SAFETY DATA SHEET

High Pressure Grease 02

date of issue: 08.08.2018
date of version: 12.12.2017

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

1.1 Product identifier
Product name: High Pressure Grease 02

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Grease
Uses advised against: No usage which is apart from.

1.3 Details of the supplier of the safety data sheet
Manufacturer / Supplier: KHS GmbH Juchost. 20
44143 Dortmund
www.khs.com
Germany

Telephone: +49 (0)231 / 569-10000
Fax: +49 (0)231 / 569-410300

Contact Person: Service Products
E-Mail: service.products@khs.com

1.4 Emergency telephone number
+49 (0)6131 / 19240 (24h-emergency call)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
The product has not been classified as hazardous according to regulation (EU) no 1272/2008 (CLP), but must be labelled.

2.2 Label elements
not applicable

Hazard statements: none
Precautionary statements:

Supplemental label elements: EUH208: Includes Calcium sulfonat. Can cause allergic reactions.
EUH210: Safety data sheet available upon request.

2.3 Other hazards
SECTION 3: Composition/information on ingredients

3.1 Chemical characterization

General information: Grease: Thickener, additives in synthetic oil.

3.2 Hazardous components

<table>
<thead>
<tr>
<th>chemical definition</th>
<th>Identifier</th>
<th>Concentration</th>
<th>classification CLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>calcium sulfonate</td>
<td>EINECS: 263-093-9</td>
<td>1,00 - &lt;10,00%</td>
<td>H317 May cause an allergic skin reaction</td>
</tr>
<tr>
<td></td>
<td>01-2119488992-18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>calcium sulfonate</td>
<td>EINECS: 271-529-4</td>
<td>1,00 - &lt;10,00%</td>
<td>H317 May cause an allergic skin reaction</td>
</tr>
<tr>
<td></td>
<td>01-2119492627-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ca-sulfonate</td>
<td>EINECS: 274-263-7</td>
<td>1,00 - &lt;10,00%</td>
<td>H317 May cause an allergic skin reaction</td>
</tr>
<tr>
<td></td>
<td>01-2119492616-28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ca- sulfonate</td>
<td>EINECS: 247-557-8</td>
<td>1,00 - &lt;3,00%</td>
<td>H315 Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>H318 Causes serious eye damage</td>
</tr>
<tr>
<td>enolamine, N-phenyl, reaction products with 2,4,4-trimethylpentene</td>
<td>EINECS: 270-128-1</td>
<td>1,00 - &lt;2,50%</td>
<td>H412 Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

PBT: persistent, bioaccumulative and toxic substance.
PvB: very persistent and very bioaccumulative substance.

SECTION 4: First aid measures

General: Instantly remove any clothing soiled by the product.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.
| **Eye contact:** | Promptly wash eyes with plenty of water while lifting the eye lids. |
| **Skin Contact:** | Wash with soap and water. Im allgemeinen ist das Produkt nicht hautreizend. |
| **Ingestion:** | Rinse mouth thoroughly. |

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

Product be able to effects skin-, and eye irritations.

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

Get medical attention if symptoms occur.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media:** CO2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added

**Unsuitable extinguishing media:** water in full jet.

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

During fire, gases hazardous to health may be formed.

**Advice for firefighters**

Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains.

**Special fire fighting procedures:**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
**SECTION 6: Accidental release measure**

6.1 Personal precautions, protective equipment and emergency procedures

| not required |

6.2 Environmental precautions

Prevent from spreading (e.g. by binding or oil barriers). Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acidbinders, universal binders, sawdust). Dispose of the material collected according to regulations. Stop the flow of material, if this is without risk.

6.4 Reference to other sections

Section 01 Contact information in case of an emergency
Section 07 Handling and storage
Section 08 appropriate personal protective equipment
Section 13 Disposal considerations

**SECTION 7: Handling and storage**

7.1 Precautions for safe handling

Prevent formation of aerosols. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Observe good industrial hygiene practices. Provide adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Local regulations concerning handling and storage of waterpolluting products have to be followed.

