SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name: CORROZIP-LF
Cat. No. 49900038, 49900039

Container size: 1 l, 5 l

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

Application: Low foaming additive for cutting fluid.

Uses advised against: No specific uses advised against are identified. (*)

Details of the supplier of the safety data sheet

Supplier: Struers ApS
Pederstrupvej 84
DK-2750 Ballerup
Tel:+45 44 600 800

Responsible for material safety data sheet authoring: Responsible for material safety data sheet authoring: DHI
Any questions to the contents of this material safety data sheet should be sent to: struers@struers.dk

Emergency telephone number

National Capital Poison Center: 1-800-222-1222

Infotrac:
1-800-535-5053
Struers US:
1-440-871-0071
SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA 2012:
Skin Irritant Category 2
Eye irritant Category 2A
Category 2 Target organ toxicant, Repeated Exposure

Label elements

Warning
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373K May cause damage to organs (kidneys) through prolonged or repeated exposure.
P273 Avoid release to the environment.
P280 Wear protective clothing, gloves, eye and face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P103 Read label before use.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/container in accordance with local regulations.

Other hazards

PBT/vPvB: No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

The product contains: organic solvents and additives.
### OSHA 2012:

<table>
<thead>
<tr>
<th>%</th>
<th>CAS-No.</th>
<th>EC No.</th>
<th>REACH Reg. No.</th>
<th>Chemical name</th>
<th>Hazard classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-&lt;30</td>
<td>102-71-6</td>
<td>203-049-8</td>
<td>01-2119486482-31-xxxx</td>
<td>Triethanolamine</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>5-&lt;10</td>
<td>111-46-6</td>
<td>203-872-2</td>
<td>01-2119457857-21-xxxx</td>
<td>2,2'-Oxybisethanol</td>
<td>Acute Oral Toxicity Category 4, Category 2 Target organ toxicant, Repeated Exposure</td>
<td></td>
</tr>
<tr>
<td>5-&lt;10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Benzotriazole, sodium salt</td>
<td>Acute Oral Toxicity Category 4, Skin Irritant Category 2, Eye irritant Category 2A, Aquatic Chronic Toxicity Category 3</td>
<td></td>
</tr>
<tr>
<td>5-&lt;10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Benzotriazole</td>
<td>Acute Oral Toxicity Category 4, Eye irritant Category 2A, Aquatic Chronic Toxicity Category 2</td>
<td></td>
</tr>
<tr>
<td>1-&lt;5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Carboxylic acids, neutralized with alkanolamines</td>
<td>Skin Irritant Category 2, Eye irritant Category 2A</td>
<td></td>
</tr>
<tr>
<td>&lt;=0,24</td>
<td>3811-73-2</td>
<td>223-296-5</td>
<td>-</td>
<td>Pyridine-2-thiol 1-oxide, sodium salt</td>
<td>Acute Oral Toxicity Category 4, Acute Dermal Toxicity Category 4, Acute Inhalation Toxicity Category 4, Skin Irritant Category 2, Eye irritant Category 2A, Aquatic Acute Toxicity Category 1, Aquatic Chronic Toxicity Category 1</td>
<td>*</td>
</tr>
<tr>
<td>&lt;0.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Poly quaternary ammonium chloride</td>
<td>Acute Oral Toxicity Category 4, Acute Inhalation Toxicity Category 4, Aquatic Acute Toxicity Category 1, Aquatic Chronic Toxicity Category 1</td>
<td>**</td>
</tr>
</tbody>
</table>

**Notes:**

*: M-factor (acute): 100; M-factor (chronic): 1

**: M-factor (acute): 10; M-factor (chronic): 1
SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

**Inhalation:**
Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions.

**Skin contact:**
Remove contaminated clothes and rinse skin thoroughly with water. In case of eczema or other skin disorders: Seek medical attention and bring these instructions.

**Eye contact:**
Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

**Ingestion:**
Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.

**Most important symptoms and effects, both acute and delayed**

**Symptoms/effects:** See section 11 for more detailed information on health effects and symptoms.

**Indication of any immediate medical attention and special treatment needed**

**Medical attention/treatments:** Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

**Extinguishing media**

**Extinguishing media:**
Extuish with carbon dioxide or dry powder. Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards:**
During fire, health hazardous gases may be formed.

**Advice for firefighters**

**Protective equipment for fire-fighters:**
Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**For non-emergency personnel:**
Avoid contact with skin and eyes. For personal protection, see section 8.

**For emergency responders:**
No specific recommendations. For personal protection, see section 8.

**Environmental precautions**

**Environmental precautions:**
Avoid discharge into drains, water courses or onto the ground.

**Methods and material for containment and cleaning up**

**Spill Cleanup Methods:**
Dam and absorb spillage with sand, sawdust or other absorbent.

**Reference to other sections**

**References:**
For personal protection, see section 8. For waste disposal, see section 13.
SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe handling advice: Avoid inhalation of vapors and contact with skin and eyes. Observe good chemical hygiene practices. Change contaminated clothing.

