

SAFETY DATA SHEET

Q8 Antifreeze Long Life Premixed



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

1.1 Product identifier

Product name : Q8 Antifreeze Long Life Premixed
UFI : 60F0-N01P-000W-NJHV

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

Material uses : Antifreeze and coolant for engines and industrial equipment

1.3 Details of the supplier of the safety data sheet

Supplier : Kuwait Petroleum Companies in the Benelux
Company Office: Desguinlei 100 - 8, 2018 Antwerp, Belgium
Contactaddress: Petroleumkaai 7, 2020 Antwerp, Belgium
Tel. +32 3 247 38 11, Fax +32 3 216 03 42

Manufacturer / Distributor : Kuwait Petroleum Belgium N.V./S.A. / Q8Oils Italia S.r.l.
Petroleumkaai 7 Via Volpedo 2
B-2020 Antwerp 15050 Castellar Guidobono (AL)
Belgium Italy

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

PCN Information contact : PCNinfo@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



National advisory body/Poison Center

Belgium : Poison Centre : +32 (0)70 245 245

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]

| | | |
|---|-------------|-------|
| <input checked="" type="checkbox"/> TOXIC TO REPRODUCTION | Category 1B | H360D |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) | Category 2 | H373 |

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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 :



SECTION 2: Hazards identification

| | |
|---|--|
| Signal word | : Danger |
| Hazard statements | : H360D - May damage the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. |
| Precautionary statements | |
| Prevention | : P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P260 - Do not breathe vapor. |
| Response | : P308 + P313 - IF exposed or concerned: Get medical advice or attention. P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. |
| Storage | : Not applicable. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : ethanediol sodium 2-ethylhexanoate |
| Supplemental label elements | : Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : R Restricted to professional users. |
| Special packaging requirements | |
| Containers to be fitted with child-resistant fastenings | : Not applicable. |
| Tactile warning of danger | : N ot applicable. |

2.3 Other hazards

| | |
|--|---|
| Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | : This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| Other hazards which do not result in classification | : None known. |

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|-------------------------|---|-----------|--|---|---------|
| ethanediol | REACH #: 01-2119456816-28 EC: 203-473-3 CAS: 107-21-1 Index: 603-027-00-1 | ≥50 - ≤75 | Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) | ATE [Oral] = 2000 mg/kg | [1] [2] |
| sodium 2-ethylhexanoate | EC: 243-283-8 CAS: 19766-89-3 Index: 607-230-00-6 | ≤3 | Repr. 1B, H360D | - | [1] |
| methyl-1H-benzotriazole | REACH #: 01-2119979081-35 EC: 249-596-6 CAS: 29385-43-1 | <1 | Acute Tox. 4, H302 Repr. 2, H361d (oral) Aquatic Chronic 2, H411 | ATE [Oral] = 720 mg/kg | [1] |

Q8 Antifreeze Long Life Premixed

SECTION 3: Composition/information on ingredients

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

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

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 following exposure or if feeling unwell.
- 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.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. 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. The product contains bitrex. Have conscious person drink several glasses of water or milk. Induce vomiting by sticking finger in throat. 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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog).
- Unsuitable extinguishing media** : Do not use water jet.

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
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.

SECTION 6: Accidental release measures

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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. 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.

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 breathe vapor or mist. Do not ingest. 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. See Section 10 for incompatible materials before handling or use.

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

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|-------------------------|--|
| ethanediol | <p>Limit values (Belgium, 5/2021) Absorbed through skin. TWA 8 hours: 20 ppm. Form: aerosol. TWA 8 hours: 52 mg/m³. Form: aerosol. Limit value - M: 40 ppm. Form: aerosol. Limit value - M: 104 mg/m³. Form: aerosol.</p> <p>EU OEL (Europe, 1/2022) Absorbed through skin. TWA 8 hours: 20 ppm. TWA 8 hours: 52 mg/m³. STEL 15 minutes: 40 ppm. STEL 15 minutes: 104 mg/m³.</p> |

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : 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

