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

Product name : NEODOL 23

Product code : V2728

CAS-No. : 75782-86-4

Manufacturer or supplier's details

Manufacturer/Supplier : Shell Chemicals Europe B.V.

PO Box 2334 3000 CH Rotterdam

Netherlands

Telephone : +31 (0)10 441 5137 +31(0)10 441 5191 Telefax : +31 (0)20 716 8316/ +31 (0)20 713 9230

Emergency telephone : +44 (0) 1235 239 670 (This telephone number is available 24

number hours per day, 7 days per week)

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.

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

Classification (REGULATION (EC) No 1272/2008)

Short-term (acute) aquatic

hazard

: Category 1

Long-term (chronic) aquatic

hazard

: Category 2

Label elements

Hazard pictograms

\*\*\*

Signal word : Warning

# SAFETY DATA SHEET

# **NEODOL 23**

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Hazard statements : PHYSICAL HAZARDS:

Not classified as a physical hazard according to CLP criteria.

**HEALTH HAZARDS:** 

Not classified as a health hazard under CLP criteria.

ENVIRONMENTAL HAZARDS: H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard

Statements

: EUH066

Repeated exposure may cause skin

dryness or cracking.

Precautionary statements : **Prevention:** 

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Storage:

No precautionary phrases.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Slightly irritating to the skin. Slightly irritating to the eye.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

#### **Hazardous components**

Chemical name	CAS-No.	Classification	Concentration
	EC-No.	(REGULATION	(% w/w)
	Registration	(EC) No	
	number	1272/2008)	
Alcohols, C12-13	75782-86-4	Aquatic Acute 1;	<= 100
		H400	
		Aquatic Chronic 2;	
		H411	

Refer to Chapter 8 for Occupational Exposure Guidelines.

For explanation of abbreviations see section 16.

### 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. Immediately flush skin with

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	large amounts of water for at lease washing with soap and water if pain and/or blisters occur, transfacility for additional treatment.	available. If redness, swelling,
In case of eye contact	<ul> <li>Flush eye with copious quantities Remove contact lenses, if prese rinsing.</li> <li>If persistent irritation occurs, ob</li> </ul>	ent and easy to do. Continue
If swallowed	: In general no treatment is necesare swallowed, however, get me	
Most important symptoms and effects, both acute and delayed	<ul> <li>Not considered to be an inhalat conditions of use.</li> <li>Possible respiratory irritation sig a temporary burning sensation coughing, and/or difficulty breat</li> </ul>	gns and symptoms may include of the nose and throat,
	Defatting dermatitis signs and s burning sensation and/or a dried	
	No specific hazards under norm Eye irritation signs and symptor sensation, redness, swelling, ar	ms may include a burning
	No specific hazards under norm Ingestion may result in nausea,	
Protection of first-aiders	<ul> <li>When administering first aid, en appropriate personal protective incident, injury and surrounding</li> </ul>	equipment according to the
Notes to physician	: Call a doctor or poison control of Treat symptomatically.	center for guidance.

# **5. FIRE-FIGHTING MEASURES**

# Flammable properties

: 135,0 °C / 275,0 °F Flash point

Method: Pensky-Martens closed cup

Ignition temperature : Data not available Upper explosion limit : Data not available Lower explosion limit : Data not available Flammability (solid, gas) : Not applicable

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

powder, carbon dioxide, sand or earth may be used for small

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fires only.

Unsuitable extinguishing

media

: Do not use water in a jet.

Specific hazards during

firefighting

: Carbon monoxide may be evolved if incomplete combustion

Will float and can be reignited on surface water.

The vapour is heavier than air, spreads along the ground and

distant ignition is possible.

Specific extinguishing

methods

Further information

: 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 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

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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.

Sudden Release of Pressure Hazard

Avoidance of contact : Copper.

Copper alloys.

Strong oxidising agents.

Aluminum

Product Transfer : Keep containers closed when not in use. Do not use

compressed air for filling discharge or handling.

Storage

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

covering the packaging and storage of this product.

Other data : 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

suitable vapour treatment system.

Nitrogen blanket recommended for large tanks (capacity 100

m3 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.

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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 Securité, (INRS), France http://www.inrs.fr/accueil

#### **Engineering measures**

: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is 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

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controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

Retain drain downs in sealed storage pending disposal or subsequent recycle.

