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

Product identifier: GLACIER COOLANT RTU 40
Relevant identified uses of the substance or mixture and uses advised against: Cooling fluid (antifreeze) Ready to use
Details of the supplier of the safety data sheet: North Sea Lubricants B.V.
Loenhorst 25
2402 LV - Alphen aan de Rijn - Nederland
Tel: +31 651345369
E-mail: support@northsealubricants.com
Emergency telephone number: +31 786527652

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture: Classified as dangerous under EC criteria.
Most important adverse physicochemical effects: None under normal conditions.

Most important adverse human health effects:
Most important adverse environmental effects: Spillages may penetrate the soil causing ground water contamination.

Label elements (according to Directive 1999/45/EC):
- hazard symbols
- indications of danger: Xn: Harmful.
- risk phrases: R22: Harmful if swallowed.
- safety advices: Keep out of the reach of children. If swallowed seek medical advice immediately and show this container or label.
Other hazards: None under normal conditions.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Mixture of ethylene glycol, demineralised water and additives.

Composition of the mixture:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Contents</th>
<th>CAS No</th>
<th>EC No</th>
<th>Annex No</th>
<th>Ref REACH</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>40 - 60 %</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>-----</td>
<td>-----</td>
<td>Xn; R22</td>
</tr>
<tr>
<td>Ethylene glycol</td>
<td>40 - 60 %</td>
<td>107-21-1</td>
<td>203-473-3</td>
<td>603-027-00-1</td>
<td>-----</td>
<td>Xn; R22</td>
</tr>
<tr>
<td>Sodium-2-ethylhexanoate</td>
<td>1 - 5 %</td>
<td>19766-89-3</td>
<td>243-283-8</td>
<td>-----</td>
<td>-----</td>
<td>Xn; R63</td>
</tr>
</tbody>
</table>

North Sea Lubricants B.V.
Loenhorst 25 2402 LV - Alphen aan de Rijn - Nederland
Tel: +31 651345369
E-mail: support@northsealubricants.com
3.  COMPOSITION / INFORMATION ON INGREDIENTS  (continued)

Other information : See § 16 for full text of all R-phrases.

4.  FIRST AID MEASURES

General Advice : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

Description of first aid measures:

- after inhalation : Remove the casualty to fresh air. Allow the victim to rest. In case of respiratory arrest, administer artificial respiration. If you feel unwell, seek medical advice.

- after contact with skin : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if ill effect or irritation develops.

- after contact with the eyes : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- after ingestion : Rinse mouth. Do not induce vomiting. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.

Indication of any immediate medical attention and special treatment needed

If swallowed, seek medical advice immediately and show this container or label.

5.  FIREFIGHTING MEASURES


Unsuitable extinguishing media : Do not use a heavy water stream.

Special hazards arising from the substance or mixture : Under fire conditions, hazardous fumes will be present.

Advice for firefighters : Evacuate unnecessary personnel. Wear self-contained breathing apparatus, rubber boots and thick rubber gloves. Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water to enter environment.

6.  ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

- for non-emergency personnel : Evacuate unnecessary personnel.

- for emergency responders : Avoid contact with skin and eyes. Wear suitable protective clothing and gloves. Equip cleanup crew with proper protection.

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and material for containment and cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Collect spills and put it into appropriated container.
7. HANDLING AND STORAGE

Precautions for safe handling: Provide local exhaust or general room ventilation. Avoid all unnecessary exposure. Where contact with eyes or skin is likely, wear suitable protection.

Conditions for safe storage, including any incompatibilities: Store in tightly closed, properly ventilated areas away from heat, sparks, open flame. Keep at temperature not exceeding 50°C. Keep away from food, drink and animal feeding stuffs.

Specific end use(s): See Product Data Sheet for detailed information.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limit values:
- EU: EH40 Workplace exposure limit. Long-term exposure limit (8-hour TWA reference period) Ethane-1,2-diol, vapour; 20 ppm - 52 mg/m³ (skin)
- USA: The American Conference of Governmental Industrial hygienists (ACGIH) assigns ethylene glycol a ceiling limit value of 50 ppm (127 mg/m³), which should not be exceeded during any part of the working exposure. [ACGIH 1993].

Biological limit values: No data available.

Exposure controls:

Appropriate engineering controls: Use adequate ventilation to keep oil mist below applicable standard.

Individual protection measures, such as personal protective equipment:
- eye / face protection: Safety glasses.
- skin protection: Wear suitable protective clothing. (EN 465, EN 466 or EN 467).
- hand protection: Wear suitable gloves resistant to chemical penetration. (EN 374)
- respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls: Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:
- Physical state: Liquid
- Colour: Light Blue.
- Odour: Characteristic
- pH value: 8.0 (50% in water)
- Density @ 15°C: 1060 kg/m³
- Solubility in water: Miscible.
10. STABILITY AND REACTIVITY

Reactivity: Stable under normal conditions.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Reacts with: Strong oxidizing agents. Strong bases.
Conditions to avoid: Extremely high or low temperatures.
Hazardous decomposition products: Toxic gases.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:
- acute toxicity: No specific toxicity data on this product available.
- irritation: Irritating to eyes and respiratory system.
- corrosivity: No adverse health effects were noted.
- sensitisation: No sensitization effects known.
- carcinogenicity: This material or its emissions may cause damage to kidney and liver and/or aggravate existing disorders.
- mutagenicity: Not expected to be mutagenetic.
- toxicity for reproduction: Not expected to be toxic.

Information on likely routes of exposure:
- after ingestion: Ingestion may cause nausea, vomiting and diarrhoea.
- after inhalation: Inhalation of vapours may cause respiratory irritation.
- after skincontact: Not expected to present a significant skin hazard under anticipated conditions of normal use.
- after eyecontact: Contact with the eyes is likely to be irritating.

Symptoms related to the physical, chemical and toxicological characteristics:
- Delayed and immediate effects as well as chronic effects from short and long-term exposure: Substance may cause effects on the kidneys and central nervous system, resulting in renal failure and brain injury. Exposure could cause lowering of consciousness. Substance may have effects on the central nervous system, resulting in abnormal eye movements (nystagmus).

Other toxicological information: No data available.

12. ECOLOGICAL INFORMATION

Toxicity: Not expected to be toxic.
Persistence and degradability: Biodegradable.
Bioaccumulative potential: There are no indications for appearance of bioaccumulation.
Mobility in soil: Not determined.
Other adverse effects: No data available.
13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in a safe manner in accordance with local/national regulations.
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

14. TRANSPORT INFORMATION

Not classified.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:
- European Inventory of Existing Commercial Chemical Substances (EINECS): All components listed.
- Germany: Water Hazard Class: 1 - slightly hazardous to water

Chemical safety assessment: Not applicable.

16. OTHER INFORMATION

Revision Indicators: None.
Legend to abbreviations and acronyms used in the safety data sheet:
EC = European Community
EN = European Norm
TWA = Time Weighted Average
VwVwS = Verwaltungsvorschrift Wassergefahrdende Stoffe


List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements:
R22 : Harmful if swallowed.
R63 : Possible risk of harm to the unborn child.


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