SAFETY DATA SHEET
Bodecid System Cleaner

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

1.1 Product identifier
Product name: Bodecid System Cleaner
Code: R0717239
Product description: Not available.
Product type: Liquid.
Other means of identification: Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses
Preservative. Biocide.

1.3 Details of the supplier of the safety data sheet
e-mail address of person responsible for this SDS
B.J. Vernooij, SDS Specialist (vernooib@troycorp.com)

1.4 Emergency telephone number
Emergency telephone number: +32 (0) 14 58 45 45
National advisory body/Poison Center
Austria: Vergiftungsinformationszentrale, 01/406 43 43
Belgium: Centre anti-poison/Antgiftcentrum 070 245245
Czech Republic: +7 Nouzové telefonní číslo: Toxikologické informační sídliště, Na Bojišti 1, 128 08 Praha 2; telefon (24 hodin/24 hour): 22941929, 22941940, 2294194757
Denmark: Giftinformation: +45 35 31 60 60
Estonia: Mürgistuseabekeskus: 16662
Finland: Myrkytyskeskus 09-171977 or 09 4711
France: BNCP +33383852192
Germany: Giftnotrufenzontrale Berlin: +49 030 - 192 40
Hungary: Egészségügyi Toxikológiai Tájékoztató Szolgálat (ETTTSZ) 1096 Budapest Nagyvárad tér 2; +36-80-201199 (ingyenes, egéssel-nappali) +36-1-4766464
Ireland: NPIC:Phone 01-8092566; Fax: 01-8368476
Italy: Ospedale Niguarda Ca Granda, Milan 0286101029
Netherlands: NVIC: Tel: 030-2748988
Norway: Norwegian poison information center: 22 59 13 00
Poland: Not available.
Slovakia: Toxikologické informačné centrum Limbova 5 833 05 Bratislava Tel. 02/5477 4166, 02/5477 4605
Sweden: National advisory body
United Kingdom (UK): NPIS 0870 600 6266
Spain: INSTITUTO NACIONAL DE TOXICOLOGÍA 91 562 04 20

Supplier
TROY CHEMICAL COMPANY BV
Uiverlaan 12e
PO Box 132
3145 XN Maassluis
The Netherlands
Phone: + 31 (0) 10 592-7494
Fax: +31 (0) 10 592-8877

Date of issue/Date of revision: February 17, 2016.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

Hours of operation: Monday - Friday: 08.30 - 17.00 (CET)

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]

Skin Corr. 1B, H314
Eye Dam. 1, H318
Aquatic Chronic 3, H412

Ingredients of unknown toxicity: Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 31.8%

Ingredients of unknown ecotoxicity: Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 33.8%

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification: C; R34 R52/53

Human health hazards: Causes burns.

Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

2.2 Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements: Causes severe skin burns and eye damage. Harmful to aquatic life with long lasting effects.

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention: Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid release to the environment.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or physician. IF IN EYES: Immediately call a POISON CENTER or physician.

Storage: Store locked up.

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

Hazardous ingredients: 3,3'-methylenebis [5-methyloxazolidine]

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## SECTION 2: Hazards identification

**Supplemental label elements**
Contains Hydrocarbons, terpene processing by-products. May produce an allergic reaction.

**Special packaging requirements**
- Containers to be fitted with child-resistant fastenings: Yes, applicable.
- Tactile warning of danger: Yes, applicable.