7.3 Specific end use(s)

no data available.

Storage Class: 11, Combustible solids
SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational Exposure Limits

8.2 Exposure controls

None of the components have assigned exposure limits.

8.2.1 Appropriate engineering controls:

Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.2.2 Individual protection measures, such as personal protective equipment

General information:
Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to in handling the chemicals or the mineral oil products.

Eye/face protection:
safety glasses (EN 166) recommended during refilling.

Hand Protection:
Material: Nitrile butyl rubber (NBR).
Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. To safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other:
Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.

Respiratory Protection:
Value not relevant for classification.

Thermal hazards:
no data available.
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## Hygiene measures:
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

## Environmental Controls:
no data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value or Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state:</td>
<td>firm</td>
</tr>
<tr>
<td>Form:</td>
<td>paste</td>
</tr>
<tr>
<td>Colour:</td>
<td>yellow</td>
</tr>
<tr>
<td>Odor:</td>
<td>mild</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>pH:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Value not relevant for classification.</td>
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<tr>
<td>Evaporation rate:</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>Value not relevant for classification.</td>
</tr>
<tr>
<td>Flammability limit - Upper (%)--</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Flammability limit - Lower (%)--</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Vapor density (air=1):</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Density:</td>
<td>0,95 - 1,05 g/cm³ (25 °C)</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>insoluble</td>
</tr>
<tr>
<td>Solubility (other):</td>
<td>no data available.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not applicable for mixtures</td>
</tr>
<tr>
<td>Autoignition Temperature:</td>
<td>Value not relevant for classification.</td>
</tr>
<tr>
<td>Autoignition Temperature:</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>Value not relevant for classification.</td>
</tr>
<tr>
<td>Kinematic viscosity:</td>
<td>2</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>Value not relevant for classification.</td>
</tr>
<tr>
<td>Oxidizing properties:</td>
<td>Value not relevant for classification.</td>
</tr>
<tr>
<td><strong>9.2 Other information</strong></td>
<td>no data available.</td>
</tr>
</tbody>
</table>
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SECTION 10: stability and reactivity

10.1 reactivity
Stable under normal use conditions.

10.2 chemical stability
Stable under normal use conditions.

10.3 possibility of hazardous reactions
Stable under normal use conditions.

10.4 conditions to avoid
Stable under normal use conditions.

10.5 incompatible materials

10.6 hazardous decomposition products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: toxicological information

11.1 information on likely routes of exposure

Acute toxicity

Oral product:
Not classified for acute toxicity based on available data.

specific substances
calcium sulfonate
LD 50 (rat): > 16,000 mg/kg

Dermal product:
Not classified for acute toxicity based on available data.

specific substances
calcium sulfonate
LD 50 (rat): > 4,000 mg/kg

Inhalation product:
Not classified for acute toxicity based on available data.

specific substances
calcium sulfonate
no data available.

Skin corrosion/irritation:
Not classified for acute toxicity based on available data.

specific substances
calcium sulfonate
no data available.

Serious eye damage/eye irritation product:
Not classified for acute toxicity based on available data.

specific substances
calcium sulfonate
no data available.
respiratory or skin sensitization: Not classified for acute toxicity based on available data.

product:  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

germin cell mutagenicity
product:  
in vitro  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

in vivo  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

carcinogenicity
product:  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

reproductive toxicity
product:  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

specific target organ toxicity - single exposure
product:  
specific substances
calcium sulfonate
no data available.
calcium sulfonate
no data available.

specific target organ toxicity - repeated exposure
product:  
specific substances
no data available.
### Aspiration hazard product:

<table>
<thead>
<tr>
<th>Specific Substances</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfonate</td>
<td>Not classified for acute toxicity based on available data.</td>
</tr>
</tbody>
</table>

