

SAFETY DATA SHEET

In accordance with Occupational Safety and Health Act's Standard of Classification and Labelling of Chemical Substances and MSDS

NEODOL LM 1214-3

Version 3.7

Revision Date 2023.11.23

MSDS number 8034
Print Date 2023.11.30

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NEODOL LM 1214-3
Product code : V2531
Synonyms : Alcohols, C12-16, ethoxylated
CAS-No. : 68439-50-9

Recommended use of the chemical and restrictions on use

Recommended use : Use in detergent manufacture.

Restrictions on use : This product must not be used in applications other than the above without first seeking the advice of the supplier.

Manufacturer or supplier's details

Supplier :
SHELL EASTERN CHEMICALS (S)
A REGISTERED BUSINESS OF SHELL EASTERN
TRADING (PTE) LTD (UEN:198902087C)
9 North Buona Vista Drive , #07-01
The Metropolis Tower 1
Singapore 138588
Singapore
Telephone : +65 6384 8269
Telefax : +65 6384 8454
Contact for Safety Data Sheet : sccmsds@shell.com
Emergency telephone number : + (65) 6542 9595 (Alert-SGS)
Other information : NEODOL is a trademark owned by Shell Trademark Management B.V. and Shell Brands Inc. and used by affiliates of Royal Dutch Shell plc.

2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 3

GHS label elements

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Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

PHYSICAL HAZARDS:
Not classified as a physical hazard under GHS criteria.
HEALTH HAZARDS:
H319 Causes serious eye irritation.
ENVIRONMENTAL HAZARDS:
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

:

Prevention:

P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P391 Collect spillage.

Storage:

No precautionary phrases.

Disposal:

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

Other hazards which do not result in classification

Repeated exposure may cause skin dryness or cracking.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Substance

Components

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
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C12-14 Alcohol ethoxylate	Alcohols, C12-14. ethoxylated	68439-50-9
		<= 100

4. FIRST-AID MEASURES

- General advice : Not expected to be a health hazard when used under normal conditions.
- In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Transport to the 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.
- If inhaled : No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
- 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 conditions of use. Possible 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. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.
- Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.
- No specific hazards under normal use conditions. Ingestion may result in nausea, vomiting and/or diarrhoea.
- Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.
- Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
- Notes to physician : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT! Call a doctor or poison control center for guidance.

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Treat symptomatically.		

5. FIRE-FIGHTING MEASURES

Suitable and unsuitable extinguishing media

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

Unsuitable extinguishing media : None

Specific hazards during firefighting : Carbon monoxide may be evolved if incomplete combustion occurs.

Specific extinguishing methods : Standard procedure for chemical fires.
Clear fire area of all non-emergency 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).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Observe all relevant local and international regulations.
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 spilled or released material. Immediately remove all contaminated clothing. 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.
Stay upwind and keep out of low areas.
Be ready for fire or possible exposure.

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 contamination.
Ventilate contaminated area thoroughly.

Methods and materials for : For large liquid spills (> 1 drum), transfer by mechanical

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containment and cleaning up

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.

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.

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

: Avoid contact with skin, eyes and clothing.
Do not empty into drains.

Avoidance of contact

: Copper.
Copper alloys.
Strong oxidising agents.
Aluminum

Product Transfer

: Keep containers closed when not in use. Refer to guidance under Handling section.

Safe storage methods (including conditions to be avoided)

Conditions for safe storage

: Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Other data

: 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.
Bulk storage tanks should be diked (bunded).
Vapours from tanks should not be released to atmosphere.
Breathing losses during storage should be controlled by a

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	suitable vapour treatment system. Nitrogen blanket recommended for large tanks (capacity 100 m ³ or higher). Insulation (lagging) will minimize heat loss in areas of low ambient temperature. Tanks should be fitted with heating coils in areas where ambient conditions can result in handling temperatures below the freezing point/pour point of the product.	
Packaging material	: Suitable material: Stainless steel., Epoxy resins, Polyester. Unsuitable material: Aluminum, Copper., Copper alloys.	
Container Advice	: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.	
Specific use(s)	: Not applicable Ensure that all local regulations regarding handling and storage facilities are followed.	

