For difficult materials

Perfectly suitable for the cold forming of threads. Can be used for brush and circulation lubrication. Not suitable for the machining of copper material!

Available ex stock in plastic containers

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Art. no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kg container</td>
<td>FZ191415.01</td>
</tr>
<tr>
<td>5 kg container</td>
<td>FZ191415.05</td>
</tr>
<tr>
<td>10 kg container</td>
<td>FZ191415.10</td>
</tr>
<tr>
<td>20 kg container</td>
<td>FZ191415.20</td>
</tr>
</tbody>
</table>

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

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

1.4. Emergency telephone number:

Mon. - Thu.  7.00 - 15.00 h  Contact: Martin Rittger, person responsible for safety
Fri.  7.00 - 14.00 h  Phone: +49 (0) 9123 / 186-120 or -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

Regulation (EC) No. 1272/2008

Special labelling of certain mixtures
EUH208  Contains benzene, mono-C10-13-alkyl derivatives, fractionation bottoms, heavy ends,
sulfonated, calcium salts, benzenesulfonic acid, mono-C16-24-alkyl derivatives, calcium
salts, TBN < 300. May produce an allergic reaction.
EUH210  Safety Information available on request.

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.

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Classification according to Regulation (EC) No. 1272/2008 [CLP]</td>
<td></td>
</tr>
<tr>
<td>148520-84-7</td>
<td>benzene, mono-C10-13-alkyl derivatives, fractionation bottoms, heavy ends, sulfonated, calcium salts</td>
<td>1 - &lt; 2.5 %</td>
</tr>
<tr>
<td>800-941-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin Sens. 1B; H317</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.
## 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.

### 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.

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
- 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>Physical state:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>dark brown</td>
</tr>
<tr>
<td>Odour:</td>
<td>characteristic</td>
</tr>
</tbody>
</table>

| pH-Value:             | not applicable  |

Changes in the physical state

<table>
<thead>
<tr>
<th>Melting point:</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>not determined</td>
</tr>
<tr>
<td>Pour point:</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Lower explosion limits:</td>
<td>0,4 vol. % VDI 2263</td>
</tr>
<tr>
<td>Upper explosion limits:</td>
<td>4,5 vol. % VDI 2263</td>
</tr>
<tr>
<td>Ignition temperature:</td>
<td>not determined</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No information available.</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>&lt; 0,1 hPa</td>
</tr>
<tr>
<td>Density (at 15 °C):</td>
<td>0,93 g/cm³</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>insoluble</td>
</tr>
</tbody>
</table>
Partition coefficient: not determined
Viscosity / dynamic: not determined
Viscosity / kinematic: 230 mm²/s (at 40 °C) ASTM D 7042
Flow time: not determined
Vapour density: not determined
Evaporation rate: not determined

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

Other observations

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

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:**

Marine pollutant: NO

**Air transport (ICAO-TI/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 %

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

Changes
This data sheet contains changes from the previous version in section(s): 2, 9, 11, 15.

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
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

Relevant H and EUH statements (number and full text)
H317 May cause an allergic skin reaction.
EUH208 Contains benzene, mono-C10-13-alkyl derivatives, fractionation bottoms, heavy ends, sulfonated, calcium salts, benzenesulfonic acid, mono-C16-24-alkyl derivatives, calcium salts, TBN < 300. May produce an allergic reaction.
EUH210 Safety data sheet available on request.

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.)