According to the Hazardous Products Regulations

# Dipropylene glycol (DPG)

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### **SECTION 1. IDENTIFICATION**

Product name : Dipropylene glycol ( DPG )

Product code : U1521

Other means of identification : DPG; Oxydipropanol

Manufacturer or supplier's details

Manufacturer/Supplier : Shell Chemicals Canada

PO Box 4280 STN C CALGARY AB T2T 5Z5

Canada

Telephone : 1-855-697-4355

Telefax : 1-866-213-7508

**Emergency telephone number** 

CHEMTREC (24 hr) : 1-800-424-9300

Recommended use of the chemical and restrictions on use

Recommended use : DPG is used in the manufacture of unsaturated polyester res-

ins and benzoate plasticizers.

Chemical Use.

Restrictions on use : Advice in this document relates only to product as originally

supplied. Other derivative chemicals will have different properties and hazards. Advice should be sought on their safe han-

dling and use., Do not add directly to food.

### **SECTION 2. HAZARDS IDENTIFICATION**

### **GHS Classification**

Based on available data this substance / mixture does not meet the classification criteria.

**GHS label elements** 

Hazard pictograms : No symbol

Signal word : No signal word

Hazard statements : PHYSICAL HAZARDS:

Not classified as a physical hazard under GHS criteria.

HEALTH HAZARDS:

Not classified as a health hazard under GHS criteria.

**ENVIRONMENTAL HAZARDS:** 

Not classified as an environmental hazard under GHS criteria.

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: Prevention: Precautionary statements

No precautionary phrases.

Response:

No precautionary phrases.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

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

Not classified as flammable but will burn.

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

Substance name : Dipropylene glycol (DPG) 25265-71-8

### **Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
Dipropylene glycol	25265-71-8	<= 100

#### **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 wa-

ter and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

: Flush eye with copious quantities of water. In case of eye contact

Remove contact lenses, if present and easy to do. Continue

rinsing.

If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities

are swallowed, however, get medical advice.

Most important symptoms and effects, both acute and

delayed

Not considered to be an inhalation hazard under normal con-

ditions of use.

Possible respiratory irritation signs and symptoms may include

a temporary burning sensation of the nose and throat, cough-

ing, and/or difficulty breathing.

No specific hazards under normal use conditions.

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Skin irritation signs and symptoms may include a burning sen-

sation, redness, or swelling.

No specific hazards under normal use conditions.

Eye irritation signs and symptoms may include a burning sen-

sation, redness, swelling, and/or blurred vision. No specific hazards under normal use conditions.

Ingestion may result in nausea, vomiting and/or diarrhoea.

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 : Call a doctor or poison control center for guidance.

Treat symptomatically. Following cases of gross overexposure, investigation of liver, kidney and eye function may be advisable. Records of such incidents should be maintained

for future reference.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Alcohol-resistant foam, water spray or fog. Dry chemical pow-

der, 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.

Carbon monoxide may be evolved if incomplete combustion

occurs.

Containers exposed to intense heat from fires should be

cooled with large quantities of water.

Specific extinguishing meth-

ods

: Standard procedure for chemical fires.

Further information : Evacuate the area of all non-essential personnel.

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, protec-

tive equipment and emer-

Observe all relevant local and international regulations.

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gency procedures

Notify authorities if any exposure to the general public or the

environment occurs or is likely to occur.

Local authorities should be advised if significant spillages

cannot be contained.

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.

Use appropriate containment to avoid environmental contami-

nation.

Ventilate contaminated area thoroughly.

Methods and materials for containment and cleaning up

Contain run-off from residue flush and dispose of properly. Soak up residue with an absorbent such as clay, sand or other

suitable material.

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.

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

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**

**General Precautions** 

: 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.

Advice on 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

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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.

**Storage** 

Conditions for safe storage : Refer to section 15 for any additional specific legislation cov-

ering the packaging and storage of this product.

Other data : 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.

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 stor-

age facilities are followed.

# SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

# Components with workplace control parameters

Contains no components with occupational exposure limit values.

### **Biological occupational exposure limits**

No biological limit allocated.

### **Monitoring Methods**

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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

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

### **Engineering measures**

: Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. Adequate ventilation to control airborne concentrations. 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:

### 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

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.

Hand protection

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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 rubber. Incidental contact/Splash protection: PVC, neoprene or nitrile 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.
The following information, while appropriate for the product is general in nature. The selection of Personal Protective Equipment will vary depending on the conditions of use.

Hygiene measures

: Wash hands before eating, drinking, smoking and using the

toilet.

Launder contaminated clothing before re-use.

### **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 envi-

ronmental legislation.

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Information on accidental release measures are to be found in

section 6.

### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Liquid.

Colour : colourless

Odour : odourless

Odour Threshold : Data not available

pH : 7

Melting / freezing point : -20 °C / -4 °F

Boiling point/boiling range : 227 °C / 441 °F

Flash point : 130 °C / 266 °F

Method: ASTM D-93 / PMCC

Evaporation rate : Data not available

Flammability

Flammability (solid, gas) : Not applicable

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit : 12.6 %(V)

Lower explosion limit : 2.9 %(V)

Vapour pressure : 1.3 Pa (25 °C / 77 °F)

Relative vapour density : 4.6 (20 °C / 68 °F)

Relative density : 1.023

Method: ASTM D4052

Density : 1.03 g/cm3 (20 °C / 68 °F)Method: ASTM D4052

Solubility(ies)

Water solubility : Completely miscible.