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components with workplace control parameters

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 Sécurité, (INRS), France <http://www.inrs.fr/accueil>

Engineering measures : Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.
Where material is heated, sprayed or mist formed, there is

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greater potential for airborne concentrations to be generated.
Eye washes and showers for emergency use.
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.

Do not ingest. If swallowed, then seek immediate medical assistance.

Personal protective equipment

Protective measures

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

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

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

Skin and body protection

: Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes.

Thermal hazards

: Not applicable

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 environmental legislation.
Information on accidental release measures are to be found in section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	: Clear to hazy liquid.
Colour	: Data not available
Odour	: mild
Odour Threshold	: Data not available
pH	: Data not available
pour point	: 2.8 °C / 37.0 °F
Boiling point/boiling range	: 260.0 °C / 500.0 °F
Flash point	: 157.2 °C / 315.0 °F
Evaporation rate	: Data not available
Flammability (solid, gas)	: Not applicable
Upper/Lower explosion limit	
Upper explosion limit	: Data not available
Lower explosion limit	: Data not available
Vapour pressure	: 0.1 hPa (37.8 °C / 100.0 °F)
Solubility(ies)	
Water solubility	: 0.05 g/l negligible
Relative vapour density	: 12.0
Relative density	: 0.921 (25.0 °C / 77.0 °F)
Density	: 0.921 g/cm ³ (25 °C / 77 °F)
Partition coefficient: n-octanol/water	: Data not available
Auto-ignition temperature	: Data not available
Decomposition temperature	: Data not available
Viscosity	
Viscosity, dynamic	: Data not available
Viscosity, kinematic	: 19 mm ² /s (37.8 °C / 100.0 °F)
Explosive properties	: Not classified
Oxidizing properties	: Data not available
Surface tension	: Data not available

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

10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions:

:	Stable at normal ambient temperature and pressure., May oxidise in the presence of air. Stable under normal conditions. None known.
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Conditions to avoid	: Extremes of temperature and direct sunlight. Product cannot ignite due to static electricity.
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Incompatible materials	: Copper. Copper alloys. Strong oxidising agents. Aluminum
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Hazardous decomposition products	: None expected under normal use conditions.
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11. TOXICOLOGICAL INFORMATION

Basis for assessment	: Information given is based on product testing, and/or similar products, and/or components.
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Information on likely routes of exposure	: Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.
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Health hazard information

Acute toxicity

Product:

Acute oral toxicity	: LD50 Rat: > 5000 mg/kg Remarks: Low toxicity
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Acute inhalation toxicity	: Remarks: Low toxicity by inhalation.
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Acute dermal toxicity	: LD50 Rabbit: > 2000 mg/kg Remarks: Low toxicity Based on available data, the classification criteria are not met.	

Components:

C12-14 Alcohol ethoxylate:

Acute oral toxicity : LD50 Rat: > 5000 mg/kg
Remarks: Low toxicity

Acute inhalation toxicity : Remarks: Low toxicity by inhalation.

Acute dermal toxicity : LD50 Rabbit: > 2000 mg/kg
Remarks: Low toxicity
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Product:

Remarks: Causes mild skin irritation., Repeated exposure may cause skin dryness or cracking.

Components:

C12-14 Alcohol ethoxylate:

Remarks: Causes mild skin irritation., Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Product:

Remarks: Expected to be irritating to eyes.

Components:

C12-14 Alcohol ethoxylate:

Remarks: Expected to be irritating to eyes.

Respiratory or skin sensitisation

Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

Carcinogenicity

Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

Material	GHS/CLP Carcinogenicity Classification
C12-14 Alcohol ethoxylate	No carcinogenicity classification.

Germ cell mutagenicity

Product:

: Remarks: Non mutagenic

Components:

C12-14 Alcohol ethoxylate:

: Remarks: Non mutagenic

Reproductive toxicity

Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

STOT - single exposure

Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

STOT - repeated exposure

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Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

Aspiration toxicity

Product:

Not an aspiration hazard.

Components:

C12-14 Alcohol ethoxylate:

Not an aspiration hazard.

Further information

Product:

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

Components:

C12-14 Alcohol ethoxylate:

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

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.

Ecotoxicity

Product:

Toxicity to fish (Acute toxicity) :
Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.

Toxicity to crustacean (Acute toxicity) :
Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.

Toxicity to algae/aquatic plants (Acute toxicity) :
Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.

