# SAFETY DATA SHEET
According to EC No 1907/2006 as amended as at the date of this SDS

# CARADOL SP27-25N

| Version | Revision Date: | SDS Number: | Date of last issue: 20.07.2018 |
|---|---|---|---|
| 1.1 | 21.09.2022 | 800010032192 | Print Date 28.09.2022 |

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | | |
|---|---|---|
| Trade name | : | CARADOL SP27-25N |
| Product code | : | U318S |
| Synonyms | : | Acrylonitrile-Styrene Copolymer Dispersion in Polyether Polyol |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| | | |
|---|---|---|
| Use of the Sub-stance/Mixture | : | Use for the manufacture of polyurethane products. |
| Uses advised against | : | This product must not be used in applications other than the above without first seeking the advice of the supplier. |

### 1.3 Details of the supplier of the safety data sheet

| | | |
|---|---|---|
| Manufacturer/Supplier | : | **Shell Chemicals Europe B.V.**<br>PO Box 2334<br>3000 CH Rotterdam<br>Netherlands |
| Telephone | : | +31 (0)10 441 5137 / +31 (0)10 441 5191 |
| Telefax | : | +31 (0)20 716 8316/ +31 (0)20 713 9230 |
| Contact for Safety Data Sheet | : | sccmsds@shell.com |

### 1.4 Emergency telephone number

+44 (0) 1235 239 670 (This telephone number is available 24 hours per day, 7 days per week)
(In non-emergency situations, the number of the Poison Information Centre is 08-33 12 31)

| | | |
|---|---|---|
| Other information | : | CARADOL is a trademark owned by Shell Trademark Management B.V. and Shell Brands Inc. and used by affiliates of Royal Dutch Shell plc. |
| | : | This product is a Polymer which is exempt from the obligation to register under REACH in accordance with Article II, Section 9. |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

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

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms : No Hazard Symbol required
Signal word : No signal word

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:
Not classified as environmental hazard according to CLP criteria.

Precautionary statements :

**Prevention:**

No precautionary phrases.

**Response:**

No precautionary phrases.

**Storage:**

No precautionary phrases.

**Disposal:**

No precautionary phrases.

### 2.3 Other hazards

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Styrene-acrylonitrile polymer | 57913-80-1 | | >= 20 - <= 30 |
| Polyalkylene glycol | 9082-00-2 | | >= 70 - <= 80 |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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

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.

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

In case of eye contact : Flush eye with copious quantities of water.
Remove contact lenses, if present and easy to do. Continue rinsing.
If persistent irritation occurs, obtain medical attention.

If swallowed : In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

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

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Call a doctor or poison control center for guidance.
Treat symptomatically. Following cases of gross overexposure, investigation of liver, kidney and eye function may be advisable. Records of such incidents should be maintained for future reference.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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.

**5.2 Special hazards arising from the substance or mixture**

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.

**5.3 Advice for firefighters**

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).

Specific extinguishing methods : 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.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Observe all relevant local and international regulations.
6.1.1 For non emergency personnel:
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.
6.1.2 For emergency responders:
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.

**6.2 Environmental precautions**

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 contamination.
Ventilate contaminated area thoroughly.

### 6.3 Methods and material for containment and cleaning up

Methods for 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.

### 6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet., For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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 storage facilities are followed.

Advice on safe handling : In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
Use local exhaust extraction over processing area.
Avoid unintentional contact with isocyanates to prevent uncontrolled polymerisation.
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.

Product Transfer : Lines should be purged with nitrogen before and after product transfer. Keep containers closed when not in use.

Hygiene measures : Wash hands before eating, drinking, smoking and using the toilet. Launder contaminated clothing before re-use.

**7.2 Conditions for safe storage, including any incompatibilities**

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

Further information on storage 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 period : 24 Months

Storage Temperature:
Ambient.
Storage should be handled at temperatures such that viscosities 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.

**7.3 Specific end use(s)**

Specific use(s) : Ensure that all local regulations regarding handling and storage facilities are followed.

Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Biological occupational exposure limits**

No biological limit allocated.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| | |
|---|---|
| Remarks: | No DNEL value has been established. |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Remarks: | Exposure assessments have not been presented for the environment therefore PNEC values not required. | |

### 8.2 Exposure controls

**Engineering measures**

Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
Adequate ventilation to control airborne concentrations.
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

General Information:
Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
Define procedures for safe handling and maintenance of controls.
Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.
Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.
Drain down system prior to equipment break-in or maintenance.
Retain drain downs in sealed storage pending disposal or subsequent recycle.

**Personal protective equipment**

The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

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

Eye protection : If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
Approved to EU Standard EN166.

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.

Skin and body protection : Skin protection is not ordinarily required beyond standard work clothes.
It is good practice to wear chemical resistant gloves.

Respiratory protection : No respiratory protection is ordinarily required under normal conditions of use.
In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | liquid |
| Colour | : | no data available |
| Odour | : | odourless |
| Odour Threshold | : | Data not available |
| Melting / freezing point | : | Data not available |
| Boiling point/boiling range | : | Data not available |
| Flammability | | |

| | | |
|---|---|---|
| Flammability (solid, gas) | : | Not applicable |

Lower explosion limit and upper explosion limit / flammability limit

| | | |
|---|---|---|
| Upper explosion limit / upper flammability limit | : | Data not available |
| Lower explosion limit / Lower flammability limit | : | Data not available |
| Flash point | : | Typical > 200 °C<br>Method: ASTM D93 (PMCC) |
| Auto-ignition temperature | : | Data not available |

Decomposition temperature

| | | |
|---|---|---|
| Decomposition temperature | : | Data not available |
| pH | : | Data not available |

Viscosity

| | | |
|---|---|---|
| Viscosity, dynamic | : | Typical 1.780 mPa.s (25 °C)<br>Method: ASTM D445 |
| Viscosity, kinematic | : | Data not available |

Solubility(ies)

| | | |
|---|---|---|
| Water solubility | : | Data not available |
| Partition coefficient: n-octanol/water | : | Data not available |
| Vapour pressure | : | Data not available (50 °C) |
| Relative density | : | Data not available |
| Density | : | 1.038 kg/m3 (25 °C)<br>Method: ASTM D4052 |
| Relative vapour density | : | Data not available |

Particle characteristics

| | | |
|---|---|---|
| Particle size | : | Data not available |

**9.2 Other information**

| | | |
|---|---|---|
| Explosives | : | Not applicable |
| Oxidizing properties | : | Data not available |
| Evaporation rate | : | Data not available |

| | | |
|---|---|---|
| Conductivity | : | Electrical conductivity: > 10,000 pS/m<br><br>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. |
| Surface tension | : | Data not available |
| Molecular weight | : | Data not available |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

No hazardous reaction is expected when handled and stored according to provisions
Hygroscopic.

### 10.3 Possibility of hazardous reactions

| | | |
|---|---|---|
| Hazardous reactions | : | Polymerises exothermically with di-isocyanates at ambient temperatures.<br>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.<br>Reacts with strong oxidising agents. |

### 10.4 Conditions to avoid

| | | |
|---|---|---|
| Conditions to avoid | : | Heat, flames, and sparks.<br>Product cannot ignite due to static electricity. |

### 10.5 Incompatible materials

| | | |
|---|---|---|
| Materials to avoid | : | Avoid contact with isocyanates, copper and copper alloys, zinc, strong oxidizing agents, and water. |

### 10.6 Hazardous decomposition products

Unknown toxic products may be formed.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

| | | |
|---|---|---|
| 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<br>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<br>Remarks: Low toxicity:<br>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. |

**Serious eye damage/eye irritation**

**Product:**

| | | |
|---|---|---|
| Remarks | : | 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. |

**Germ cell mutagenicity**

**Product:**

| | | |
|---|---|---|
| Genotoxicity in vivo | : | Remarks: Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity- Assessment | : | This product does not meet the criteria for classification in categories 1A/1B. |

**Carcinogenicity**

**Product:**

| | | |
|---|---|---|
| Remarks | : | Based on available data, the classification criteria are not met. |
| Carcinogenicity - Assessment | : | This product does not meet the criteria for classification in categories 1A/1B. |

| Material | GHS/CLP Carcinogenicity Classification |
|---|---|
| Styrene-acrylonitrile polymer | No carcinogenicity classification. |

| | |
|---|---|
| Polyalkylene glycol | No carcinogenicity classification. |

**Reproductive toxicity**

**Product:**

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

Reproductive toxicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

**STOT - single exposure**

**Product:**

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

**STOT - repeated exposure**

**Product:**

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

**Aspiration toxicity**

**Product:**

Not an aspiration hazard.

