1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : Shell Coolant Longlife Ready to Use

Product code : 001J0922

1.2 Identified relevant uses of the substance or mixture and restrictions on use

Recommended use of the chemical and restrictions on use

Recommended use : Antifreeze and coolant.

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.

1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details

Manufacturer/Supplier : **Shell Markets Middle East Limited FZE**
Level 3, The Offices 4, One Central
Dubai World Trade Center
P.O.BOX307 Dubai
United Arab Emirates

Telephone : (+971) 800035704494
Telefax : (+971) 43321591

1.4 Emergency telephone number

Emergency telephone number : 800035704494 (within UAE)
+60383168800 (outside UAE)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity (Oral) : Category 4
Specific target organ toxicity - repeated exposure : Category 2 (Kidney)

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : PHYSICAL HAZARDS:
Not classified as a physical hazard according to CLP criteria.
HEALTH HAZARDS:
H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.
ENVIRONMENTAL HAZARDS:
Not classified as environmental hazard according to CLP criteria.

Precautionary statements : **Prevention:**
P264 Wash hands 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/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
Contains Ethylene Glycol

2.3 Other hazards

Intentional abuse, misuse or other massive exposure may cause multiple organ damage and or death.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

3.2 Mixtures

Chemical nature : Mixture of ethylene glycol, water and additives.

Hazardous components

Chemical name	CAS-No. EC-No. Registration	Classification (REGULATION (EC) No	Concentration (% w/w)

	number	1272/2008)	
Ethanediol	107-21-1	Acute Tox. 4; H302 STOT RE 2; H373	45 - 55
Sodium octanoate	1984-06-1	Skin Irrit. 2; H315 Eye Irrit. 2A; H319	1 - 3

For explanation of abbreviations see section 16.

Other information

Refer to Chapter 8 for Occupational Exposure Guidelines.

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice : Not expected to be a health hazard when used under normal conditions.

If inhaled : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

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.

4.2 Protection of first-aiders

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.

4.3 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed : 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.
Not considered to be an inhalation hazard under normal

conditions of use.
Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.
No specific hazards under normal use conditions.
Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters.
Ingestion may result in nausea, vomiting and/or diarrhoea.
High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Notes to physician : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT!
Call a doctor or poison control center for guidance.
Treat symptomatically.
May cause significant renal, respiratory, and CNS toxicity.
May cause significant acidosis.
The preferred treatment is immediate transportation to a medical facility and use of appropriate treatment including possible administration of activated charcoal, gastric lavage and or gastric aspiration. If none of the above are immediately available and a delay of more than one hour is anticipated before such medical attention can be obtained, induction of vomiting may be appropriate using IPECAC syrup (Contraindicated if there are any signs of CNS depression). This should be considered on a case by case basis following specialist advice. Specific other treatments may include ethanol therapy, fomepizole, treatment of acidosis and haemodialysis. Seek specialist advice without delay.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Flammable properties

Flash point : /
Method: Unspecified
Not applicable

Ignition temperature : >
200 °C / 392 °F

Upper explosion limit : Typical 15 %(V)

Lower explosion limit : Typical 3 %(V)

Flammability (solid, gas) : Data not available

Suitable extinguishing media : 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.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : 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.

5.3 Recomendations for fire-fighters

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).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid contact with skin and eyes.

6.2 Environmental precautions

Environmental precautions : Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods and materials for containment and cleaning up : 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

appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

6.4 Reference to other sections

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.
Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

General Precautions	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. 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.
Advice on safe handling	:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.
Avoidance of contact	:	Strong oxidising agents.

7.2 Conditions for safe storage, including any incompatibilities

Other data	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labeled and closable containers. Store at ambient temperature.
Packaging material	:	Suitable material: For containers or container linings, use mild steel or high density polyethylene. Unsuitable material: Zinc., Avoid contact with galvanized materials.
Container Advice	:	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

7.3 Specific end use(s)

Specific use(s)	:	Antifreeze and coolant.
Uses advised against	:	This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanediol	107-21-1	MPC-TWA (mixture of vapour and aerosol)	5 mg/m3	RU OEL
	Further information: Class 3 - Moderately dangerous			
		MPC-STEL (mixture of vapour and aerosol)	10 mg/m3	RU OEL
	Further information: Class 3 - Moderately dangerous			
Ethanediol	107-21-1	STEL	40 ppm 104 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	20 ppm 52 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
Ethanediol	107-21-1	MPC-TWA (mixture of vapour and aerosol)	5 mg/m3	KZ OEL
	Further information: Class 3 - Moderately dangerous			
		MPC-STEL (mixture of vapour and aerosol)	10 mg/m3	KZ OEL
	Further information: Class 3 - Moderately dangerous			
	Hazard classification: 4			

Biological occupational exposure limits

No biological limit allocated.

8.2 Exposure controls

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

L'Institut National de Recherche et de Securité, (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.

General Information
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.
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.

Personal protective equipment

Protective measures

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

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.

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 suitable, select an appropriate combination of mask and filter.
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. PVC, neoprene or nitrile rubber gloves 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.

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.

