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SECTION 1. IDENTIFICATION

Product name : CARADOL ET160-01

Product code : U1763

Synonyms : Polyol

CAS-No. : 25791-96-2

Manufacturer or supplier's details

Company : Shell Chemical LP

PO Box 576

HOUSTON TX 77001

USA

SDS Request : 1-800-240-6737 Customer Service : 1-855-697-4355

Emergency telephone number

Chemtrec Domestic (24 hr) : 1-800-424-9300 Chemtrec International (24 : 1-703-527-3887

hr)

Recommended use of the chemical and restrictions on use

Recommended use : Use for the manufacture of polyurethane products.

Restrictions on use : This product must not be used in applications other than the

above without first seeking the advice of the supplier.

Other information : CARADOL is a registered trademark of Shell trademark Man-

agement BV.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

GHS label elements

Hazard pictograms : No Hazard Symbol required

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:

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Not classified as an environmental hazard under GHS criteria.

Precautionary statements : Prevention:

No precautionary phrases.

Response:

No precautionary phrases.

Storage:

No precautionary phrases.

Disposal:

No precautionary phrases.

Other hazards which do not result in classification

none

The classification of this material is based on OSHA HCS 2012 criteria.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

Chemical name	Synonyms	CAS-No.	Concentration (% w/w)
Propoxylated glycerol	Polyol	25791-96-2	<= 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.

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 : 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.

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No specific hazards under normal use conditions.

Skin irritation signs and symptoms may include a burning sen-

sation, redness, or swelling.

Eye irritation signs and symptoms may include a burning sen-

sation, redness, swelling, and/or blurred vision.

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.

Indication of any immediate medical attention and special

treatment needed

Call a doctor or poison control center for guidance.

Treat symptomatically. Following cases of gross over-

exposure, 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 : Large fires should only be fought by properly trained fire fight-

ers.

Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires

only.

Unsuitable extinguishing

media

Do not use water in a jet.

Specific hazards during fire-

fighting

Will only burn if enveloped in a pre-existing fire.

Hazardous combustion products may include:

Carbon dioxide

Unidentified organic and inorganic compounds.

Toxic gases
Carbon monoxide.

Specific extinguishing meth-

ods

Standard procedure for chemical fires.

Further information : Clear fire area of all non-emergency personnel.

All storage areas should be provided with adequate fire

fighting facilities.

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- : Observe all relevant local and international regulations.

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tive equipment and emergency procedures

Avoid contact with skin, eyes and clothing.

Avoid inhaling vapour and/or mists.

Extinguish any naked flames. Do not smoke. Remove ignition

sources. Avoid sparks.

Environmental precautions

Remove all possible sources of ignition in the surrounding

area.

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

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.

Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations

governing disposal in the local area.

Additional advice : For guidance on selection of personal protective equipment

see Section 8 of this Safety Data Sheet.

For guidance on disposal of spilled material see Section 13 of

this Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

Technical measures : Avoid breathing of or direct contact with material. Only use in

well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see

Section 8 of this Safety Data Sheet.

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this

material.

Ensure that all local regulations regarding handling and stor-

age facilities are followed.

Advice on safe handling : In accordance with good industrial hygiene practices, precau-

tions should be taken to avoid breathing of material. Use local exhaust extraction over processing area.

Avoid unintentional contact with isocyanates to prevent uncon-

trolled polymerisation.

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Avoid contact with skin, eyes and clothing.

Air-dry contaminated clothing in a well-ventilated area before

laundering.

Do not empty into drains. Handling Temperature:

Ambient.

When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Extinguish any naked flames. Do not smoke. Remove ignition

sources. Avoid sparks.

Avoidance of contact : Avoid contact with isocyanates, copper and copper alloys,

zinc, strong oxidizing agents, and water.

Product Transfer : Lines should be purged with nitrogen before and after product

transfer. Keep containers closed when not in use.

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

ering the packaging and storage of this product.

Storage period : 24 Months

Further information on stor-

age stability

Prevent all contact with water and with moist atmosphere.

