

SAFETY DATA SHEET

according to the Hazardous Products Regulations

Ethylene Glycol Antifreeze Grade

Version
2.2

Revision Date:
2025-05-22

SDS Number:
800010051250

Print Date: 2025-05-24
Date of last issue: 25.02.2025
Date of first issue: 12.07.2021

SECTION 1. IDENTIFICATION

Product name : Ethylene Glycol Antifreeze Grade

Product code : 002D7367

Manufacturer or supplier's details

Manufacturer/Supplier : **Shell Canada Products**
4000-500 Centre Street SE
Calgary AB T2G 1A6
Canada

Telephone : (+1) 8006611600
Telefax : (+1) 4033848345

Emergency telephone number : CHEMTREC (24 hr): 1 (703) 527-3887 or 1 (800) 424-9300 (US)

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 those listed in Section 1 without first seeking the advice of the supplier.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Acute toxicity (Oral) : Category 4

Specific target organ toxicity - repeated exposure (Oral) : Category 2 (Kidney)

GHS label elements

Hazard pictograms :



Signal word : Warning

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Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
H302 Harmful if swallowed.
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

Precautionary statements : **Prevention:**
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
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.
P314 Get medical advice/ attention 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
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
ethanediol	ethane-1,2-diol	107-21-1	>= 90 - <= 100
Diethylene glycol	2,2'-oxydiethanol	111-46-6	>= 0 - <= 10

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.

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- In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

If persistent irritation occurs, obtain medical attention.
- In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
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 : Ingestion may result in nausea, vomiting and/or diarrhoea. Kidney damage may be indicated by changes in urine output or appearance, pain upon urination or in the lower back, or general oedema (swelling from fluid retention).

Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.
Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.
High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or 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.
- Notes to physician : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT!
May cause significant renal, respiratory, and CNS toxicity.
May cause significant acidosis.
Call a doctor or poison control center for guidance.
Treat symptomatically.
-

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use foam, water fog for major fires.
Shut off supply. If not possible and no risk to surroundings, let the fire burn itself out.
Use dry chemical powder, carbon dioxide, sand or earth for minor fires.
- Unsuitable extinguishing media : Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire.
Simultaneous use of foam and water on the same surface is

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to be avoided as water destroys the foam.

- Specific hazards during fire-fighting : Hazardous combustion products may include:
A complex mixture of airborne solid and liquid particulates and gases (smoke).
Carbon monoxide may be evolved if incomplete combustion occurs.
Unidentified organic and inorganic compounds.
The vapour is heavier than air, spreads along the ground and distant ignition is possible.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 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).
- Further information : If the fire cannot be extinguished the only course of action is to evacuate immediately.
Keep adjacent containers cool by spraying with water.
If possible remove containers from the danger zone.
Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- Environmental precautions : Take measures to minimise the effects on groundwater.
Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways.
Prevent from spreading or entering into waterways, sewers, basements or confined areas.
- Methods and materials for containment and cleaning up : For solids, shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
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 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.
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

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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.
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.
For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.
Local authorities should be advised if significant spillages cannot be contained.

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.
Prevent spillages.

Advice on safe handling : Avoid prolonged or repeated contact with skin.
When using do not eat or drink.
Earth all equipment.

Avoidance of contact : Strong oxidising agents.

Product Transfer : Keep containers closed when not in use. Even when the product is not itself flammable, such vapours may be present as a result of operations involving a previously handled product, or faulty vapour recovery systems. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.

Further information on storage stability : Drum and small container storage:
Drums should be stacked to a maximum of 3 high.
Use properly labeled and closable containers.
Tank storage:
Tanks must be specifically designed for use with this product.
Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

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Packaging material : Suitable material: For container and container linings, use mild steel or aluminium.
Unsuitable material: Compatibility should be checked with the manufacturer.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanediol	107-21-1	TWA (Vapour)	25 ppm	ACGIH
		STEL (Vapour)	50 ppm	ACGIH
		STEL (Inhalable fraction, Aerosol only)	10 mg/m ³	ACGIH

Biological occupational exposure limits

No biological limit allocated.

Personal protective equipment

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use.
In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
Check with respiratory protective equipment suppliers.
Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
Select a filter suitable for organic gases and vapours [boiling point >65 °C (149 °F)].
Where respiratory protective equipment is required, use a full-face mask.
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 material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

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. When handling heated product wear heat resistant gloves. For continuous contact we recommend gloves with breakthrough time of more than 240

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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. Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile gloves may be suitable. (Breakthrough time of > 240 minutes.) For incidental contact/splash protection Neoprene, PVC gloves may be suitable.