Partition coefficient: n-

octanol/water

: log Pow: -0.462 (21.7 °C / 71.1 °F)

Auto-ignition temperature : 327 - 337 °C / 621 - 639 °F

Decomposition temperature : Data not available

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Viscosity

Viscosity, dynamic : 116 mPa.s (25 °C / 77 °F)

Method: ASTM D445

Viscosity, kinematic : 118 mm2/s (20 °C / 68 °F)

Method: ASTM D445

32 mm2/s (40 °C / 104 °F) Method: ASTM D445

Explosive properties : Not applicable

Oxidizing properties : Data not available

Surface tension : 71.4 mN/m,  $22 ^{\circ}\text{C} / 72 ^{\circ}\text{F}$ 

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 : 134.2 g/mol

#### **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
Oxidises on contact with air.

Possibility of hazardous reac-

tions

: None known.

Conditions to avoid : Extremes of temperature and direct sunlight.

Product cannot ignite due to static electricity.

Incompatible materials : Strong oxidising agents.

Strong acids. Strong bases.

Hazardous decomposition

products

: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases includ-

ing carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degra-

dation.

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Carbonyl and dioxolane derivatives may be formed.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

Basis for assessment : Information given is based on product testing, and/or similar

products, and/or components.

Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual com-

ponent(s).

### Information on likely routes of exposure

Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

#### **Acute toxicity**

**Product:** 

Acute oral toxicity : LD 50 (Rat, male and female): > 5,000 mg/kg

Method: US EPA Test Guideline OPP 81-1

Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity : LC 50 (Rat, male and female): > 2.34 mg/l

Exposure time: 4 h
Test atmosphere: Aerosol
Method: Other guideline method.

Remarks: Based on available data, the classification criteria

are not met.

Acute dermal toxicity : LD 50 (Rabbit, male and female): > 5,000 mg/kg

Method: Other guideline method.

Remarks: Based on available data, the classification criteria

are not met.

**Components:** 

Dipropylene glycol:

Acute oral toxicity : LD 50 (Rat, male and female): > 5,000 mg/kg

Method: US EPA Test Guideline OPP 81-1

Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity : LC 50 (Rat, male and female): > 2.34 mg/l

Exposure time: 4 h
Test atmosphere: Aerosol
Method: Other guideline method.

Remarks: Based on available data, the classification criteria

are not met.

Acute dermal toxicity : LD 50 (Rabbit, male and female): > 5,000 mg/kg

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Method: Other guideline method.

Remarks: Based on available data, the classification criteria

are not met.

### Skin corrosion/irritation

### **Product:**

Species: Rabbit

Method: Other guideline method.

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

### **Components:**

### Dipropylene glycol:

Species: Rabbit

Method: Other guideline method.

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

### Serious eye damage/eye irritation

#### **Product:**

Species: Rabbit

Method: Other guideline method.

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

### **Components:**

## Dipropylene glycol:

Species: Rabbit

Method: Other guideline method.

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

### Respiratory or skin sensitisation

## **Product:**

Species: Guinea pig

Method: Other guideline method.

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

## **Components:**

# Dipropylene glycol:

Species: Guinea pig

Method: Other guideline method.

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

### Germ cell mutagenicity

#### **Product:**

Genotoxicity in vitro : Method: Acceptable non-standard method.

Remarks: Based on available data, the classification criteria

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are not met.

: Method: Test(s) equivalent or similar to OECD Test Guideline

476

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.

**Components:** 

Dipropylene glycol:

Genotoxicity in vitro : Method: Acceptable non-standard method.

Remarks: Based on available data, the classification criteria

are not met.

: Method: Test(s) equivalent or similar to OECD Test Guideline

476

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.

Carcinogenicity

**Product:** 

Species: Mouse, (male and female)

Application Route: Oral

Method: Acceptable non-standard method.

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

**Components:** 

Dipropylene glycol:

Species: Mouse, (male and female)

Application Route: Oral

Method: Acceptable non-standard method.

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

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.

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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

**Product:** 

Effects on fertility : Species: Mouse

Sex: male and female Application Route: Oral

Method: Literature data

Remarks: Based on available data, the classification criteria

are not met.

Effects on foetal develop-

ment

: Species: Rat, female Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline

414

Remarks: Based on available data, the classification criteria

are not met.

Species: Rabbit, female Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline

414

Remarks: Based on available data, the classification criteria

are not met.

## Components:

Dipropylene glycol:

Effects on fertility

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

Method: Literature data

Remarks: Based on available data, the classification criteria

are not met.

Effects on foetal develop-

ment

: Species: Rat, female

Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline

414

Remarks: Based on available data, the classification criteria

are not met.

Species: Rabbit, female Application Route: Oral

Method: Test(s) equivalent or similar to OECD Test Guideline

414

Remarks: Based on available data, the classification criteria

are not met.