Tanks must be clean, dry and rust-free.

Prevent ingress of water.

Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Nitrogen blanket recommended for large tanks (capacity 100

m3 or higher).

Drums should be stacked to a maximum of 3 high.

Storage Temperature:

Ambient.

Storage should be handled at temperatures such that viscosi-

ties are less than 500 cSt; typically at 25-50 °C.

Tanks should be fitted with heating coils in areas where the ambient temperatures are below the recommended product handling temperatures. Heating coil skin temperatures should

not exceed 100 °C.

Packaging material : Suitable material: Stainless steel., For container paints, use

epoxy paint, zinc silicate paint.

Unsuitable material: Copper., Copper alloys.

Specific use(s) : Not applicable

Ensure that all local regulations regarding handling and stor-

age facilities are followed.

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SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Biological occupational exposure limits

No biological limit allocated.

Monitoring Methods

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

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

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

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

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

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

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

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

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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, precau-

tions should be taken to avoid breathing of material.

Hand protection Remarks

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

mended national standards. Check with PPE suppliers.

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.

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> Minimise release to the environment. An environmental assessment must be made to ensure compliance with local envi-

ronmental legislation.

Information on accidental release measures are to be found in

section 6.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid.

Colour Clear colourless

Odour odourless

Odour Threshold Not relevant

pΗ ca. 7

Melting point/freezing point Data not available

 $: > 200 \, ^{\circ}\text{C} / > 392 \, ^{\circ}\text{F}$ Boiling point/boiling range

Flash point Typical > 200 °C / > 392 °F

Method: ASTM D93 (PMCC)

Evaporation rate Data not available

Flammability

Flammability (solid, gas) Not applicable

Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit / up- : Data not available

per flammability limit

Lower explosion limit / Lower flammability limit Data not available

Vapour pressure < 10 kPa (20 °C / 68 °F)

Relative vapour density Data not available

Relative density 1.02

Method: ASTM D4052

1.0217 g/cm3 (20 °C / 68 °F) Density

Method: ASTM D4052

Solubility(ies)

Water solubility Miscible.

Partition coefficient: n-

octanol/water

Data not available

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Auto-ignition temperature : Data not available

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : Typical 230 mPa.s (25 °C / 77 °F)

Method: ASTM D445

Viscosity, kinematic : 235 - 255 mm2/s (25 °C / 77 °F)

Method: ASTM D445

Explosive properties : Classification Code: Not classified

Oxidizing properties : Not applicable

Surface tension : Data not available

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 accumu-

lator.

Molecular weight : 1,000 g/mol

Particle size : Data not available

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

Hygroscopic.

Possibility of hazardous reac-

tions

Polymerises exothermically with di-isocyanates at ambient

temperatures.

The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of reaction partners is good or is supported by stirring or by the presence

of solvents.

Reacts with strong oxidising agents.

Conditions to avoid : Heat, flames, and sparks.

Product cannot ignite due to static electricity.

Incompatible materials : Avoid contact with isocyanates, copper and copper alloys,

zinc, strong oxidizing agents, and water.

Hazardous decomposition

products

Unknown toxic products may be formed.

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SECTION 11. TOXICOLOGICAL INFORMATION

Basis for assessment : Information given is based on data obtained from similar sub-

stances.

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

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

Acute toxicity

Product:

Acute oral toxicity : LD 50 : > 2,000 mg/kg

Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity : Remarks: Based on available data, the classification criteria

are not met.

Acute dermal toxicity : LD 50 : > 2,000 mg/kg

Remarks: Low toxicity

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

Components:

Propoxylated glycerol:

Acute oral toxicity : LD 50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on available data, the classification criteria

are not met.

Acute inhalation toxicity : Remarks: Based on available data, the classification criteria

are not met.

Acute dermal toxicity : LD 50 (Rat, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 402

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:

Propoxylated glycerol:

Species: Rabbit

Method: OECD Test Guideline 404

Remarks: Slightly irritating to skin., Insufficient to classify., Based on available data, the classifi-

cation criteria are not met.