# Personal protective equipment

#### 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)].

Hand protection Remarks

: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. When prolonged or frequent repeated contact occurs. 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.

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> 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.

Thermal hazards : Not applicable

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

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

**Appearance** : liquid

: Water white Colour

Odour

Odour Threshold : Data not available рΗ : Not applicable : 18 °C / 64 °F pour point

Method: ASTM D97

Melting point/range Data not available

Boiling point/boiling range : 259 - 276 °C / 498 - 529 °F

: 135,0 °C / 275,0 °F Flash point

Method: Pensky-Martens closed cup

Evaporation rate : Data not available Flammability (solid, gas) : Not applicable

Upper explosion limit : Data not available

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Lower explosion limit : Data not available Vapour pressure : <5 Pa (25 °C / 77 °F)

Relative vapour density : 7,0

Relative density :  $0.833 (25 \, ^{\circ}\text{C} / 77 \, ^{\circ}\text{F})$ 

Density : 0,834 g/cm3 (20 °C / 68 °F)

Method: ASTM D4052

Solubility(ies)

Water solubility : ca. 5 mg/l negligible (25 °C / 77 °F)

Partition coefficient: n-

octanol/water

: log Pow: 5,28 - 5,58

Auto-ignition temperature : Data not available

Decomposition temperature : Data not available

Viscosity

Viscosity, dynamic : 22 mPa.s (20 °C / 68 °F)

Viscosity, dynamic 50 mPa.s (Not applicable /)

Viscosity, kinematic : 23 mm2/s (25 °C / 77 °F)

13 mm2/s (40 °C / 104 °F) Method: ASTM D 445

14 mm2/s (37,8 °C / 100,0 °F)

Explosive properties : Not applicable
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 accumulator.

Particle size : Data not available

Molecular weight : 191 - 197 g/mol

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# 10. STABILITY AND REACTIVITY

: Stable at normal ambient temperature and pressure., May Reactivity

oxidise in the presence of air.

Chemical stability : The product is chemically stable. Stable under normal

conditions.

Possibility of hazardous

reactions

: None known.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Copper.

Copper alloys.

Strong oxidising agents.

Aluminum

Hazardous decomposition

products

: None expected under normal use conditions.

#### 11. TOXICOLOGICAL INFORMATION

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

products, and/or components.

exposure

Information on likely routes of : Exposure may occur via inhalation, ingestion, skin absorption,

skin or eye contact, and accidental ingestion.

# **Acute toxicity**

**Product:** 

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

Remarks: Low toxicity:

: Remarks: Low toxicity if inhaled. Acute inhalation toxicity

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

: LD50 Rabbit: > 5000 mg/kg Acute dermal toxicity

Remarks: Low toxicity:

Components:

Alcohols, C12-13:

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

Remarks: Low toxicity:

: Remarks: Low toxicity if inhaled. Acute inhalation toxicity

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

: LD50 Rabbit: > 5000 mg/kg Acute dermal toxicity

Remarks: Low toxicity:

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# Skin corrosion/irritation

# **Product:**

Remarks: Causes mild skin irritation.

# Components:

Alcohols, C12-13:

Remarks: Causes mild skin irritation.

# Serious eye damage/eye irritation

### **Product:**

Remarks: Not irritating to eye.

#### **Components:**

Alcohols, C12-13:

Remarks: Not irritating to eye.

# Respiratory or skin sensitisation

# **Product:**

Remarks: Not a sensitiser.

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

# Components:

Alcohols, C12-13:

Remarks: Not a sensitiser.

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

# Germ cell mutagenicity

# Product:

Remarks: Non mutagenic

### **Components:**

Alcohols, C12-13:

Remarks: Non mutagenic

# Carcinogenicity

# **Product:**

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

# **Components:**

# Alcohols, C12-13:

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

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Material	GHS/CLP Carcinogenicity Classification
Alcohols, C12-13	No carcinogenicity classification.

### Reproductive toxicity

# **Product:**

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

# Components:

# Alcohols, C12-13:

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:**

### Alcohols, C12-13:

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:**

# Alcohols, C12-13:

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

# **Aspiration toxicity**

# **Product:**

Not an aspiration hazard.

# Components:

# Alcohols, C12-13:

Not an aspiration hazard.

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#### **Further information**

### **Product:**

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

# Components:

### Alcohols, C12-13:

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: LL/EL/IL50 <= 1 mg/l

Very toxic.

