

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 24.09.2021

Version number 3

Revision: 24.09.2021


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

- **1.1 Product identifier**
- **Trade name: SHERAHEAVY-METAL**
- **Article number: 401073**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
No further relevant information available.
- **Application of the substance / the mixture:** Metal alloy for dentistry
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SHERA Werkstoff-Technologie GmbH & Co. KG  
Espohlstraße 53  
D-49448 Lemförde  
GERMANY  
sdb@shera.de  
+ 49 (0) 54 43 . 99 33 . 0
- **Further information obtainable from:** Department of product security.
- **1.4 Emergency telephone number:**  
Gif tinformationszentrum-Nord: +49 (0) 551-19240  
(Information in german or english)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008:**

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Muta. 2	H341	Suspected of causing genetic defects.
Carc. 1B	H350	May cause cancer.
Repr. 1B	H360F	May damage fertility.
Aquatic Chronic 4	H413	May cause long lasting harmful effects to aquatic life.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms:**



GHS08
- **Signal word:** Danger
- **Hazard-determining components of labelling:**  
cobalt
- **Hazard statements:**
  - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - H317 May cause an allergic skin reaction.
  - H341 Suspected of causing genetic defects.
  - H350 May cause cancer.
  - H360F May damage fertility.
  - H413 May cause long lasting harmful effects to aquatic life.
- **Precautionary statements:**
  - P261 Avoid breathing dust.
  - P273 Avoid release to the environment.

(Contd. on page 2)

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

**Trade name: SHERAHEAVY-METAL**

(Contd. of page 1)

- P280 Wear protective gloves / eye protection.  
 P285 In case of inadequate ventilation wear respiratory protection.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P304+P312 IF INHALED: Call a doctor if you feel unwell.  
 P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P405 Store locked up.  
 P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

- **2.3 Other hazards**

There might be dusts and fumes from various components during mechanical or thermal processing (for example, grinding or milling). These can lead to health hazards if inhaled or through skin contact. Depending on the fineness of the dust, flammability cannot be ruled out.

- **Results of PBT and vPvB assessment:**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7440-48-4 EINECS: 231-158-0 Index number: 027-001-00-9	cobalt Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360F; Skin Sens. 1, H317; Aquatic Chronic 4, H413	50-70%
CAS: 7440-47-3 EINECS: 231-157-5	chromium substance with a Community workplace exposure limit	25-30%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information:** No special measures required.

- **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

In case of skin irritation, seek medical treatment.

May produce an allergic reaction.

Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Call a doctor immediately.

Rinse opened eye for several minutes under running water.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

GB

(Contd. on page 3)

## Safety data sheet

### according to 1907/2006/EC, Article 31



Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

Trade name: SHERAHEAVY-METAL

(Contd. of page 2)

#### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information available.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Metal vapours and metal oxides in the form of smoke.
- **5.3 Advice for firefighters** Do not allow water used to extinguish fire to enter drains or waterways.
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.

#### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation.  
Avoid formation of dust.  
Use respiratory protective device against the effects of fumes / dust / aerosol.  
Do not breathe dust.
- **6.2 Environmental precautions** Do not allow to enter sewers / surface or ground water.
- **6.3 Methods and material for containment and cleaning up**  
Avoid generation of dust.  
Pick up mechanically.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

#### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation / exhaustion at the workplace.  
Prevent formation of dust.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** No special measures are necessary.
- **Further information about storage conditions:** None.
- **Storage class:** No information available.
- **7.3 Specific end use(s)** No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**

**7440-48-4 cobalt**

WEL (Great Britain)	Long-term value: 0.1 mg/m <sup>3</sup> as Co; Carc, Sen
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(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

Trade name: SHERAHEAVY-METAL

(Contd. of page 3)

MAK (Germany)	Inhalable fraction; cf. Section XIII
<b>7440-47-3 chromium</b>	
WEL (Great Britain)	Long-term value: 0.5 mg/m <sup>3</sup>
AGW (Germany)	Long-term value: 2 E mg/m <sup>3</sup> 1(I); 10, EU
IOELV (EU)	Long-term value: 2 mg/m <sup>3</sup> as Cr
<b>7439-98-7 molybdenum</b>	
MAK (Germany)	cf. Section IIb and XII

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see item 7.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures:**

Do not eat, drink, smoke or sniff while working.

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

- **Respiratory protection:**

Not necessary if room is well-ventilated.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product. Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material:**

Protective gloves have to be replaced at the first sign of deterioration.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye/face protection** Safety glasses.

- **Body protection:** Light weight protective clothing.

- **Environmental exposure controls** See Section 7. No further action is necessary.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Colour:** Metallic
- **Odour:** Odourless

(Contd. on page 5)

## Safety data sheet

### according to 1907/2006/EC, Article 31



Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

Trade name: SHERAHEAVY-METAL

(Contd. of page 4)

· <b>Melting point/freezing point:</b>	1,290-1,450 °C
· <b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
· <b>Flammability</b>	Not determined.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not applicable.
· <b>Viscosity:</b>	Not applicable.
· <b>Kinematic viscosity</b>	Not applicable.
· <b>Dynamic:</b>	Not applicable.
· <b>Solubility</b>	
· <b>water:</b>	Insoluble.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	8.3 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.

· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Solid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent content:</b>	
· <b>Solids content:</b>	100.0 %
· <b>Change in condition:</b>	
· <b>Evaporation rate</b>	Not applicable.

· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void.
· <b>Flammable gases</b>	Void.
· <b>Aerosols</b>	Void.
· <b>Oxidising gases</b>	Void.
· <b>Gases under pressure</b>	Void.
· <b>Flammable liquids</b>	Void.
· <b>Flammable solids</b>	Void.
· <b>Self-reactive substances and mixtures</b>	Void.
· <b>Pyrophoric liquids</b>	Void.
· <b>Pyrophoric solids</b>	Void.
· <b>Self-heating substances and mixtures</b>	Void.
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void.
· <b>Oxidising liquids</b>	Void.
· <b>Oxidising solids</b>	Void.
· <b>Organic peroxides</b>	Void.
· <b>Corrosive to metals</b>	Void.

(Contd. on page 6)

GB

## Safety data sheet according to 1907/2006/EC, Article 31



Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

**Trade name: SHERAHEAVY-METAL**

(Contd. of page 5)

- **Desensitised explosives** Void.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No data available.
- **10.2 Chemical stability** Stable under normal storage and handling conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials** No further relevant information available.
- **10.6 Hazardous decomposition products** No further relevant information available.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
  - **Acute toxicity:** Based on available data, the classification criteria are not met.
  - **LD/LC50 values relevant for classification:**
- |                         |      |                   |
|-------------------------|------|-------------------|
| <b>7440-48-4 cobalt</b> |      |                   |
| Oral                    | LD50 | 6,170 mg/kg (Rat) |
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
  - **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
  - **Germ cell mutagenicity**  
Suspected of causing genetic defects.
  - **Carcinogenicity**  
May cause cancer.
  - **Reproductive toxicity**  
May damage fertility.
  - **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.
  - **Additional toxicological information:**
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** No information available.
  - **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 7)

## Safety data sheet according to 1907/2006/EC, Article 31



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Version number 3

Revision: 24.09.2021

Trade name: SHERAHEAVY-METAL

(Contd. of page 6)

- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.  
At present there are no ecotoxicological assessments.  
Danger to drinking water if even small quantities leak into the ground.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste disposal key:**  
The waste disposal code as prescribed in the European Waste Catalogue (EWC) depends on the waste producer and can thus vary for a product. The waste disposal code should thus be obtained separately from the waste producer in each case.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| <ul style="list-style-type: none"> <li>• <b>14.1 UN number or ID number</b></li> <li>• <b>ADR, IMDG, IATA</b></li> <li>• <b>ADN</b></li> </ul>                                      | Void.<br>Void.  |
| <ul style="list-style-type: none"> <li>• <b>14.2 UN proper shipping name</b></li> <li>• <b>ADR, IMDG, IATA</b></li> </ul>   | Void.           |
| <ul style="list-style-type: none"> <li>• <b>14.3 Transport hazard class(es)</b></li> <li>• <b>ADR, IMDG, IATA</b></li> <li>• <b>Class</b></li> <li>• <b>ADN/R Class:</b></li> </ul> | Void.<br>Void.  |
| <ul style="list-style-type: none"> <li>• <b>14.4 Packing group</b></li> <li>• <b>ADR, IMDG, IATA</b></li> </ul>   | Void.           |
| <ul style="list-style-type: none"> <li>• <b>14.5 Environmental hazards:</b></li> <li>• <b>Marine pollutant:</b></li> </ul>  | No.             |
| <ul style="list-style-type: none"> <li>• <b>14.6 Special precautions for user</b></li> </ul>  | Not applicable. |
| <ul style="list-style-type: none"> <li>• <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>   | Not applicable. |
| <ul style="list-style-type: none"> <li>• <b>UN "Model Regulation":</b></li> </ul>   | Void.           |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

(Contd. on page 8)

GB

## Safety data sheet according to 1907/2006/EC, Article 31



Printing date 24.09.2021

Version number 3

Revision: 24.09.2021

**Trade name: SHERAHEAVY-METAL**

(Contd. of page 7)

- **National regulations:**
- **Information about limitation of use:**  
Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on the state of knowledge and experience pertaining on the date of issue. The information is not to be taken as a guarantee of product properties and do not constitute the basis for a contractual legal relationship. The details must not be changed or transferred to other products. Duplication in an unchanged state is permissible.

- **Relevant phrases**

- H317 May cause an allergic skin reaction.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H360F May damage fertility.
- H413 May cause long lasting harmful effects to aquatic life.

- **Department issuing SDS:** Department of product security.

- **Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organisation
- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Resp. Sens. 1: Respiratory sensitisation . Category 1
- Skin Sens. 1: Skin sensitisation . Category 1
- Muta. 2: Germ cell mutagenicity . Category 2
- Carc. 1B: Carcinogenicity . Category 1B
- Repr. 1B: Reproductive toxicity . Category 1B
- Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard . Category 4

- **\* Data compared to the previous version altered.**

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