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

1.1. Product identifier
EMUGE Thread Cutting Oil No. 5+ HIGH ALLOY

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

Use of the substance/mixture
Non water miscible coolant

1.3. Details of the supplier of this safety information
EMUGE-Werk Richard Glimpel GmbH & Co. KG
Fabrik für Präzisionswerkzeuge
Nürnberger Str. 96-100, 91207 Lauf, GERMANY
Tel. +49 (0) 91 23 / 1 86 - 0
Fax +49 (0) 91 23 / 1 86 - 2 37
info@emuge-franken.com · www.emuge-franken.com

1.4. Emergency telephone number:
Mo. - Thu. 7.00 - 15.00 h Contact: Martin Rittger, Sicherheitsfachkraft
Fr. 7.00 - 14.00 h Phone: +49 (0) 91 23 / 1 86-1 20 oder -0
E-mail: martin.rittger@emuge.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008
This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements

2.3. Other hazards
Results of PBT and vPvB assessment: not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Chemical characterization
Mineral oil-based mixture. Mineral oil with DMSO extract < 3 % as measured by IP 346.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Remove contaminated, saturated clothing immediately.

After inhalation
Remove casualty to fresh air and keep warm and at rest.

After contact with skin
After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion
If swallowed, rinse mouth with water (only if the person is conscious). Let water be drunken in little sips (dilution effect). Call a physician immediately. Do NOT induce vomiting.
Thread Cutting Oil No. 5+ HIGH ALLOY, chlorine-free
Safety Information according to Regulation (EC) No. 1907/2006 (REACH)

4.2. Most important symptoms and effects, both acute and delayed
When in doubt or if symptoms are observed, get medical advice.

4.3. Indication of any immediate medical attention and special treatment needed
No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
- alcohol resistant foam
- Extinguishing powder
- Carbon dioxide (CO2).

Unsuitable extinguishing media
- Full water jet.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition products: Carbon monoxide, Carbon dioxide (CO2). Do not inhale explosion and combustion gases.

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.

Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Do not allow to enter into soil/subsoil.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
See protective measures under point 7 and 8.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Clean contaminated articles and floor according to the environmental legislation.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
- Use personal protection equipment. Do not eat, drink or smoke when using this product. Provide fresh air. Handle and open container with care. Conditions to avoid: generation/formation of aerosols.

Advice on protection against fire and explosion
- No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
- Protect against: Frost. Keep away from heat. Protect against direct sunlight. Keep container tightly closed in a cool, well-ventilated place.
- Minimum shelf life: 3 years (from delivery date EMUGE Werk Lauf)

7.3. Specific end use(s)
- Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
- Appropriate engineering controls: See chapter 7. No additional measures necessary.
Protective and hygiene measures
When using do not eat, drink, smoke, sniff.

Eye/face protection
Eye glasses with side protection.

Hand protection
Wear suitable gloves. Recommended glove articles: DIN EN 374. Suitable material: NBR (Nitrile rubber). Breakthrough time (maximum wearing time): > 480 min (Thickness of the glove material: 0.4 mm). Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Skin protection
Protective clothing.

Respiratory protection
With correct and proper use, and under normal conditions, breathing protection is not required. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used. Suitable respiratory protection apparatus: Filtering Half-face mask (DIN EN 149), e.g. FFA P / FFP3.

Environmental exposure controls
Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>black</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
<td></td>
</tr>
<tr>
<td>pH-Value</td>
<td>not applicable</td>
<td></td>
</tr>
</tbody>
</table>

Changes in the physical state

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Pour point</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C EN ISO 2592</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limits</td>
<td>0,4 vol. %</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limits</td>
<td>6,5 vol. %</td>
<td></td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt; 0,1 hPa</td>
<td></td>
</tr>
<tr>
<td>(at 20 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density (at 15 °C):</td>
<td>0,94 g/cm³ DIN EN ISO 12185</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity / dynamic</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Viscosity / kinematic (at 40 °C)</td>
<td>236 mm²/s ASTM D 7042</td>
<td></td>
</tr>
<tr>
<td>Flow time</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Vapour density</td>
<td>not determined</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Other information
No information available.
SECTION 10: Stability and reactivity

10.1. Reactivity
No information available.

10.2. Chemical stability
No information available.

10.3. Possibility of hazardous reactions
No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid
Heat.

10.5. Incompatible materials
No information available.

10.6. Hazardous decomposition products
No information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

Irritation and corrosivity
Based on available data, the classification criteria are not met.

Sensitising effects
Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
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
Based on available data, the classification criteria are not met.

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

Practical experience

Other observations
Keeping to the general worker’s protection rules and the industrial hygienics, there is no risk in handling this product through the personnel.

SECTION 12: Ecological information

12.1. Toxicity
There are no data available on the mixture itself.

12.2. Persistence and degradability
There are no data available on the mixture itself.

12.3. Bioaccumulative potential
There are no data available on the mixture itself.

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
No data available

12.6. Other adverse effects
No data available
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal
Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.

Waste disposal number of waste from residues/unused products
120107 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; mineral-based machining oils free of halogens (except emulsions and solutions); hazardous waste

Contaminated packaging
Non-contaminated packages may be recycled. Consult the appropriate local waste disposal expert about waste disposal.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)
14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TII/IATA-DGR)
14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards
ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user
No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No data available

SECTION 15: Regulatory information

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

EU regulatory information
2010/75/EU (VOC): 0 %
Information according to 2012/18/EU (SEVESO III):
Not subject to 2012/18/EU (SEVESO III)

National regulatory information
Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.
SECTION 16: Other information

Abbreviations and acronyms
- ADR: Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organization
- CAS: Chemical Abstracts Service (a division of the American Chemical Society)
- DNEL/DMEL: Derived No-Effect Level / Derived Minimal Effect Level
- PNEC: Predicted No Effect Concentration
- WEL (UK): Workplace Exposure Limits
- TWA (EC): Time-Weighted Average
- STEL (EC): Short Term Exposure Limit
- ATE: Acute Toxicity Estimate
- LD50: Lethal Dose, 50% (median lethal dose)
- LC50: Lethal Concentration, 50% (median lethal concentration)
- EC50: half maximal Effective Concentration
- ErC50: EC50 in terms of reduction of growth rate
- AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
- VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety information, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety information is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)
Available ex stock in plastic containers

1 kg container  Art. no. FZ191415.01
5 kg container  Art. no. FZ191415.05
10 kg container Art. no. FZ191415.10
20 kg container Art. no. FZ191415.20

For up-to-date safety information, see: www.emuge.de/msds

An overview of our thread cutting oils and pastes can be found in our flyer „cooling lubricants“, available under article no. ZP10067.DEGB