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Serious eye damage/eye irritation

Product:

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

Components:

Propoxylated glycerol:

Species: Rabbit

Method: OECD Test Guideline 405

Remarks: Slightly irritating., Insufficient to classify., Based on available data, the classification

criteria are not met.

Respiratory or skin sensitisation

Product:

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

Components:

Propoxylated glycerol:

Species: Guinea pig

Method: OECD Test Guideline 406

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

Germ cell mutagenicity

Product:

: Remarks: Based on available data, the classification criteria

are not met.

Components:

Propoxylated glycerol:

: 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.

: Remarks: Based on available data, the classification criteria

are not met.

Germ cell mutagenicity- As-

sessment

: This product does not meet the criteria for classification in

categories 1A/1B.

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Carcinogenicity

Product:

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

Components:

Propoxylated glycerol:

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

Carcinogenicity - Assess-

ment

: 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.

OSHANo 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

Product:

:

Remarks: Based on available data, the classification criteria

are not met.

Components:

Propoxylated glycerol:

Species: Rat

Sex: male and female Application Route: Oral

Method: OECD Test Guideline 421

Remarks: Based on available data, the classification criteria

are not met.

Reproductive toxicity - As-

sessment

: 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.

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Components:

Propoxylated glycerol:

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:

Propoxylated glycerol:

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

Repeated dose toxicity

Components:

Propoxylated glycerol:

Species: Rat, male and female

Application Route: Oral

Method: OECD Test Guideline 407

Target Organs: No specific target organs noted

Aspiration toxicity

Product:

Not an aspiration hazard.

Components:

Propoxylated glycerol:

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

Further information

Product:

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

Components:

Propoxylated glycerol:

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-

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ponent(s).

Ecotoxicity

Product:

Toxicity to fish (Acute toxici-

ty)

LC50: > 100 mg/l

Remarks: Based on available data, the classification criteria

are not met.

Practically non toxic:

Toxicity to daphnia and other : aquatic invertebrates (Acute

toxicity)

EC50: > 100 mg/l

Remarks: Based on available data, the classification criteria

are not met.

Practically non toxic:

Toxicity to algae (Acute tox-

icity)

EC50: > 100 mg/l

Remarks: Practically non toxic:

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

Toxicity to fish (Chronic tox-

icity)

Remarks: Data not available

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

Remarks: Data not available

Toxicity to microorganisms

(Acute toxicity)

IC50: > 100 mg/l

Remarks: Based on available data, the classification criteria

are not met.

Practically non toxic:

Components:

Propoxylated glycerol:

Toxicity to fish (Acute toxicity)

LC50 (Leuciscus idus (Golden orfe)): > 1,000 mg/l

Exposure time: 96 h

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

LL/EL/IL50 > 100 mg/l

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

Toxicity to daphnia and other : aquatic invertebrates (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

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

Toxicity to algae (Acute tox-

icity)

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

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

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Toxicity to fish (Chronic tox-

icity)

Remarks: Data not available

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): >= 10 mg/l

Exposure time: 21 d

Method: Information given is based on data obtained from

similar substances.

Remarks: NOEC/NOEL > 10 - <=100 mg/l

Toxicity to microorganisms

(Acute toxicity)

EC10 (Activated sludge, domestic waste): > 10,000 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

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

Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable.

Components:

Propoxylated glycerol:

Biodegradability : Biodegradation: 99 %

Exposure time: 28 d

Method: OECD Test Guideline 302B Remarks: Inherently biodegradable.

Oxidises rapidly by photo-chemical reactions in air.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not bioaccumulate significantly.

Components:

Propoxylated glycerol:

Bioaccumulation : 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:

Propoxylated glycerol:

Mobility : Remarks: If product enters soil, it will be highly mobile and

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may contaminate groundwater.

Dissolves in water.

Other adverse effects

Components:

Propoxylated glycerol:

Results of PBT and vPvB

assessment

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not consid-

ered to be PBT or vPvB.