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|-------------------------|------|----------------------|------------------------|--------------------|----------|
| ethanediol | DNEL | Long term Inhalation | 7 mg/m ³ | General population | Local |
| | DNEL | Long term Inhalation | 35 mg/m ³ | Workers | Local |
| | DNEL | Long term Dermal | 53 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 106 mg/kg bw/day | Workers | Systemic |
| sodium 2-ethylhexanoate | DNEL | Long term Oral | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 1 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 2 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 3.5 mg/m ³ | General population | Systemic |
| methyl-1H-benzotriazole | DNEL | Long term Inhalation | 14 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Oral | 0.01 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0.01 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 0.3 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 350 µg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 21.2 mg/m ³ | Workers | Systemic |

PNECs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|------------------------|------------|---------------|
| Ethanediol | Fresh water | 10 mg/l | - |
| | Marine water | 1 mg/l | - |
| | Fresh water sediment | 20.9 mg/kg | - |
| | Sewage Treatment Plant | 199.5 mg/l | - |

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: < 1 hour (breakthrough time): nitrile rubber 0.17 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. Gas and combination filter cartridges should comply with the European standard EN14387.

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Appearance : Clear

Color : Orange

SECTION 9: Physical and chemical properties

| | |
|--|---|
| Odor | : Sweet. [Slight] |
| Odor threshold | : Not available. |
| Melting point/freezing point | : <input checked="" type="checkbox"/> -36°C (<-32.8°F) [ASTM D 1177] |
| Boiling point or initial boiling point and boiling range | : >105°C (>221°F) |
| Flammability | : Not applicable. |
| Lower and upper explosion limit | : Lower: 3% Upper: 15% |
| Flash point | : <input checked="" type="checkbox"/> Closed cup: 115°C (239°F) [ASTM D 93] |
| Auto-ignition temperature | : <input checked="" type="checkbox"/> 398°C (748.4°F) |
| Decomposition temperature | : Not available. |
| pH | : <input checked="" type="checkbox"/> 8.3 to 8.8 |
| Viscosity | : <input checked="" type="checkbox"/> Not available. |
| Solubility | : |

| Media | Result |
|--|----------------|
| <input checked="" type="checkbox"/> cold water | Easily soluble |
| hot water | Easily soluble |

| | |
|--|--|
| Solubility in water | : <input checked="" type="checkbox"/> Not available. |
| Miscible with water | : <input checked="" type="checkbox"/> Yes. |
| Partition coefficient n-octanol/ water (log Pow) | : <input checked="" type="checkbox"/> Not applicable. |
| Vapor pressure | : <input checked="" type="checkbox"/> 0.01 kPa (<0.075006 mm Hg) |
| Density | : <input checked="" type="checkbox"/> 1.06 g/cm ³ [20°C (68°F)] [ASTM D 4052] |
| Relative vapor density | : Not available. |
| Explosive properties | : Not applicable. |
| Oxidizing properties | : Not applicable. |
| <u>Particle characteristics</u> | |
| Median particle size | : <input checked="" type="checkbox"/> Not applicable. |

9.2 Other information

9.2.1 Information with regard to physical hazard classes

| | |
|----------------------|-------------------|
| Explosive properties | : Not applicable. |
| Oxidizing properties | : Not applicable. |

9.2.2 Other safety characteristics

| | |
|---------------------|--|
| Miscible with water | : <input checked="" type="checkbox"/> Yes. |
|---------------------|--|

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 | : <input checked="" type="checkbox"/> No specific data. |
| 10.5 Incompatible materials | : <input checked="" type="checkbox"/> No specific data. |

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SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------|---------|------------|----------|
| ethanediol | LD50 Oral | Rat | 4700 mg/kg | - |
| methyl-1H-benzotriazole | LD50 Oral | Rat | 675 mg/kg | - |

Conclusion/Summary : Not available.

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|----------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Q8 Antifreeze Long Life Premixed | 3030.3 | N/A | N/A | N/A | N/A |
| ethanediol | 2000 | N/A | N/A | N/A | N/A |
| methyl-1H-benzotriazole | 720 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|-----------------|-------------|
| ethanediol | Eyes - Mild irritant | Rabbit | - | 1 hours 100 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 6 hours 1440 mg | - |
| methyl-1H-benzotriazole | Skin - Mild irritant | Rabbit | - | 555 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 10 mg | - |

Conclusion/Summary : Not available.