### 2.3 Other hazards

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

## SECTION 3: Composition/information on ingredients

### Substance/mixture
Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>{3,3’}-methylenebis [5-methyloxazolidine]</td>
<td>EC: 266-235-8</td>
<td>10</td>
<td>Xn; R21/22 Acute Tox. 4, H302 [1]</td>
</tr>
<tr>
<td></td>
<td>CAS: 66204-44-2</td>
<td></td>
<td>C; R34 Acute Tox. 4, H312</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R52 Skin Corr. 1B, H314</td>
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<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318 Acute Tox. 4, H302</td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts</td>
<td>EC: 270-115-0</td>
<td>≥3 - &lt;5</td>
<td>Xn; R22</td>
</tr>
<tr>
<td></td>
<td>CAS: 68411-30-3</td>
<td></td>
<td>Xi; R38 Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N; R51/53 Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4, H411 Aquatic Chronic 2, H411 Met. Corr. 1, H290</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>REACH #: 01-2119457892-27</td>
<td>≥3 - &lt;5</td>
<td>C; R35</td>
</tr>
<tr>
<td></td>
<td>EC: 215-185-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAS: 1310-73-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 011-002-00-6</td>
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<td></td>
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<tr>
<td>Alcohols, C16-18, ethoxylated</td>
<td>EC: 500-212-8</td>
<td>≥1 - &lt;2.8</td>
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<td></td>
<td>CAS: 68439-49-6</td>
<td></td>
<td>Xi; R36/38 Skin Irrit. 2, H315</td>
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<td></td>
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</tr>
<tr>
<td>Hydrocarbons, terpene processing by-products</td>
<td>EC: 273-309-3</td>
<td>≥0.1 - &lt;0.3</td>
<td>R10</td>
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<tr>
<td></td>
<td>CAS: 68956-56-9</td>
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<td>Xn; R65 Eye Irrit. 2, H319</td>
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<td></td>
<td></td>
<td>Xi; R36/38 Skin Sens. 1B, H317</td>
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<td></td>
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<td></td>
<td>R43 Asp. Tox. 1, H304</td>
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<td></td>
<td></td>
<td></td>
<td>N; R51/53 Aquatic Chronic 2, H411</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>pyridine-2-thiol 1-oxide, sodium salt</td>
<td>EC: 223-296-5</td>
<td>0.1</td>
<td>Xn; R20/21/22</td>
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<td></td>
<td>CAS: 3811-73-2</td>
<td></td>
<td>Xi; R36/38</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>R50</td>
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</tr>
</tbody>
</table>

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SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Type</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] Substance classified with a health or environmental hazard</td>
<td>See Section 16 for the full text of the R-phrases declared above.</td>
<td>See Section 16 for the full text of the H statements declared above.</td>
</tr>
<tr>
<td>[2] Substance with a workplace exposure limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[5] Substance of equivalent concern</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other hazards which do not result in classification

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

Inhalation: Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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

Potential acute health effects

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**SECTION 4: First aid measures**

**Eye contact**: Causes serious eye damage.
**Inhalation**: No known significant effects or critical hazards.
**Skin contact**: Causes severe burns.
**Ingestion**: No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact**: Adverse symptoms may include the following:
- Pain
- Watering
- Redness

**Inhalation**: No specific data.
**Skin contact**: Adverse symptoms may include the following:
- Pain or irritation
- Redness
- Blistering may occur

**Ingestion**: Adverse symptoms may include the following:
- Stomach pains

**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 an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media**
- None known.

**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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products**
- Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Nitrogen oxides
  - Sulfur oxides
  - Metal oxide/oxides

**5.3 Advice for firefighters**

**Special precautions 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. Do not breathe 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). Water polluting material. May be harmful to the environment if released in large quantities.

#### 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). (Applicable when exposure scenario is available.)

#### 7.1 Precautions for safe handling

**Protective measures:** Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. 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. Keep away from acids. 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.

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SECTION 7: Handling and storage

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. Separate from acids. 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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s). (Applicable when exposure scenario is available.)

8.1 Control parameters

Occupational exposure limits

Europe
No exposure limit value known.

Austria
Sodium hydroxide
GKV_MAK (Austria, 9/2007).
TWA: 2 mg/m³ 8 hours. Form: inhalable fraction
PEAK: 4 mg/m³, 8 times per shift, 5 minutes. Form: inhalable fraction

pyridine-2-thiol 1-oxide, sodium salt
GKV_MAK (Austria, 9/2007). Absorbed through skin.
TWA: 1 mg/m³ 8 hours.
PEAK: 4 mg/m³, 4 times per shift, 15 minutes.