Toxicity to crustacean (Acute

toxicity)

Remarks: LL/EL/IL50 <= 1 mg/l

Very toxic.

Toxicity to algae/aquatic

plants (Acute toxicity) R

Remarks: LL/EL/IL50 <= 1 mg/l

Very toxic.

Toxicity to fish (Chronic

toxicity)

: Remarks: Data not available

Toxicity to crustacean

(Chronic toxicity)

: Remarks: Data not available

Toxicity to microorganisms

(Acute toxicity)

: Remarks: Data not available

Components: Alcohols, C12-13:

Alconois, 012-13.

Toxicity to fish (Acute

toxicity)

: Remarks: LL/EL/IL50 <= 1 mg/l

Very toxic.

Toxicity to crustacean (Acute

toxicity)

: Remarks: LL/EL/IL50 <= 1 mg/l

Very toxic.

Toxicity to algae/aquatic plants (Acute toxicity)

: Remarks: LL/EL/IL50 <= 1 mg/l

Very toxic.

M-Factor (Short-term (acute)

aquatic hazard)

: 1

Toxicity to microorganisms

(Acute toxicity)

Toxicity to fish (Chronic : Remarks: Data not available

13 / 17 800001001060 RU

: Remarks: Data not available

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toxicity)

Toxicity to : Remarks: Data not available

crustacean(Chronic toxicity)

Persistence and degradability

**Product:** 

Biodegradability : Remarks: Readily biodegradable.

<u>Components:</u> Alcohols, C12-13:

Biodegradability : Remarks: Readily biodegradable.

Bioaccumulative potential

**Product:** 

Bioaccumulation : Remarks: Bioaccumulation is unlikely to occur due to

metabolism and excretion.

Partition coefficient: n-

octanol/water
Components:
Alcohols, C12-13:

: log Pow: 5,28 - 5,58

Bioaccumulation : Remarks: Bioaccumulation is unlikely to occur due to

metabolism and excretion.

Mobility in soil

**Product:** 

Mobility : Remarks: Floats on water., Adsorbs to soil and has low

mobility

Components: Alcohols, C12-13:

Mobility : Remarks: Floats on water., Adsorbs to soil and has low

mobility

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,

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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.

#### 14. TRANSPORT INFORMATION

# **International Regulations**

**ADR** 

UN number : 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(C12-C13 ALCOHOL)

Class : 9
Packing group : III
Labels : 9
Hazard Identification Number : 90
Environmentally hazardous : yes

**ADN** 

UN number : 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

Class : 9
Packing group : III

Labels : 9 (N1, F)

Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substances, liquid, n.o.s.

(C12-C13 ALCOHOL)

Class : 9
Packing group : III
Labels : 9

**IMDG-Code** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(C12-C13 ALCOHOL)

Class : 9
Packing group : III
Labels : 9
Marine pollutant : yes

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# Maritime transport in bulk according to IMO instruments

Pollution category : Y Ship type : 2

Product name : Noxious liquid, NF, (5) n.o.s. (Neodol 23 contains alcohols

(C13+))

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

# 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:

**AICS** Listed DSL Listed **IECSC** Listed **ENCS** Listed : Listed KECI : Listed NZIoC **PICCS** : Listed **TSCA** : Listed : Listed TCSI

# **16. OTHER INFORMATION**

### **Full text of H-Statements**

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

#### Full text of other abbreviations

Aquatic Acute Short-term (acute) aquatic hazard Aquatic Chronic Long-term (chronic) aquatic hazard

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

document can be looked up in reference literature (e.g.

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scientific dictionaries) and/or websites.

SDS Regulation : 1. GN 2.2.5.1313-03 "Maximum permissible

concentration of harmful substance in the working zone

area".

2. GOST 12.1.007-76 "Harmful agents. Classification and

safety requirements."

3. GOST 12.1.005-88 "General hygiene requirements to

the working zone area".

4. GN 2.1.5.1315-03 "Reservoir water maximum

permissible concentration".

5. GOST 19433-88 "Dangerous goods. Classification and

marking".

6. Rail transportation safety rules and dangerous goods

accidents liquidation procedure.

7. GOST 30333-2007 Chemical product safety data

sheet. General requirements. Regulation 1907/2006/EC

# **Further information**

Training advice : Provide adequate information, instruction and training for

operators.

Other information : 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).

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.