Respiratory or skin 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)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|---------------|
| ethanediol | Category 2 | - | kidneys |

Aspiration hazard

Not available.

SECTION 11: Toxicological information

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

Not available.

- Conclusion/Summary** : Not available.
General : May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : May damage the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|-------------------------|-------------------------------------|---|----------|
| ethanediol | Acute LC50 6900000 µg/l Fresh water | Crustaceans - <i>Ceriodaphnia dubia</i> - Neonate | 48 hours |
| | Acute LC50 41000 mg/l Fresh water | Daphnia - <i>Daphnia magna</i> - Neonate | 48 hours |
| methyl-1H-benzotriazole | Acute LC50 8050000 µg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |
| | Acute LC50 102 mg/l Fresh water | Crustaceans - <i>Ceriodaphnia dubia</i> | 48 hours |
| | Acute LC50 38 mg/l Fresh water | Fish - <i>Pimephales promelas</i> | 96 hours |

Conclusion/Summary : Not available.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|-------------------------|---|-----------------|------|----------|
| ethanediol | OECD 301A 301A Ready Biodegradability - DOC Die-Away Test | >70 % - 28 days | - | - |

Conclusion/Summary : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|-------------------------|-------------------|------------|------------------|
| ethanediol | - | - | Readily |
| sodium 2-ethylhexanoate | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| ethanediol | -1.36 | - | 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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 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

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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 14* | antifreeze fluids containing hazardous substances |

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 or ID 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. |

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 Maritime transport in bulk according to IMO instruments : 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

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SECTION 15: Regulatory information

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| Product/ingredient name | % | Designation [Usage] |
|--|-----|---------------------|
| <input checked="" type="checkbox"/> Q8 Antifreeze Long Life Premixed | ≥90 | 3 |
| sodium 2-ethylhexanoate | ≤3 | 30 30 |

Labeling : Restricted to professional users.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants (1021/2019/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Germany

Hazard class for water (WGK) : 1

Switzerland

VOC content : Exempt.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

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.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

SECTION 15: Regulatory information

| | |
|--|--|
| Eurasian Economic Union | : <input checked="" type="checkbox"/> Russian Federation inventory : Not determined. |
| Japan | : <input checked="" type="checkbox"/> Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted. |
| 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. |
| Thailand | : <input checked="" type="checkbox"/> Not determined. |
| Turkey | : Not determined. |
| United States of America | : All components are active or exempted. |
| Viet Nam | : <input checked="" type="checkbox"/> Not determined. |
| 15.2 Chemical Safety Assessment | : <input checked="" type="checkbox"/> 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 | : <input checked="" type="checkbox"/> ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ASTM = American Society for Testing and Materials ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS = Chemical Abstracts Service CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DIN = German Institute for Standardization DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EC = European Commission EC50 = Half maximal effective concentration EN = European Standard (Norm) EUH statement = CLP-specific Hazard statement GHS - Globally Harmonized System of Classification and Labeling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IC50 = Half maximal inhibitory concentration IMDG = International Maritime Dangerous Goods IMO = International Maritime Organisation ISO = International Organization for Standardization LC50 = Median lethal concentration LD50 = Median lethal dose LOAEL / LOAEC = Lowest Observed Adverse Effect Level / Concentration MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available NOAEL / NOAEC = No Observed Adverse Effect Level / Concentration NOEL / NOEC = No Observed Effect Level / Concentration OECD = Organisation for Economic Co-operation and Development OEL = Occupational Exposure Limit PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail SDS = Safety Data Sheet |
|-----------------------------------|--|

Q8 Antifreeze Long Life Premixed

SECTION 16: Other information

SVHC = Substances of Very High Concern
STEL = Short Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weighted Average
UFI = Unique Formula Identifier
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

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

| Classification | Justification |
|------------------------------------|--|
| Repr. 1B, H360D STOT RE 2, H373 | Calculation method Calculation method |

Full text of abbreviated H statements

| | |
|-------|--|
| H302 | Harmful if swallowed. |
| H360D | May damage the unborn child. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H411 | Toxic to aquatic life with long lasting effects. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Chronic 2 | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Repr. 1B | TOXIC TO REPRODUCTION - Category 1B |
| Repr. 2 | TOXIC TO REPRODUCTION - Category 2 |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |

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

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.