Belgium
Sodium hydroxide
Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2009).
M: 2 mg/m³

Bulgaria
Sodium hydroxide
ПБ МТСП и МЗ Наредба №13/2003 (Bulgaria, 8/2007).
Limit value 8 hours: 2 mg/m³ 8 hours. Form: aerosols

Czech Republic
Sodium hydroxide
178/2001 (Czech Republic, 12/2007).
TWA: 1 mg/m³ 8 hours.
STEL: 2 mg/m³ 15 minutes.

Denmark
Sodium hydroxide
Arbejdstilsynet (Denmark, 3/2008).
CEIL: 2 mg/m³

Hydrocarbons, terpene processing by-products
Arbejdstilsynet (Denmark, 10/2012).
TWA: 25 ppm 8 hours.

pyridine-2-thiol 1-oxide, sodium salt
Arbejdstilsynet (Denmark, 3/2008). Absorbed through skin.
TWA: 1 mg/m³ 8 hours.

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SECTION 8: Exposure controls/personal protection

Sodium hydroxide

**Finland**

Sodium hydroxide

Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 7/2009).

CEIL: 2 mg/m³

**France**

Sodium hydroxide

INRS (France, 12/2007). Notes: indicative exposure limits

TWA: 2 mg/m³ 8 hours.

**Germany**

pyridine-2-thiol 1-oxide, sodium salt

TRGS900 AGW (Germany, 8/2010). Absorbed through skin.

TWA: 1 mg/m³ 8 hours.

PEAK: 2 mg/m³ 15 minutes.

**Greece**

Sodium hydroxide

PD 90/1999 (Greece, 8/2007).

TWA: 2 mg/m³ 8 hours.

STEL: 2 mg/m³ 15 minutes.

**Hungary**

Sodium hydroxide

EüM-SzCsM (Hungary, 12/2007).

TWA: 2 mg/m³ 8 hours.

**Ireland**

Sodium hydroxide

NAOSH (Ireland, 8/2007).

OELV-15min: 2 mg/m³ 15 minutes.

**Latvia**

Sodium hydroxide

LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007).

TWA: 0.5 mg/m³ 8 hours.

**Lithuania**

Sodium hydroxide

Del Lietuvos Higienos Normos (Lithuania, 10/2007).

CEIL: 2 mg/m³

**Hydrocarbons, terpene processing by-products**

Lietuvos Higienos Normos HN 23 (Lithuania, 10/2007).

TWA: 150 mg/m³ 8 hours.

TWA: 25 ppm 8 hours.

STEL: 300 mg/m³ 15 minutes.

STEL: 50 ppm 15 minutes.

**Norway**

Sodium hydroxide


CEIL: 2 mg/m³

**Poland**

Sodium hydroxide

Ministra Pracy i Polityki Społecznej (Poland, 7/2009).

TWA: 0.5 mg/m³ 8 hours.

STEL: 1 mg/m³ 15 minutes.

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SECTION 8: Exposure controls/personal protection

**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 atmosphere - Measurement of exposure by biological monitoring).

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**SECTION 8: Exposure controls/personal protection**

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.

### Derived effect levels

No DELs available.

### Predicted effect concentrations

No PECs available.

#### 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**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygiene measures</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Eye/face protection</strong></td>
<td>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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.</td>
</tr>
<tr>
<td><strong>Skin protection</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Hand protection</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Body protection</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Respiratory protection</strong></td>
<td>Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.</td>
</tr>
<tr>
<td><strong>Environmental exposure controls</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

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**SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
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<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine-like</td>
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<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>12 to 14</td>
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<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
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<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Burning time</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Burning rate</td>
<td>Not applicable</td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.1 to 1.2</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Not available</td>
</tr>
<tr>
<td>Dispersibility properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>

### 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.

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### SECTION 10: Stability and reactivity

**10.5 Incompatible materials**
- Reactive or incompatible with the following materials: acids

**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 toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3’-methylenebis [5-methyl oxazolidine]</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>1207 to 1620 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>632 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>900 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>404 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>1350 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LDLo Oral</td>
<td>Rabbit</td>
<td>500 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1260 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>2.7 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td>Alcohols, C16-18, ethoxylated pyridine-2-thiol 1-oxide, sodium salt</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>700 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>1800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>750 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1500 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**: Not available.