- Eye protection : Wear goggles for use against liquids and gas, combined with face shield.
- Skin and body protection : Wear chemical resistant gloves/gauntlets and boots. Where risk of splashing, also wear an apron.
- Protective measures : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

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. Take appropriate measures to fulfil the requirements of relevant environmental protection legislation. Avoid contamination of the environment by following advice given in Section 6. If necessary, prevent undissolved material from being discharged to waste water. Waste water should be treated in a municipal or industrial waste water treatment plant before discharge to surface water.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	mild
Odour Threshold	:	Data not available
Melting point/freezing point	:	Data not available
Boiling point/boiling range	:	190 - 240 °C Method: Unspecified
Flammability (solid, gas)	:	Data not available
Upper explosion limit / Upper flammability limit	:	Data not available
Lower explosion limit / Lower flammability limit	:	Data not available
Flash point	:	<= 121 °C Method: Unspecified
Auto-ignition temperature	:	Data not available
Decomposition temperature	:	Data not available
pH	:	Not applicable
Viscosity		
Viscosity, kinematic	:	24.8 mm ² /s (20 °C) Method: Unspecified Not applicable
		Method: Unspecified Not applicable

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Solubility(ies)
Water solubility : Data not available

Solubility in other solvents : Data not available

Partition coefficient: n-
octanol/water : Data not available

Vapour pressure : Method: Unspecified
Method: Unspecified

Relative density : Data not available

Density : 1,110 - 1,120 kg/m³ (15.0 °C)
Method: Unspecified

Relative vapour density : Typical 2.14

Particle characteristics
Particle size : Data not available
Data not available

9.2 Other information

Explosives : Classification Code: Not classified.

Oxidizing properties : Data not available

Evaporation rate : Data not available

Conductivity : This material is not expected to be a static accumulator.

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SECTION 10. STABILITY AND REACTIVITY

- Reactivity : No, product will not become self-reactive.
- Chemical stability : Stable under normal conditions of use.
- Possibility of hazardous reactions : No hazardous reaction is expected when handled and stored according to provisions
- Conditions to avoid : Heat, open flames, sparks and flammable atmospheres.
- Incompatible materials : Strong oxidising agents.
- Hazardous decomposition products : Hazardous decomposition products are not expected to form during normal storage.
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.

SECTION 11. TOXICOLOGICAL INFORMATION

- Basis for assessment : Information given is based on data on the components and the toxicology of similar products.

Acute toxicity

Product:

- Acute oral toxicity : LD 50 (Rat): > 300 - 2,000 mg/kg
Remarks: Harmful if swallowed.
- Acute inhalation toxicity : Remarks: Based on available data, the classification criteria are not met.
- Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.
LD50 >5000 mg/kg

Components:

ethanediol:

- Acute oral toxicity : LD 50 (Rat, male and female): > 2,000 mg/kg
Method: Acceptable non-standard method.
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

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lethal by ingestion to cats and dogs.

Acute inhalation toxicity : LC 50 (Rat, male and female): > 2.5 mg/l
Exposure time: 6 h
Test atmosphere: Aerosol
Method: Literature data
Remarks: LC50 > 1.0 - <= 5.0 mg/l
LC50 greater than near-saturated vapour concentration.
Based on available data, the classification criteria are not met.

Acute dermal toxicity : LD 50 (Mouse, male and female): > 2,000 mg/kg
Method: Literature data
Remarks: Based on available data, the classification criteria are not met.

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

Product:

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

Components:

ethanediol:

Species : Rabbit
Method : Acceptable non-standard method.
Remarks : Slightly irritating to skin.
Insufficient to classify.

Diethylene glycol:

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

Serious eye damage/eye irritation

Product:

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

Components:

ethanediol:

Species : Rabbit
Method : Acceptable non-standard method.
Remarks : Slightly irritating to the eye.
Insufficient to classify.

Diethylene glycol:

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

Respiratory or skin sensitisation

Product:

Exposure routes : Skin contact
Remarks : Not a skin sensitiser.

Exposure routes : Inhalation
Remarks : Not a sensitiser.

Components:

ethanediol:

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

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.

Germ cell mutagenicity

Product:

Genotoxicity in vivo : Remarks: Non mutagenic

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Components:

ethanediol:

- Genotoxicity in vitro : Method: OECD Test Guideline 471
Remarks: Based on data from similar materials
- Method: Acceptable non-standard method.
Remarks: Based on data from similar materials
- Method: Literature data
Remarks: Based on data from similar materials
- Genotoxicity in vivo : Species: Rat
Method: Literature data
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.

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 : 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

Product:

- Remarks : Not a carcinogen.

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Components:

ethanediol:

Species : Mouse, male and female
Application Route : Oral
Method : Literature data
Remarks : Based on available data, the classification criteria are not met.

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

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.

