# SAFETY DATA SHEET

## Q8 Corrosion Inhibitor Long Life

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

### 1.1 Product identifier

**Product name** : Q8 Corrosion Inhibitor Long Life

**Material uses** : Corrosion inhibitor for cooling systems

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

Not applicable.

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

**Manufacturer / Distributor** : Kuwait Petroleum Companies in the Benelux
Company Office: Brusselstraat 59, B-2018, Antwerp
Contactaddress: Petroleumkaai 7, B-2020, Antwerp
Tel. +32 3 247 38 11, Fax +32 3 216 03 42

**e-mail address of person responsible for this SDS** : SDSinfo@Q8.com, communication preferably in English only.

### 1.4 Emergency telephone number

**Europe** : +44 (0) 1235 239 670

**Global (English only)** : +44 (0) 1865 407 333

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Repr. 2, H361d (Unborn child)

**Ingredients of unknown toxicity** : None.

**Ingredients of unknown ecotoxicity** : None.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Warning

**Hazard statements** : H361d - Suspected of damaging the unborn child.

**Precautionary statements**

**Prevention** : P201 - Obtain special instructions before use.
P280 - Wear protective gloves: > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber or Viton® - thickness >0.38 mm. Wear eye or face protection. Wear protective clothing.

## SECTION 2: Hazards identification

**Response** : P308 + P313 - IF exposed or concerned: Get medical attention.

**Storage** : P405 - Store locked up.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : sodium 2-ethylhexanoate

**Supplemental label elements** : Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|---|---|---|
| sodium 2-ethylhexanoate | REACH #: 01-2119979083-31<br>EC: 243-283-8<br>CAS: 19766-89-3 | ≥25 - ≤50 | Repr. 2, H361d (Unborn child) | [1] |
| methyl-1H-benzotriazole | REACH #: 01-2119979081-35<br>EC: 249-596-6<br>CAS: 29385-43-1 | <2.5 | Acute Tox. 4, H302<br>Aquatic Chronic 2, H411 | [1] |
| imidazole | REACH #: 01-2119485825-24<br>EC: 206-019-2<br>CAS: 288-32-4<br>Index: 613-319-00-0 | <0.30 | Acute Tox. 4, H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Repr. 1B, H360D (Unborn child)<br>**See Section 16 for the full text of the H statements declared above.** | [1] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

# SECTION 4: First aid measures

## 4.1 Description of first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.

**Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

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

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

# SECTION 5: Firefighting measures

## 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, $CO_2$, alcohol-resistant foam or water spray (fog).

**Unsuitable extinguishing media** : Do not use water jet.

## SECTION 5: Firefighting measures

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

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

### 6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available.

## SECTION 8: Exposure controls/personal protection

### 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Recommended: > 8 hours (breakthrough time): neoprene, butyl rubber, nitrile rubber or Viton® - thickness >0. 38 mm

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state** : Liquid.

**Appearance** : Clear.

**Color** : Colorless.

**Odor** : Mild.

**Odor threshold** : Not available.

**pH** : 7.8 to 8.5 [Conc. (% w/w): 5%]

**Melting point/freezing point** : -5°C

**Initial boiling point and boiling range** : 100°C

**Flash point** : Open cup: Not applicable.

**Evaporation rate** : Not available.

## SECTION 9: Physical and chemical properties

**Flammability (solid, gas)** : Not applicable.

**Upper/lower flammability or explosive limits** : Not available.

**Vapor pressure** : Not available.

**Vapor density** : Not available.

**Relative density** : 1.06

**Solubility(ies)** : Not available.

**Partition coefficient: n-octanol/water** : Not available.

**Auto-ignition temperature** : Not applicable.

**Decomposition temperature** : Not available.

**Viscosity (40°C)** : Not available.

**Explosive properties** : Not applicable.

**Oxidizing properties** : Not applicable.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:
Strong oxidizing materials, strong acids, nitrates, peroxides and chlorates

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.at °C: Elevated temperature: Ketone. Aldehyde.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| methyl-1H-benzotriazole | LD50 Oral | Rat | 675 mg/kg | - |
| imidazole | LD50 Oral | Rat | 220 mg/kg | - |

**Conclusion/Summary** : Not available.

**Acute toxicity estimates**

| Route | ATE value |
|---|---|
| Oral | 27108.4 mg/kg |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| methyl-1H-benzotriazole | Eyes - Mild irritant | Rabbit | - | 10 milligrams | - |

**Conclusion/Summary** : Not available.

## SECTION 11: Toxicological information

**Sensitization**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.

**Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

## SECTION 11: Toxicological information

Not available.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| methyl-1H-benzotriazole | EC50 53 mg/l | Algae - Skeletonema costatum | 72 hours |
| | LC50 55 mg/l | Crustaceans - Arcartia tonsa | 48 hours |
| | LC50 55 mg/l | Fish - Cyprinodon variegatus | 96 hours |
| imidazole | EC50 133 mg/l | Algae - Desmodesmus subspicatus | 72 hours |
| | EC50 341.5 mg/l | Crustaceans - Daphnia magna | 48 hours |

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Readily biodegradable

### 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| imidazole | -0.02 | - | low |

### 12.4 Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

**Product**

## SECTION 13: Disposal considerations

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

**European waste catalogue (EWC)**

| Waste code | Waste designation |
|---|---|
| 16 01 21* | hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14 |

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---|---|---|---|---|
| **14.1 UN number** | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| **14.2 UN proper shipping name** | - | - | - | - |
| **14.3 Transport hazard class(es)** | - | - | - | - |
| **14.4 Packing group** | - | - | - | - |
| **14.5 Environmental hazards** | No. | No. | No. | No. |
| **Additional information** | - | - | - | - |

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

# SECTION 15: Regulatory information

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

### EU Regulation (EC) No. 1907/2006 (REACH)

#### Annex XIV - List of substances subject to authorization

##### Annex XIV

None of the components are listed.

##### Substances of very high concern

None of the components are listed.

### Other EU regulations

**Europe inventory** : All components are listed or exempted.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**Hazard class for water (WGK)** : Appendix No. 4

**VOC content** : Exempt.

### International regulations

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

### International lists

#### National inventory

**Australia** : Not determined.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

**Japan** : **Japan inventory (ENCS)**: All components are listed or exempted.
**Japan inventory (ISHL)**: Not determined.

**Malaysia** : Not determined.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

**Taiwan** : All components are listed or exempted.

**Turkey** : All components are listed or exempted.

**United States** : All components are listed or exempted.

**15.2 Chemical Safety Assessment** : Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification | Justification |
|---|---|
| Repr. 2, H361d (Unborn child) | Calculation method |

**Full text of abbreviated H statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H360D | May damage the unborn child. |
| H361d | Suspected of damaging the unborn child. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Full text of classifications [CLP/GHS]**

| | |
|---|---|
| Acute Tox. 4, H302 | ACUTE TOXICITY (oral) - Category 4 |
| Aquatic Chronic 2, H411 | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Repr. 1B, H360D | TOXIC TO REPRODUCTION (Unborn child) - Category 1B |
| Repr. 2, H361d | TOXIC TO REPRODUCTION (Unborn child) - Category 2 |
| Skin Corr. 1C, H314 | SKIN CORROSION/IRRITATION - Category 1C |

**Training advice** : Ensure operatives are trained to minimise exposures.

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**Prepared by** : Kuwait Petroleum Research & Technology B.V., The Netherlands

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**