### 11.2 Information on other hazards

**Further information**

**Product:**

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

Remarks : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

Toxicity to fish : 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 : EC50 : > 100 mg/l
Remarks: Based on available data, the classification criteria are not met.
Practically non toxic:

Toxicity to algae/aquatic plants : EC50 : > 100 mg/l
Remarks: Practically non toxic:
Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Data not available

Toxicity to microorganisms : IC50 : > 100 mg/l
Remarks: Based on available data, the classification criteria are not met.
Practically non toxic:

### 12.2 Persistence and degradability

**Product:**

Biodegradability : Remarks: Readily biodegradable.

### 12.3 Bioaccumulative potential

**Product:**

Bioaccumulation : Remarks: Does not bioaccumulate significantly.

### 12.4 Mobility in soil

**Product:**

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

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB..

### 12.6 Endocrine disrupting properties

no data available

### 12.7 Other adverse effects

**Product:**

Additional ecological information : Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : 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.

Disposal, transport, storage and handling should be in accordance with SE regulation Avfallsförordning (2011:927).

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.

Packing: Emptying: Place the package upside down, and tilt slightly, circa 10 degrees, to enable drainage in such a way that the lowest part of the package is at the exit orifice. On some packing an extra hole must be made. Drainage should be carried out at room temperature (at least 15 °C). Wait until the package is drip dry. Do not close package after draining. Please note the risks connected with emptying package and containers with flammable liquids. Emptied package should be ventilated in a safe place away from sparks and fire. Residues may be an explosion risk. Do not puncture, cut or weld in non-cleaned package, containers or drums.

Local legislation
Remarks : Suggestion for emptied package:
15 01 02: Plastic packaging
15 01 04 metallic packaging.

Packages containing any remaining product and which have not been emptied until drip dry,must be handled as dangerous waste and must be well sealed before disposal.
Suggestion for waste code:
15 01 10: Packaging containing residues of or contaminated by dangerous substances

## SECTION 14: Transport information

### 14.1 UN number or ID number

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **RID** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

### 14.2 UN proper shipping name

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **RID** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

### 14.3 Transport hazard class(es)

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **RID** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

### 14.4 Packing group

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **RID** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |
| **IATA** | : | Not regulated as a dangerous good |

### 14.5 Environmental hazards

| | | |
|---|---|---|
| **ADR** | : | Not regulated as a dangerous good |
| **RID** | : | Not regulated as a dangerous good |
| **IMDG** | : | Not regulated as a dangerous good |

### 14.6 Special precautions for user

| | | |
|---|---|---|
| Remarks | : | Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport. |

**14.7 Maritime transport in bulk according to IMO instruments**

| | | |
|---|---|---|
| Pollution category | : | Y |
| Ship type | : | 3 |
| Product name | : | Acrylonitrile-Styrene Copolymer Dispersion in Polyether Polyol |

**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.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

| | | |
|---|---|---|
| REACH - List of substances subject to authorisation (Annex XIV) | : | Product is not subject to Authorisation under REACH. |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). | : | This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57). |

**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:**

| | | |
|---|---|---|
| TSCA | : | Listed |
| DSL | : | Listed |
| AIIC | : | Listed |
| IECSC | : | Listed |
| ENCS | : | Listed |
| KECI | : | Listed |
| NZIoC | : | Listed |
| PICCS | : | Listed |
| TCSI | : | Listed |

**15.2 Chemical safety assessment**

A Chemical Safety Assessment is not required for this substance.

## SECTION 16: Other information

**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| | | |
|---|---|---|
| Training advice | : | Provide adequate information, instruction and training for operators. |
| Other information | : | For Industry guidance and tools on REACH please visit the CEFIC website at http://cefic.org/Industry-support.<br>The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.<br>A vertical bar (\|) in the left margin indicates an amendment |

from the previous version.

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|---|---|---|
| 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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