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.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	:	Liquid at room temperature.
Colour	:	pink
Odour	:	characteristic
Odour Threshold	:	Data not available
pH	:	8,1, 100 %
Melting point/freezing point	:	-37 °C / -35 °F (100,0 hPa) Method: ASTM D1177
Initial boiling point and boiling range	:	> 100 °C / 212 °Festimated value(s)
Flash point	:	Method: Unspecified Not applicable
Evaporation rate	:	Data not available
Flammability (solid, gas)	:	Data not available
Upper explosion limit	:	Typical 15 %(V)
Lower explosion limit	:	Typical 3 %(V)
Vapour pressure	:	Data not available (50 °C / 122 °F)
Relative vapour density	:	> 1
Relative density	:	1,070 (20 °C / 68 °F)
Density	:	1.070 kg/m3 (20 °C / 68 °F) Method: ASTM D4052
Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	Data not available
Partition coefficient: n-octanol/water	:	Data not available
Auto-ignition temperature	:	> 200 °C / 392 °F

Decomposition temperature	:	Data not available
Viscosity		
Viscosity, dynamic	:	Data not available
Viscosity, kinematic	:	Method: Unspecified Not applicable
Particle size	:	Data not available

9.2 Other information

Explosive properties	:	Classification Code: Not classified
Oxidizing properties	:	Data not available
Conductivity	:	This material is not expected to be a static accumulator.
Molecular weight	:	Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity

The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with strong oxidising agents.

10.4 Conditions to avoid

Conditions to avoid : Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

10.6 Hazardous decomposition products

: No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Basis for assessment : Information given is based on data on the components and the toxicology of similar products.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 : Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity : LD50 rat: > 500 - 2.000 mg/kg
Remarks: Harmful if swallowed.

Acute inhalation toxicity : LC 50 Rat: > 5 mg/l
Exposure time: 4 h
Remarks: Low toxicity

Acute dermal toxicity : LD50 Rabbit: > 5.000 mg/kg
Remarks: Low toxicity

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 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.

Skin corrosion/irritation

Product:

Remarks: Slightly irritating to skin., 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.

Serious eye damage/eye irritation

Product:

Remarks: Slightly irritating to the eye., 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.

Respiratory or skin sensitisation

Product:

Remarks: Not a skin sensitiser.
Based on available data, the classification criteria are not met.

Components:

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

Germ cell mutagenicity

Product:

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

Components:

Ethanediol:

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

Test species: RatMethod: 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.

Carcinogenicity

Product:

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

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.

Material	GHS/CLP Carcinogenicity Classification
Ethanediol	No carcinogenicity classification.
Sodium octanoate	No carcinogenicity classification.

Reproductive toxicity

Product:

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

Components:

Ethanediol:

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

Method: Literature data

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

Effects on foetal development	:	Species: Rat, male and female Application Route: Oral Method: Literature data Remarks: Based on available data, the classification criteria are not met., Causes foetotoxicity in animals; considered to be secondary to maternal toxicity.
Reproductive toxicity - Assessment	:	This product does not meet the criteria for classification in categories 1A/1B.

STOT - single exposure

Product:

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.

STOT - repeated exposure

Product:

Remarks: 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.

Repeated dose toxicity

Components:

Ethanediol:

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

Aspiration toxicity

Product:

Not an aspiration hazard.

11.2 Information on other hazards

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

Further information

Product:

Remarks: Slightly irritating to respiratory system.

Remarks: Inhalation of vapours or mists may cause irritation to the respiratory system.

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

12. ECOLOGICAL INFORMATION

Basis for assessment : Ecotoxicological data have not been determined specifically for this product.
Information given is based 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 component(s).

12.1 Toxicity

Product:

Toxicity to fish (Acute toxicity) :
Remarks: LC/EC/IC50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to crustacean (Acute toxicity) :
Remarks: LC/EC/IC50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to algae/aquatic plants (Acute toxicity) :
Remarks: LC/EC/IC50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic toxicity)	:	Remarks: Based on available data, the classification criteria are not met.
Toxicity to crustacean (Chronic toxicity)	:	Remarks: Based on available data, the classification criteria are not met.
Toxicity to microorganisms (Acute toxicity)	:	Remarks: Based on available data, the classification criteria are not met.

Components:
Ethanediol :

Toxicity to fish (Acute toxicity)	:	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 crustacean (Acute toxicity)	:	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 (Acute toxicity)	:	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 microorganisms (Acute toxicity)	:	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
Toxicity to fish (Chronic toxicity)	:	NOEC: 15.380 mg/l Exposure time: 7 d Species: Pimephales promelas (fathead minnow) Method: Other guideline method. Remarks: NOEC/NOEL > 100 mg/l
Toxicity to crustacean(Chronic toxicity)	:	NOEC: 8.590 mg/l Exposure time: 7 d Species: Chironomus sp. (midge) Method: Other guideline method. Remarks: NOEC/NOEL > 100 mg/l

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable.

Components:
Ethanediol :

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

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not bioaccumulate significantly.

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

Components:
Ethanediol :

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

12.4 Mobility in soil

Product:

Mobility : Remarks: Liquid under most environmental conditions., If product enters soil, it will be highly mobile and may contaminate groundwater., Dissolves in water., Poses a significant risk of oxygen depletion in aquatic systems.

Components:
Ethanediol :

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

12.5 Other adverse effects

Product:

Additional ecological information : Does not have ozone depletion potential, photochemical ozone creation potential or global warming potential.

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.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment 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. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment. Waste, spills or used product is dangerous waste. 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. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. 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. Disposal should be in accordance with applicable regional, national, and local laws and regulations.
Local legislation Remarks	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

14.1 UN number or ID number

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.5 Environmental hazards

ADR	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good

14.6 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.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex 1 rules apply for bulk shipments by sea.

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.

Other international regulations

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

TSCA : All components listed.

16. OTHER INFORMATION

Full text of H-Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

Full text of other abbreviations

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure

Abbreviations and Acronyms : 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).
The standard abbreviations and acronyms used in this document can be looked up in reference literature (e.g. scientific dictionaries) and/or websites.

Further information

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

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.