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2815 mg/kg</td>
</tr>
<tr>
<td>Dermal</td>
<td>8380.4 mg/kg</td>
</tr>
</tbody>
</table>

**Irritation/Corrosion**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts</td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>0.5 Milliliters</td>
<td>-</td>
</tr>
<tr>
<td>Alcohols, C16-18, ethoxylated</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 microliters</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 microliters</td>
<td>-</td>
</tr>
</tbody>
</table>

**Conclusion/Summary**: Not available.

**Sensitizer**

**Conclusion/Summary**: Not available.

**Mutagenicity**

**Conclusion/Summary**: Not available.

**Carcinogenicity**

**Conclusion/Summary**: Not available.

**Reproductive toxicity**

**Conclusion/Summary**: Not available.

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SECTION 11: Toxicological information

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrocarbons, terpene processing by-products</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
</tbody>
</table>

Information on the likely routes of exposure

Potential acute health effects

Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin contact : Causes severe burns.
Eye contact : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.
Ingestion : Adverse symptoms may include the following:
- stomach pains
Skin contact : Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur
Eye contact : Adverse symptoms may include the following:
- pain
- watering
- redness

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 : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.

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SECTION 11: Toxicological information

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3’-methylenebis [5-methyloxazolidine]</td>
<td>Acute EC50 4.3 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 5.7 mg/l</td>
<td>Algae</td>
<td>72 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 28 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 37.9 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 57.7 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 71 mg/l</td>
<td>Fish</td>
<td>96 hours</td>
</tr>
<tr>
<td>Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts</td>
<td>Acute LC50 5 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)</td>
<td>96 hours</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Acute EC50 76 mg/l</td>
<td>Daphnia</td>
<td>24 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 40.38 mg/l Fresh water</td>
<td>Daphnia - Ceriodaphnia dubia - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 33000 to 100000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 99 mg/l</td>
<td>Fish - Lepomis macrochirus</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 45.5 mg/l</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 56 mg/l Marine water</td>
<td>Fish - Poecilia reticulata - Young</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 0.0088 mg/l</td>
<td>Daphnia</td>
<td>48 hours</td>
</tr>
<tr>
<td>pyridine-2-thiol 1-oxide, sodium salt</td>
<td>Acute LC50 0.00264 mg/l</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Conclusion/Summary: Not available.

12.2 Persistence and degradability

Conclusion/Summary: Not available.

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3’-methylenebis [5-methyloxazolidine] pyridine-2-thiol 1-oxide, sodium salt</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>pyridine-2-thiol 1-oxide, sodium salt</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts pyridine-2-thiol 1-oxide, sodium salt</td>
<td>3.32</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>50</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Soil/water partition coefficient (K&lt;sub&gt;oc&lt;/sub&gt;)</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>: Not available.</td>
<td>: Not available.</td>
</tr>
</tbody>
</table>

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SECTION 12: Ecological information

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

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 : The classification of the product may meet the criteria for a hazardous waste.

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

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2 UN proper</td>
<td>Corrosive liquid, basic, organic, n.o.s. (3,3'-methylenebis [5-methylloxazolidine], Sodium hydroxide)</td>
<td>Corrosive liquid, basic, organic, n.o.s. (3,3'-methylenebis [5-methylloxazolidine], Sodium hydroxide)</td>
<td>Corrosive liquid, basic, organic, n.o.s. (3,3'-methylenebis [5-methylloxazolidine], Sodium hydroxide)</td>
</tr>
<tr>
<td>shipping name</td>
<td>14.3 Transport hazard class(es) : 8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

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### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.6 Special precautions for user</th>
<th>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.</th>
<th>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.</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional information</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**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**
  - **Substances of very high concern**
    - 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**
  - Not applicable.