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.

Do not dispose into the environment, in drains or in water

courses.

Waste product should not be allowed to contaminate soil or

water.

Disposal should be in accordance with applicable regional,

national, and local laws and regulations.

Local regulations may be more stringent than regional or na-

tional requirements and must be complied with.

Contaminated packaging : Drain container thoroughly.

After draining, vent in a safe place away from sparks and fire.

Send to drum recoverer or metal reclaimer.

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

US Department of Transportation Classification (49 CFR Parts 171-180)

Not regulated as a dangerous good

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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Maritime transport in bulk according to IMO instruments

Pollution category : Z Ship type : 3

Product name : Glycerol Propoxylated

Special precautions for user

Remarks : Special Precautions: Refer to Section 7, Handling & Storage,

for special precautions which a user needs to be aware of or

needs to comply with in connection with transport.

Additional Information: This product may be transported under nitrogen blanketing.

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

the IBC Code

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

*: This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

US State Regulations

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulations:

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

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

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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AIIC Listed

DSL Listed

IECSC Listed

ENCS Listed

KECI Listed

NZIoC Listed

PICCS Listed

TSCA Listed

TCSI Listed

SECTION 16. OTHER INFORMATION

Further information

NFPA Rating (Health, Fire, Reac- 0, 1, 0

tivity)

0, 1, 0

Full text of other abbreviations

Abbreviations and Acronyms : The standard abbreviations and acronyms used in this docu-

ment can be looked up in reference literature (e.g. scientific

dictionaries) and/or websites.

ACGIH = American Conference of Governmental Industrial

Hygienists

ADR = European Agreement concerning the International

Carriage of Dangerous Goods by Road

AICS = Australian Inventory of Chemical Substances ASTM = American Society for Testing and Materials

BEL = Biological exposure limits

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

CAS = Chemical Abstracts Service

CEFIC = European Chemical Industry Council CLP = Classification Packaging and Labelling

COC = Cleveland Open-Cup

DIN = Deutsches Institut fur Normung DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level

DSL = Canada Domestic Substance List

EC = European Commission EC50 = Effective Concentration fifty

ECETOC = European Center on Ecotoxicology and Toxicolo-

gy Of Chemicals

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

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ECHA = European Chemicals Agency

EINECS = The European Inventory of Existing Commercial

Chemical Substances

EL50 = Effective Loading fifty

ENCS = Japanese Existing and New Chemical Substances Inventory

EWC = European Waste Code

GHS = Globally Harmonised System of Classification and

Labelling of Chemicals

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IC50 = Inhibitory Concentration fifty

IL50 = Inhibitory Level fifty

IMDG = International Maritime Dangerous Goods

INV = Chinese Chemicals Inventory

IP346 = Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics DMSO-extractables

KECI = Korea Existing Chemicals Inventory

LC50 = Lethal Concentration fifty LD50 = Lethal Dose fifty per cent.

LL/EL/IL = Lethal Loading/Effective Loading/Inhibitory loading

LL50 = Lethal Loading fifty

MARPOL = International Convention for the Prevention of

Pollution From Ships

NOEC/NOEL = No Observed Effect Concentration / No Ob-

served Effect Level

OE_HPV = Occupational Exposure - High Production Volume

PBT = Persistent, Bioaccumulative and Toxic

PICCS = Philippine Inventory of Chemicals and Chemical

Substances

PNEC = Predicted No Effect Concentration

REACH = Registration Evaluation And Authorisation Of

Chemicals

RID = Regulations Relating to International Carriage of Dan-

gerous Goods by Rail

SKIN DES = Skin Designation

STEL = Short term exposure limit

TRA = Targeted Risk Assessment

TSCA = US Toxic Substances Control Act

TWA = Time-Weighted Average

vPvB = very Persistent and very Bioaccumulative

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

Sources of key data used to : compile the Safety Data

Sheet

The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU

IUCLID date base, EC 1272 regulation, etc).

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The information 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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