Reproductive toxicity

Components:

ethanediol:

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

Diethylene glycol:

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

Reproductive toxicity

Remarks : Based on available data, the classification criteria are not met.
Not a developmental toxicant.
Does not impair fertility.

STOT - single exposure

Product:

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

Components:

ethanediol:

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

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

Product:

Exposure routes : Ingestion
Remarks : May cause damage to organs or organ systems through prolonged or repeated exposure.
Kidney: can cause kidney damage.

Components:

ethanediol:

Exposure routes : Oral
Target Organs : Kidney
Remarks : May cause damage to organs or organ systems through prolonged or repeated exposure.

Diethylene glycol:

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

Repeated dose toxicity

Components:

ethanediol:

Species : Rat, male
Application Route : Oral
Method : Test(s) equivalent or similar to OECD Test Guideline 408
Target Organs : Kidney

Diethylene glycol:

Species : Rat, male and female
Application Route : Oral
Method : Acceptable non-standard method.

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Target Organs : No specific target organs noted

NOAEL : 300 mg/kg
Exposure time : 98 Days

LOAEL : 1500 mg/kg
Exposure time : 98 Days

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

NOAEL : 4440 mg/kg

LOAEL : 8880 mg/kg

Aspiration toxicity

Product:

Not an aspiration hazard.

Components:

ethanediol:

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

Diethylene glycol:

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

Further information

Components:

ethanediol:

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

Diethylene glycol:

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

SECTION 12. ECOLOGICAL INFORMATION

Basis for assessment : Incomplete ecotoxicological data are available for this product. The information given below is based partly on a knowledge of the components and the ecotoxicology of similar products.

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Ecotoxicity

Product:

- Toxicity to fish : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.
- Toxicity to daphnia and other :
aquatic invertebrates : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.
- Toxicity to algae/aquatic :
plants : Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.
- Toxicity to fish (Chronic tox- :
icity) : Remarks: NOEC/NOEL > 100 mg/l
- Toxicity to daphnia and other :
aquatic invertebrates (Chron- :
ic toxicity) : Remarks: NOEC/NOEL > 100 mg/l
- Toxicity to microorganisms :
: Remarks: LL/EL/IL50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Components:

ethanediol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 72,860 mg/l
Exposure time: 96 h
Method: Other guideline method.
Remarks: Practically non toxic:
LC/EC/IC50 > 100 mg/l
- Toxicity to daphnia and other :
aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Practically non toxic:
LC/EC/IC50 > 100 mg/l
- Toxicity to algae/aquatic :
plants : EC50 (Pseudokirchneriella subcapitata (algae)): 6,500 -
13,000 mg/l
Exposure time: 96 h
Method: Other guideline method.
Remarks: Practically non toxic:
LC/EC/IC50 > 100 mg/l
- Toxicity to fish (Chronic tox- :
icity) : NOEC (Pimephales promelas (fathead minnow)): 15,380 mg/l
Exposure time: 7 d

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Method: Other guideline method.
Remarks: NOEC/NOEL > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Chironomus sp. (midge)): 8,590 mg/l
Exposure time: 7 d
Method: Other guideline method.
Remarks: NOEC/NOEL > 100 mg/l

Toxicity to microorganisms : EC20 (Activated sludge, domestic waste): > 1,995 mg/l
Exposure time: 0.5 h
Method: Other guideline method.
Remarks: Practically non toxic:
LC/EC/IC50 > 100 mg/l

Diethylene glycol:

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

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Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

ethanediol:

Biodegradability : Biodegradation: 90 - 100 %
Exposure time: 10 d
Method: OECD Test Guideline 301A
Remarks: Readily biodegradable.

Diethylene glycol:

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

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

ethanediol:

Bioaccumulation : Remarks: Does not have the potential to bioaccumulate significantly.

Diethylene glycol:

Bioaccumulation : Remarks: Does not bioaccumulate significantly.

Mobility in soil

Product:

Mobility : Remarks: No data available

Components:

ethanediol:

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

Diethylene glycol:

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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

Product:

Additional ecological information : No data available

Components:

ethanediol:

Results of PBT and vPvB assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

Additional ecological information : Does not have ozone depletion potential.

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 considered to be PBT or vPvB.

Additional ecological information : Data not available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Recover or recycle if possible.
Do not pollute the soil, water or environment with the waste container. 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. Do not dispose into the environment, in drains or in water courses.
Do not dispose of tank water bottoms by allowing them to drain into the ground.
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.

Local legislation
Remarks : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14. TRANSPORT INFORMATION

National Regulations

TDG

Not regulated as a dangerous good

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

MARPOL Annex 1 rules apply for bulk shipments by sea.

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

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

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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

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

DSL : All components listed.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit

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AIRC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 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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