**Other EU regulations**

- **Europe inventory**: Not determined.
- **Black List Chemicals**: Not listed
- **Priority List Chemicals**: Listed
- **Industrial emissions (integrated pollution prevention and control) - Air**
  - Not listed
- **Industrial emissions (integrated pollution prevention and control) - Water**
  - Not listed

**National regulations**

- **Product registration**
  - **Europe inventory**: Not determined.
  - **Australia inventory (AICS)**: Not determined.
  - **China inventory (IECSC)**: Not determined.
  - **Japan inventory**: Not determined.
  - **Korea inventory**: Not determined.
  - **Malaysia Inventory (EHS Register)**: Not determined.
  - **New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
  - **Philippines inventory (PICCS)**: Not determined.
  - **Taiwan Chemical Substances Inventory (TCSI)**: Not determined.
  - **United States inventory (TSCA 8b)**: Not determined.
  - **Canada inventory**: Not determined.

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SECTION 15: Regulatory information

Denmark
Mal-code : 00-4

Germany
Hazard class for water : 2 Appendix No. 4
Chemical Weapons Convention List Schedule I Chemicals : Not listed
Chemical Weapons Convention List Schedule II Chemicals : Not listed
Chemical Weapons Convention List Schedule III Chemicals : Not listed

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

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]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1B, H314</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements
H226 Flammable liquid and vapor.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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**SECTION 16: Other information**

<table>
<thead>
<tr>
<th>Full text of classifications [CLP/GHS]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4, H302</td>
<td>ACUTE TOXICITY (oral) - Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4, H312</td>
<td>ACUTE TOXICITY (dermal) - Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4, H332</td>
<td>ACUTE TOXICITY (inhalation) - Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1, H400</td>
<td>AQUATIC HAZARD (ACUTE) - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1, H410</td>
<td>AQUATIC HAZARD (LONG-TERM) - Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 2, H411</td>
<td>AQUATIC HAZARD (LONG-TERM) - Category 2</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
</tr>
<tr>
<td>Asp. Tox. 1, H304</td>
<td>ASPIRATION HAZARD - Category 1</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2</td>
</tr>
<tr>
<td>Flam. Liq. 3, H226</td>
<td>FLAMMABLE LIQUIDS - Category 3</td>
</tr>
<tr>
<td>Met. Corr. 1, H290</td>
<td>CORROSIVE TO METALS - Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A, H314</td>
<td>SKIN CORROSION/IRRITATION - Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B, H314</td>
<td>SKIN CORROSION/IRRITATION - Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315</td>
<td>SKIN CORROSION/IRRITATION - Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1B, H317</td>
<td>SKIN SENSITIZATION - Category 1B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full text of abbreviated R phrases</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R10- Flammable.</td>
<td></td>
</tr>
<tr>
<td>R22- Harmful if swallowed.</td>
<td></td>
</tr>
<tr>
<td>R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.</td>
<td></td>
</tr>
<tr>
<td>R21/22- Harmful in contact with skin and if swallowed.</td>
<td></td>
</tr>
<tr>
<td>R65- Harmful: may cause lung damage if swallowed.</td>
<td></td>
</tr>
<tr>
<td>R34- Causes burns.</td>
<td></td>
</tr>
<tr>
<td>R35- Causes severe burns.</td>
<td></td>
</tr>
<tr>
<td>R38- Irritating to skin.</td>
<td></td>
</tr>
<tr>
<td>R36/38- Irritating to eyes and skin.</td>
<td></td>
</tr>
<tr>
<td>R43- May cause sensitization by skin contact.</td>
<td></td>
</tr>
<tr>
<td>R50- Very toxic to aquatic organisms.</td>
<td></td>
</tr>
<tr>
<td>R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
<td></td>
</tr>
<tr>
<td>R52- Harmful to aquatic organisms.</td>
<td></td>
</tr>
<tr>
<td>R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full text of classifications [DSD/DPD]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C - Corrosive</td>
<td></td>
</tr>
<tr>
<td>Xn - Harmful</td>
<td></td>
</tr>
<tr>
<td>Xi - Irritant</td>
<td></td>
</tr>
<tr>
<td>N - Dangerous for the environment</td>
<td></td>
</tr>
</tbody>
</table>

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**Version** : 1.01

**Notice to reader**

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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.