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### STOT - single exposure

#### **Product:**

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

### **Components:**

### Dipropylene glycol:

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

### STOT - repeated exposure

### **Product:**

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

### **Components:**

### Dipropylene glycol:

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

### Repeated dose toxicity

### **Product:**

Species: Rat, male and female

Application Route: Oral

Method: Acceptable non-standard method.

Target Organs: No specific target organs noted

### **Components:**

# Dipropylene glycol:

Species: Rat, male and female

Application Route: Oral

Method: Acceptable non-standard method. Target Organs: No specific target organs noted

# **Aspiration toxicity**

# **Product:**

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

### **Components:**

#### Dipropylene glycol:

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

# **Further information**

### **Product:**

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

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### **Components:**

### Dipropylene 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. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual com-

ponent(s).

### **Ecotoxicity**

### **Product:**

Toxicity to fish (Acute toxici-

ty)

: LC50 (Oryzias latipes (Japanese medaka)): > 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to crustacean (Acute

toxicity)

: EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic plants (Acute toxicity)

: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to fish (Chronic tox-

icity)

: Chronic Toxicity Value: 1,340 mg/l

Exposure time: 30 d

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL > 100 mg/l

Toxicity to crustacean (Chronic toxicity)

: Chronic Toxicity Value (Daphnia (water flea)): 466 mg/l

Exposure time: 16 d

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL > 1.0 - <= 10 mg/l

Toxicity to microorganisms

(Acute toxicity)

: EC10 (Pseudomonas putida): >= 1,000 mg/l

Exposure time: 18 h

Method: Test(s) equivalent or similar to OECD Guideline 209

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Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

**Components:** 

Dipropylene glycol:

Toxicity to fish (Acute toxici-

ty)

: LC50 (Oryzias latipes (Japanese medaka)): > 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to crustacean (Acute

toxicity)

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to algae/aquatic

plants (Acute toxicity)

: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Toxicity to fish (Chronic tox-

icity)

: Chronic Toxicity Value: 1,340 mg/l

Exposure time: 30 d

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL > 100 mg/l

Toxicity to crusta-

cean(Chronic toxicity)

: Chronic Toxicity Value (Daphnia (water flea)): 466 mg/l

Exposure time: 16 d

Method: Based on quantitative structure-activity relationship

(QSAR) modelling

Remarks: NOEC/NOEL > 1.0 - <= 10 mg/l

Toxicity to bacteria : EC10 (Pseudomonas putida): >= 1,000 mg/l

Exposure time: 18 h

Method: Test(s) equivalent or similar to OECD Guideline 209

Remarks: Practically non toxic:

LL/EL/IL50 > 100 mg/l

Persistence and degradability

**Product:** 

Biodegradability : Biodegradation: 84.4 %

Exposure time: 28 d

Method: OECD Test Guideline 301F Remarks: Readily biodegradable.

**Components:** 

Dipropylene glycol:

According to the Hazardous Products Regulations

# Dipropylene glycol (DPG)

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Biodegradability : Biodegradation: 84.4 %

Exposure time: 28 d

Method: OECD Test Guideline 301F Remarks: Readily biodegradable.

# Bioaccumulative potential

**Product:** 

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 0.3 - 4.6

Exposure time: 42 d

Method: OECD Test Guideline 305C

Remarks: Does not bioaccumulate significantly.

Partition coefficient: n-

octanol/water

: log Pow: -0.462 (21.7 °C)

**Components:** 

Dipropylene glycol:

Bioaccumulation : Species: Cyprinus carpio (Carp)

Bioconcentration factor (BCF): 0.3 - 4.6

Exposure time: 42 d

Method: OECD Test Guideline 305C

Remarks: Does not bioaccumulate significantly.

Mobility in soil

**Product:** 

Mobility : Remarks: If the product enters soil, one or more constituents

will or may be mobile and may contaminate groundwater.

Components:

Dipropylene glycol:

Mobility : Remarks: If the product enters soil, one or more constituents

will or may be mobile and may contaminate groundwater.

Other adverse effects

no data available

### **SECTION 13. DISPOSAL CONSIDERATIONS**

**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 meth-

ods in compliance with applicable regulations.

Remove all packaging for recovery or waste disposal.

According to the Hazardous Products Regulations

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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**

**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

Pollution category : Z Ship type : 3

Product name : Dipropylene 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.

According to the Hazardous Products Regulations

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Nitrogen is an odourless and invisible gas. Exposure to nitrogen may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry. Transport in bulk according to Annex II of Marpol and the IBC Code

#### **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 : Listed

IECSC : Listed

ENCS : Listed

KECI : Listed

NZIoC : Listed

PICCS : Listed

TSCA : Listed

TCSI : Listed

### **SECTION 16. OTHER INFORMATION**

### Full text of other abbreviations

AIIC - 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 Or-

According to the Hazardous Products Regulations

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ganisation 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. Due to the conversion of this product to GHS classification and labelling, there has been a significant change to the nature of the information presented in Section 2.

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).

Revision Date : 2024-09-26

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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