Toxicity to fish (Chronic) : Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l

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toxicity)
Toxicity to crustacean (Chronic toxicity) : Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l
Toxicity to microorganisms (Acute toxicity) : Remarks: LC/EC/IC50 > 100 mg/l
Practically non toxic:
Based on available data, the classification criteria are not met.

Components:

C12-14 Alcohol ethoxylate :

Toxicity to fish (Acute toxicity) : Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.
Toxicity to crustacean (Acute toxicity) : Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.
Toxicity to algae/aquatic plants (Acute toxicity) : Remarks: LC/EC/IC50 < 1 mg/l
Very toxic.
M-Factor (Short-term (acute) aquatic hazard) : 1
Toxicity to microorganisms (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: NOEC/NOEL > 0.1 - <=1.0 mg/l
Toxicity to crustacean(Chronic toxicity) : Remarks: NOEC/NOEL > 0.1 - <=1.0 mg/l

Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable.

Components:

C12-14 Alcohol ethoxylate :

Biodegradability : Remarks: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely to occur due to metabolism and excretion.

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

Components:

C12-14 Alcohol ethoxylate :

Bioaccumulation : Remarks: Bioaccumulation is unlikely to occur due to metabolism and excretion.

Mobility in soil

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Product:

Mobility : Remarks: Floats on water., If product enters soil, it will be highly mobile and may contaminate groundwater.

Components:

C12-14 Alcohol ethoxylate :

Mobility : Remarks: Floats on water., If product enters soil, it will be highly mobile and may contaminate groundwater.

Other adverse effects

no data available

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 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 water.

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.

Contaminated packaging : Drain container thoroughly.
After draining, vent in a safe place away from sparks and fire.
Residues may cause an explosion hazard.
Do not puncture, cut, or weld uncleaned drums.
Send to drum recoverer or metal reclaimer.

Disposal considerations

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

National Regulations

Refer to section 15 for specific national regulation.

International Regulations

ADR

UN number : 3082

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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

Class : 9

Packing group : III

Labels : 9

Hazard Identification Number : 90

Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substances, liquid, n.o.s.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

Class : 9

Packing group : III

Labels : 9

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol C12-C16 Poly (1-6) Ethoxylate)

Class : 9

Packing group : III

Labels : 9

Marine pollutant : yes

Maritime transport in bulk according to IMO instruments

Pollution category : Y

Ship type : 2

Product name : ALCOHOL (C12-C16) POLY (1-6) ETHOXYLATES

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.

15. REGULATORY INFORMATION

National regulatory information

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

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INDUSTRY SAFETY & HEALTH ACT:	Hazardous substances prohibited from manufacturing, etc., Not applicable
	Hazardous substances subject to authorization, Not applicable
	Hazardous substances subject to control, Not applicable
	Substances established for exposure limits, Not applicable
	Hazardous factor subject to keep below permissible limit, Not applicable
	Hazardous Factors Subject to Working Environment Monitoring, Not applicable
	Hazardous Factors Subject to Special Medical Examination, Not applicable
CHEMICALS CONTROL ACT:	Toxic chemical substances, Not applicable
	Authorization chemical substances, Not applicable
	Restricted chemical substances, Not applicable
	Prohibited chemical substances, Not applicable
	Accident precaution chemical substance, Not applicable
DANGEROUS GOODS SAFE CONTROL ACT:	Category/Classification of dangerous material:, Category 4 Dangerous Goods (Flammable Liquids), Grade 4 petroleum chemicals
WASTES MANAGEMENT ACT:	Treat with Article 4/5/24/25 of Disposal Considerations Section.

Other requirements in domestic and other countries

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

AICS : Listed

DSL : Listed

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IECSC	: Listed
KECI	: Listed
PICCS	: Listed
TSCA	: Listed
ENCS	: Listed

16. OTHER INFORMATION

Full text of other abbreviations

Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard
Eye Irrit.	Eye irritation

Abbreviations and Acronyms

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 Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Further information

SAFETY DATA SHEET

In accordance with Occupational Safety and Health Act's Standard of Classification and Labelling of Chemical Substances and MSDS

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Training advice : Provide adequate information, instruction and training for operators.

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 data base, EC 1272 regulation, etc).

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

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