### Other adverse effects:

<table>
<thead>
<tr>
<th>Specific Substances</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfonate</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Acute toxicity

<table>
<thead>
<tr>
<th>Test Endpoint</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish product</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Calcium sulfonate</td>
<td>LC 50 (fish, 96 h): &gt; 1.001 mg/l</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Endpoint</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic invertebrates product</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Calcium sulfonate</td>
<td>EC50 (water flea, 48 h): &gt; 1.001 mg/l</td>
</tr>
</tbody>
</table>

### Chronic toxicity product:

<table>
<thead>
<tr>
<th>Test Endpoint</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish product</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Endpoint</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic invertebrates product</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>
Based on available data, the classification criteria are not met.

### 12.2 Persistence and Degradability

**Product:**
- Specific substances: calcium sulfonate, calcium sulfonate
- Not readily biodegradable (according to OECD criteria).

### 12.3 Bioaccumulative potential

**Product:**
- Specific substances: calcium sulfonate, calcium sulfonate
- Not applicable for mixtures.

### 12.4 Mobility in soil

**Product:**
- Specific substances: calcium sulfonate, calcium sulfonate
- Not applicable for mixtures.

### 12.5 Results of PBT and vPvB assessment:

**Product does not include ingredients.**
- Specific substances: calcium sulfonate, calcium sulfonate

### 12.6 Other adverse effects

- No data available.
- Specific substances: calcium sulfonate, calcium sulfonate

**Water hazard class (WGK):**
- WGK 1: slightly water-endangering.

## SECTION 13: disposal considerations

### 13.1 Waste treatment methods

**General information:** Dispose in accordance with all applicable regulations.
disposal methods: Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed.

| 12 01 12*: used waxes and fats |

---

### SECTION 14: transport information

**ADR/RID**
- 14.1 UN number: 
- 14.2 UN proper shipping name: 
- 14.3 transport hazard class(es): non-dangerous goods 
- label(s): 
- hazard no. (ADR): 
- tunnel restriction code: 
- 14.4 packing group: 
- 14.5 environmental hazards: 
- 14.6 special precautions for user: 

**ADN**
- 14.1 UN number: 
- 14.2 UN proper shipping name: 
- 14.3 transport hazard class(es): non-dangerous goods 
- class: 
- 14.4 packing group: 
- 14.5 environmental hazards: 
- 14.6 special precautions for user: 

**IMDG**
- 14.1 UN number: 
- 14.2 UN proper shipping name: 
- 14.3 transport hazard class(es): non-dangerous goods 
- class: 
- 14.4 packing group: 
- 14.5 environmental hazards: 
- 14.6 special precautions for user: 

---
IATA
14.1 UN number: 
14.2 UN proper shipping name: non-dangerous goods
14.3 transport hazard class(es): non-dangerous goods class
14.4 packing group: 
14.5 environmental hazards: 
14.6 special precautions for user: 

SECTION 15: regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer: none


national regulations

water hazard class (WGK): WGK 1: slightly water-endangering.

15.2 chemical safety assessment: No Chemical Safety Assessment has been carried out.
### SECTION 16: other information

<table>
<thead>
<tr>
<th>revision Information:</th>
<th>Vertical lines in the margin indicate an amendment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>wording of the H-statements in section 2 and 3</td>
<td>H315 Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td>H317 May cause an allergic skin reaction</td>
</tr>
<tr>
<td></td>
<td>H318 Causes serious eye damage</td>
</tr>
<tr>
<td></td>
<td>H412 Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>other information:</th>
<th>The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies. The classification results from the Conventional Method mentioned in regulation EU 1272/2008 (CLP).</th>
</tr>
</thead>
<tbody>
<tr>
<td>revision date:</td>
<td>08.08.2018</td>
</tr>
<tr>
<td></td>
<td>section 10.5 has been corrected.</td>
</tr>
</tbody>
</table>

| disclaimer: | The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product’s properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature. |