



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 03/14/2024

Reviewed on 03/14/2024

## 1 Identification

· **Product identifier**

· **Trade name:** Training metal

· -

· **Application of the substance / the mixture** Training alloy (non-precious metals)

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Information department:**

Tel. +1 (800) 431-1785 Fax: +1 (800) 522-1545

e-mail: [customer.servicehkna@kulzer-dental.com](mailto:customer.servicehkna@kulzer-dental.com)

· **Emergency telephone number:**

Emergency CONTACT (24-Hour-Number)

ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

## 2 Hazard(s) identification

· **Classification of the substance or mixture**

Sensitization - Respiratory 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

Germ Cell Mutagenicity 2 H341 Suspected of causing genetic defects.

Carcinogenicity 2 H351 Suspected of causing cancer.

Toxic to Reproduction 1B H360 May damage fertility or the unborn child.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

cobalt

· **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

Suspected of causing cancer.

May damage fertility or the unborn child.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves / eye protection.

Wear protective clothing.

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In case of inadequate ventilation wear respiratory protection.

Specific treatment (see on this label).

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system**

· **NFPA ratings for USA (scale 0-4)**



· **HMIS-Ratings (Scale 0-4)**



· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

**3 Composition/information on ingredients**

· **Chemical characterization: Mixtures**

· **Description:** -

· **Dangerous components:**

7440-50-8	copper	75-90%
7440-31-5	tin	5-10%
7440-48-4	cobalt	≥1-≤5%
Sensitization - Respiratory 1, H334; Germ Cell Mutagenicity 2, H341; Carcinogenicity 1B, H350; Toxic to Reproduction 1B, H360 Acute Toxicity - Oral 4, H302; Sensitization - Skin 1, H317		

· **Additional information**

The informations as to risks and precautions given in the chapters 4 to 8, 10 to 12 do not apply to the product itself, but only to dust and vapours generated on working with it.

For the wording of the listed hazard phrases refer to section 16.

**4 First-aid measures**

· **Description of first aid measures**

· **General information** No special measures required.

· **After inhalation** After inhalation of smoke, vapors and dust get fresh air and see a doctor.

· **After skin contact**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

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- **After swallowing** Do not induce vomiting; immediately call for medical help.
- **Information for doctor**
  - **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
  - **Suitable extinguishing agents**  
Sand. Do not use water.  
Limestone powder
  - **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
  - **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information** -

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.
- 
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>		
7440-31-5	tin	6 mg/m <sup>3</sup>
7440-48-4	cobalt	0.18 mg/m <sup>3</sup>
· <b>PAC-2:</b>		
7440-31-5	tin	67 mg/m <sup>3</sup>
7440-48-4	cobalt	2 mg/m <sup>3</sup>
· <b>PAC-3:</b>		
7440-31-5	tin	400 mg/m <sup>3</sup>
7440-48-4	cobalt	20 mg/m <sup>3</sup>

**7 Handling and storage**

- **Handling**
  - **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires:** No special measures required.

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- **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:** Not required.
    - **Further information about storage conditions:** None.
  - **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**7440-50-8 copper**

PEL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL	Long-term value: 1* 0.1** mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV	Long-term value: 1* 0.2** mg/m <sup>3</sup> *dusts and mists; **fume; as Cu

**7440-31-5 tin**

PEL	Long-term value: 2 mg/m <sup>3</sup> metal
REL	Long-term value: 2 mg/m <sup>3</sup>
TLV	Long-term value: 2* mg/m <sup>3</sup> metal, *inh. fraction

**7440-48-4 cobalt**

PEL	Long-term value: 0.1* mg/m <sup>3</sup> as Co; *for metal dust and fume
REL	Long-term value: 0.05 mg/m <sup>3</sup> as Co; metal dust & fume
TLV	Long-term value: 0.02* mg/m <sup>3</sup> *inh. fraction; DSEN, RSEN, BEI, A3

· **Ingredients with biological limit values:**

**7440-48-4 cobalt**

BEI	15 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (nonspecific)
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· **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment**
    - **General protective and hygienic measures** Wash hands before breaks and at the end of work.
    - **Breathing equipment:**  
Use respiratory protective device against the effects of fumes/dust/aerosol.