Technical measures: Work practice should minimize contact. Do not eat, drink or smoke when using the product. Avoid inhalation of aerosols.

Technical precautions: Mechanical ventilation may be required. Provide easy access to water supply and eye wash facilities.

Conditions for safe storage, including any incompatibilities

Storage conditions: Store in tightly closed original container in a dry and cool place.

Specific end use(s)

Specific use(s): No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>As</th>
<th>Exposure limits</th>
<th>Type</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-71-6</td>
<td>Triethanolamine</td>
<td>-</td>
<td>5 mg/m3</td>
<td>TWA</td>
<td>-</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

Personal protection: Personal protection equipment should be chosen according to the ANSI standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. Use air-supplied respirator.

Hand protection: Wear protective gloves. Nitrile gloves or rubber gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Thickness: ≥ 0,3 mm (*)

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of contact.

Hygiene measures: Wash hands after handling. Wash contaminated clothing before reuse.

Environmental Exposure Controls: Not available.
### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form:</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color:</strong></td>
<td>The color can vary slightly from batch to batch.</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Amine</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>8.7-9.2</td>
</tr>
<tr>
<td><strong>Melting point:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Boiling point:</strong></td>
<td>&gt;212°F</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>&gt;266°F</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor density:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>1.14</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>Miscible with water</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature (°F):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Decomposition temperature (°F):</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>Viscosity: 17 mm²/s</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Oxidizing properties:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other data:</strong></td>
<td>Volatile Organic Compound (VOC): 112 g/l (calculated)</td>
</tr>
</tbody>
</table>
### SECTION 10: STABILITY AND REACTIVITY

**Reactivity**

**Reactivity:** Cutting debris kept in closed container may develop gas. Keep cutting debris dry to avoid exothermic reaction.

**Chemical stability**

**Stability:** Stable under normal temperature conditions.

**Possibility of hazardous reactions**

**Hazardous Reactions:** No data available.

**Conditions to avoid**

**Conditions/materials to avoid:** No information available.

**Incompatible materials**

**Incompatible materials:** Strong oxidizing substances, strong acids and strong bases.

**Hazardous decomposition products**

**Hazardous decomposition products:** In case of fire, toxic gases (CO, CO2, NOx) may be formed.
SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity (Oral): Based on available data, the classification criteria are not met.

Acute Toxicity (Oral LD50): 2732 mg/kg (ATE)
ATE = Acute Toxicity Estimate.

2,2'-Oxydiethanol: LD50 = 12565 mg/kg (oral rat)

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.
National Toxicology Program (NTP): No.
IARC Cancer Review: Group 3 for Triethanolamine.
OSHA: No.

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

STOT - Single exposure: Based on available data, the classification criteria are not met.

STOT - Repeated exposure: May cause damage to organs (kidneys) through prolonged or repeated exposure.

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

Inhalation: Vapors may irritate throat and respiratory system and cause coughing. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea.

Ingestion: May irritate and cause malaise. May be absorbed in the body and cause dizziness, nausea and vomiting.
SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Pyridine-2-thiol 1-oxide, sodium salt: $0.0088$ (EC$_{50}$ 48 hours, Daphnia, mg/l)

Persistence and degradability

Degradability: No data available.

Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

Mobility in soil

Mobility: No data available.

Results of PBT and vPvB assessment

PBT/vPvB: No information available.

Other adverse effects

Other adverse effects: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues: Dispose of waste and residues in accordance with local authority requirements.

Do not store cutting debris in closed container. See section 10.1.

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.
SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

UN number
UN-No: -

UN proper shipping name
Proper Shipping Name: -

Transport hazard class(es)
Class: -

Packing group
PG: -

Environmental hazards
Marine pollutant: -
Environmentally Hazardous substance: -

Special precautions for user
Special precautions: None known.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Transport in bulk: Not relevant.
SECTION 15: REGULATORY INFORMATION

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

Special provisions: State and local regulation may apply.

TSCA: Listed.

NFPA Rating: Health: 2 Fire: 1 Reactivity: 0 Other:-

SARA Section 302: No.
SARA Section 304: No.
SARA Section 313: No.
SARA (311/312) Hazard categories: Yes.

National regulation: The following lists have been checked:
Threshold Limit Values (2019), ACGIH, by the American Conference on Governmental Industrial Hygienists.
NIOSH Pocket Guide to Chemical Hazards.
The Code of Federal Regulation, Title 40, part 261.33. Identification and listing of hazardous waste.
SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 1, 8.
The (*) indicates the changes made with respect to the previous version.

Approved by DHI.

Abbreviations and acronyms used in the safety data sheet:
PBT = Persistent, Bioaccumulative and Toxic.
vPvB = very Persistent and very Bioaccumulative.

Additional information:
Classification according to HCS 2012:
Calculation method.
and
On basis of test data.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.