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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

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

Grease

**1.3. Details of the supplier of the safety data sheet**

Company name:	Zeller+Gmelin GmbH & Co. KG	
Street:	Schlossstr. 20	
Place:	D-73054 Eislingen	
Telephone:	+49 (0) 7161 / 802-0	Telefax: +49 (0) 7161 / 802-290
e-mail:	info@zeller-gmelin.de	
Contact person:	Uwe Allmendinger	Telephone: +49 (0) 7161 / 802-297
e-mail:	produktsicherheit@zeller-gmelin.de	
Internet:	www.zeller-gmelin.de	
Responsible Department:	Produktsicherheit / Product Safety	

**1.4. Emergency telephone number:**Germany: +49 (0) 7161 / 802-400  
In England and Wales: NHS Direct: 0845 4647 or 111 In Scotland: NHS 24 - 08454 24 24 24 In Republic of Ireland: 01 809 2166**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Acute 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes serious eye irritation.

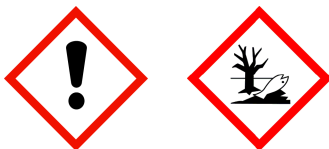
Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

Signal word: Warning

Pictograms:

**Hazard statements**

H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P273	Avoid release to the environment.
P280	Wear eye protection/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.
P337+P313	If eye irritation persists: Get medical advice/attention.

**2.3. Other hazards**

Results of PBT and vPvB assessment: not applicable.

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**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Mineral oil-based mixture. Mineral oil with DMSO extract &lt; 3 % as measured by IP 346.

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7440-50-8	copper flakes (coated with aliphatic acid)			10 - < 20 %
	231-159-6		01-2119480154-42	
	Acute Tox. 3, Acute Tox. 4, Eye Irrit. 2, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H331 H302 H319 H400 H410			

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 (CO<sub>2</sub>).**Unsuitable extinguishing media**

Full water jet.

**5.2. Special hazards arising from the substance or mixture**Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). 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**

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**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**
**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7440-50-8	Copper, dusts and mists (as Cu)	-	1		TWA (8 h)	WEL
		-	2		STEL (15 min)	WEL

**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): &gt; 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

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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**

Physical state:	Paste
Colour:	red brown
Odour:	characteristic

**Test method**

pH-Value:	not applicable
<b>Changes in the physical state</b>	
Melting point:	not determined
Initial boiling point and boiling range:	not determined
Pour point:	not determined
Flash point:	> 220 °C EN ISO 2592
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	not determined
Decomposition temperature:	No information available.
Vapour pressure: (at 20 °C)	< 0,1 hPa
Density (at 15 °C):	1,15 g/cm <sup>3</sup>
Water solubility:	insoluble
Partition coefficient:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
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**

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**11.1. Information on toxicological effects**
**Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-50-8	copper flakes (coated with aliphatic acid)				
	oral	ATE 500 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation (4 h) aerosol	LC50 0,733 mg/l	Rat male		

**Irritation and corrosivity**

Causes serious eye irritation.

Skin corrosion/irritation: 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**

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120112 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; spent waxes and fats; 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:** UN 3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER METAL POWDER)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  



Classification code: M7  
Special Provisions: 274 335 375 601  
Limited quantity: 5 kg  
Excepted quantity: E1  
Transport category: 3  
Hazard No: 90  
Tunnel restriction code: -

**Marine transport (IMDG)**

**14.1. UN number:** UN 3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER METAL POWDER)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  


Marine pollutant: YES  
Special Provisions: 274, 335, 966, 967, 969  
Limited quantity: 5 kg  
Excepted quantity: E1  
EmS: F-A, S-F

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 3077  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER METAL POWDER)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
Hazard label: 9  


Special Provisions: A97 A158 A179 A197  
Limited quantity Passenger: 30 kg G

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Passenger LQ:	Y956
Excepted quantity:	E1
IATA-packing instructions - Passenger:	956
IATA-max. quantity - Passenger:	400 kg
IATA-packing instructions - Cargo:	956
IATA-max. quantity - Cargo:	400 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes



Danger releasing substance: COPPER METAL POWDER

**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):	E1 Hazardous to the Aquatic Environment

**National regulatory information**

Water contaminating class (D): 3 - highly 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): 2,3,8,9,14,15.

**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  
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen  
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

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**Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H331	Toxic 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.

**Further Information**

Safety Data Sheet according to COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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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 data sheet, 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 data sheet 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.)*