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ABEK-P3 (EN14387)

Filter P1.

· **Protection of hands:**

Check protective gloves prior to each use for their proper condition.  
recommended

· **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**

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

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

· **Eye protection:**

eye protection (EN 166)

Tightly sealed goggles.

· **Body protection:** Light weight protective clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:**

Solid.

· **Color:**

Yellow

· **Odor:**

Odorless

· **Odor threshold:**

Not determined.

· **pH-value:**

Mixture is non-soluble (in water).

· **Change in condition**

· **Melting point/Melting range:**

1380 °C (2,516 °F)

· **Boiling point/Boiling range:**

> 999 °C (> 1,830.2 °F)

· **Flash point:**

Not applicable

· **Flammability (solid, gaseous)**

Not determined.

· **Decomposition temperature:**

Not determined.

· **Ignition temperature:**

Product is not selfigniting.

· **Danger of explosion:**

Product does not present an explosion hazard.  
Not determined.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

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· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C (68 °F):</b>	8.800 g/cm <sup>3</sup> (73.436 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Insoluble
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>dynamic:</b>	Not applicable.
· <b>kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
· <b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** none

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>7440-50-8 copper</b>		
Oral	LD50	>2,500 mg/kg (rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
	LD0	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>5.11 mg/l (rat) (OECD 436)
	LC0/4h	≥5.11 mg/L (rat) (OECD 436)
<b>7440-31-5 tin</b>		
Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
<b>7440-48-4 cobalt</b>		
Oral	LD50	550 mg/kg (rat) (OECD 425)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

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- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>		
7440-48-4	cobalt	2B
· <b>NTP (National Toxicology Program)</b>		
7440-48-4	cobalt	R
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		
· <b>Reproductive toxicity</b> Based on available data, the classification criteria are not met.		

**12 Ecological information**

· **Toxicity**

· <b>Aquatic toxicity:</b>	
<b>7440-50-8 copper</b>	
LC50/96h	0.193 mg/l (fish)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
  - **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
  - **Recommendation:** Packaging can be reused or recycled after cleaning.

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**14 Transport information**

· <b>UN-Number</b> · DOT, ADR, ADN, IMDG, IATA	Void
· <b>UN proper shipping name</b> · DOT, ADN, IMDG, IATA · ADR	Void Void
· <b>Transport hazard class(es)</b> · DOT, ADR, ADN, IMDG, IATA · Class	Void
· <b>Packing group</b> · DOT, ADR, IMDG, IATA	Void
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	-
· <b>UN "Model Regulation":</b>	Void

**15 Regulatory information**

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b> · Sara
· <b>SARA Section 355 (extremely hazardous substances)</b> None of the ingredients is listed.
· <b>SARA Section 313 (specific toxic chemical listings)</b> 7440-48-4 cobalt
· <b>Hazardous Air Pollutants</b> 7440-48-4 cobalt
· <b>Proposition 65</b>
· <b>Prop 65 - Chemicals known to cause cancer</b> 7440-48-4 cobalt
· <b>Chemicals known to cause reproductive toxicity for females:</b> None of the ingredients is listed.
· <b>Chemicals known to cause reproductive toxicity for males:</b> None of the ingredients is listed.
· <b>Chemicals known to cause developmental toxicity:</b> None of the ingredients is listed.

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· **Carcinogeny categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

7440-48-4 cobalt

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Chemical safety assessment**

· **Water hazard class:** Generally not hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

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.

H360 May damage fertility or the unborn child.

· **Date of preparation / last revision 03/14/2024**

· **Abbreviations and acronyms:**

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

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1

Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2

Carcinogenicity 1B: Carcinogenicity – Category 1B

Carcinogenicity 2: Carcinogenicity – Category 2

Toxic to Reproduction 1B: Reproductive toxicity – Category 1B

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