remove all packaging for recovery or waste disposal.  
Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment.  
Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.  
Do not dispose into the environment, in drains or in water courses.  
Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- Disposal should be in accordance with applicable regional, national, and local laws and regulations.  
Local regulations may be more stringent than regional or national requirements and must be complied with.
- MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.
- Contaminated packaging : Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

### SECTION 14. TRANSPORT INFORMATION

#### National Regulations

No data available

#### International Regulations

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Maritime transport in bulk according to IMO instruments



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|                    |                     |
|--------------------|---------------------|
| Pollution category | : Z                 |
| Ship type          | : 3                 |
| Product name       | : Diethylene glycol |

### Special precautions for user

|         |  |
|---------|--|
| Remarks | : Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport. |
|---------|--|

|                        |  |
|------------------------|--|
| Additional Information | : This product may be transported under nitrogen blanketing. Nitrogen is an odourless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.<br>Transport in bulk according to Annex II of Marpol and the IBC Code |
|------------------------|--|

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## SECTION 15. REGULATORY INFORMATION

### Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

### The components of this product are reported in the following inventories:

|       |          |
|-------|----------|
| DSL   | : Listed |
| IECSC | : Listed |
| ENCS  | : Listed |
| KECI  | : Listed |
| NZIoC | : Listed |
| PICCS | : Listed |
| TSCA  | : Listed |
| TCSI  | : Listed |

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## SECTION 16. OTHER INFORMATION

### Further information

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|         |                |              |                                 |
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NFPA Rating (Health, Fire, Reactivity) 1, 1, 0

### Full text of other abbreviations

|                            |   |   |
|----------------------------|---|---|
| ACGIH                      | : | USA. ACGIH Threshold Limit Values (TLV)   |
| NOM-010-STPS-2014          | : | Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits |
| ACGIH / TWA                | : | 8-hour, time-weighted average   |
| ACGIH / STEL               | : | Short-term exposure limit   |
| NOM-010-STPS-2014 / VLE-P  | : | Ceiling value   |
| Abbreviations and Acronyms | : | The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.        |

ACGIH = American Conference of Governmental Industrial Hygienists  
ADR = European Agreement concerning the International Carriage of Dangerous Goods by Road  
AICS = Australian Inventory of Chemical Substances  
ASTM = American Society for Testing and Materials  
BEL = Biological exposure limits  
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes  
CAS = Chemical Abstracts Service  
CEFIC = European Chemical Industry Council  
CLP = Classification Packaging and Labelling  
COC = Cleveland Open-Cup  
DIN = Deutsches Institut für Normung  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
DSL = Canada Domestic Substance List  
EC = European Commission  
EC50 = Effective Concentration fifty  
ECETOC = European Center on Ecotoxicology and Toxicology Of Chemicals  
ECHA = European Chemicals Agency  
EINECS = The European Inventory of Existing Commercial Chemical Substances  
EL50 = Effective Loading fifty  
ENCS = Japanese Existing and New Chemical Substances Inventory  
EWC = European Waste Code  
GHS = Globally Harmonised System of Classification and Labelling of Chemicals  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IC50 = Inhibitory Concentration fifty  
IL50 = Inhibitory Level fifty  
IMDG = International Maritime Dangerous Goods  
INV = Chinese Chemicals Inventory  
IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables  
KECI = Korea Existing Chemicals Inventory

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LC50 = Lethal Concentration fifty  
LD50 = Lethal Dose fifty per cent.  
LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading  
LL50 = Lethal Loading fifty  
MARPOL = International Convention for the Prevention of  
Pollution From Ships  
NOEC/NOEL = No Observed Effect Concentration / No Ob-  
served Effect Level  
OE\_HPV = Occupational Exposure - High Production Volume  
PBT = Persistent, Bioaccumulative and Toxic  
PICCS = Philippine Inventory of Chemicals and Chemical  
Substances  
PNEC = Predicted No Effect Concentration  
REACH = Registration Evaluation And Authorisation Of  
Chemicals  
RID = Regulations Relating to International Carriage of Dan-  
gerous Goods by Rail  
SKIN\_DES = Skin Designation  
STEL = Short term exposure limit  
TRA = Targeted Risk Assessment  
TSCA = US Toxic Substances Control Act  
TWA = Time-Weighted Average  
vPvB = very Persistent and very Bioaccumulative

A vertical bar (|) in the left margin indicates an amendment from the previous version.

Sources of key data used to compile the Safety Data Sheet : The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

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The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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.

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