

Safety data sheet

acc. to 1907/2006/EC, Article 31 (REACH), 1272/2008/EC (CLP) and 453/2010/EC

Printing date 25.11.2013

Version number 1

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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.

H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements

P260 Do not breathe dust.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Additional information:

According to Regulation (EC) 1272/2008, Annex 1, section 1.3.4.1, metals in massive form, alloys, mixtures containing polymers and mixtures containing elastomers do not require a label according to this Annex, if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of this Annex.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

3.2 Chemical characterization: Mixtures

Description: Cobalt-based alloy

Dangerous components:

CAS: 7440-48-4	cobalt	50 - 100%
EINECS: 231-158-0	Xn R42/43	
Index number: 027-001-00-9	R53	
	Resp. Sens. 1, H334; Skin Sens. 1, H317; Aquatic Chronic 4, H413	
CAS: 7440-47-3	chromium	25 - <50%
EINECS: 231-157-5	substance with a Community workplace exposure limit	
CAS: 7440-33-7	tungsten	2.5- <10%
EINECS: 231-143-9	substance with a Community workplace exposure limit	
CAS: 7440-21-3	silicon	< 1%
EINECS: 231-130-8	substance with a Community workplace exposure limit	
	Flam. Sol. 2, H228	

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. **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

. 4.1 Description of first aid measures

. **General information** Instantly remove any clothing soiled by the product.

. **After inhalation** : Supply fresh air; consult doctor in case of symptoms.

. **After skin contact** : Wash with water and soap.

. **After eye contact** : Rinse opened eye for 15 minutes under running water. Then consult doctor.

. **After swallowing** :

Rinse out mouth and then drink plenty of water (approx. 500 ml).

In case of persistent symptoms consult doctor.

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

The most important known symptoms and effects are described in the labelling (see section 2) and / or in section 11. Further important symptoms and effects are so far not known.

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

No further relevant information available.

5 Firefighting measures

. 5.1 Extinguishing media

. Suitable extinguishing agents

Use fire fighting measures that suit the environment.

CO₂, extinguishing powder or water jet. Fight larger fires with foam.

ABC powder

Sand

. 5.2 Special hazards arising from the substance or mixture

Fire can cause release of :

Metal vapor and metal oxides as fumes.

. 5.3 Advice for firefighters

. **Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

. 6.1 Personal precautions, protective equipment and emergency procedures

Avoid causing dust.

Wear protective clothing.

Ensure adequate ventilation

Use breathing protection against the effects of fumes/dust/aerosol.

. 6.2 Environmental precautions:

Do not allow concentrated solutions to enter drainage system, surface or ground water.

. 6.3 Methods and material for containment and cleaning up:

Collect mechanically.

Dispose of contaminated material as waste according to section 13.

. 6.4 Reference to other sections

See section 7 for information on safe handling

See section 8 for information on personal protection equipment.

7 Handling and storage

. 7.1 Precautions for safe handling

Prevent formation of dust.

Provide suction extractors if dust is formed.

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Ensure good ventilation/exhaustion at the workplace.

Extractors are required on all machines used for thermal processing or metal removal processes.

. **Information about protection against explosions and fires:** No special measures required.

. **7.2 Conditions for safe storage, including any incompatibilities**

. **Storage**

. **Requirements to be met by storerooms and containers:** No special requirements.

. **Information about storage in one common storage facility:** Not required.

. **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

. **7.3 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.

. **8.1 Control parameters**

. **Components with critical values that require monitoring at the workplace:**

7440-47-3 chromium

WEL (Great Britain) Long-term value: 0.5 mg/m³

IOELV (European Union) Long-term value: 2 mg/m³
as Cr

7440-33-7 tungsten

WEL (Great Britain) Short-term value: 3* 10** mg/m³
Long-term value: 1* 5** mg/m³
*soluble, **insoluble compounds, as W

7440-21-3 silicon

WEL (Great Britain) Long-term value: 10* 4** mg/m³
*inhalable dust **respirable dust

. **CAS No. Designation of material % Type Value Unit**

General dust exposure limit, German TRGS 900 (2009) 3 mg/m³
measured as alveolic part

. **Additional information:** The lists that were valid during compilation were used as a basis.

. **8.2 Exposure controls**

. **Personal protective equipment**

. **General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke while working.

Avoid contact with the eyes and skin.

Do not inhale dust / smoke / mist.

. **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

Short term filter device: ABEK-filter

Filter P3.

. **Protection of hands:**

Protective gloves:

In case of spray contact at least protection index 2 recommended, according to more than 30 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.4 mm

In case of prolonged and intensive contact protection index 6 recommended, according to more than 480 min. penetration time (EN 374).

Layer thickness of gloves at least: 0.7 mm

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. Material of gloves

Butyl rubber, BR
 Fluorocarbon rubber (Viton)
 Nitrile rubber, NBR
 Natural rubber, NR
 Chloroprene rubber, CR
 Neoprene gloves

. 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.

. **Eye protection:** Safety glasses (DIN 58211, EN 166)

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

9 Physical and chemical properties

. 9.1 Information on basic physical and chemical properties

. General Information

. Appearance:

Form: Solid
 Colour: Silver-coloured

. Smell: Odourless

. Odour threshold: Not applicable

. pH-value: Not applicable

. Change in condition

Melting point/Melting range: 1390 - 1415 °C
 Boiling point/Boiling range: > 2000 °C

. Flash point: Not applicable

. Inflammability (solid, gaseous) Not applicable

. Ignition temperature: Not applicable

. Decomposition temperature: Not determined

. Danger of explosion: Product is not explosive.

. Critical values for explosion:

Lower: Not applicable
 Upper: Not applicable

. Oxidizing properties Not applicable

. Steam pressure: Not applicable

. Density at 20 °C ca. 8 g/cm³

. Evaporation rate Not applicable

. Solubility in / Miscibility with

Water: Insoluble

. Partition coefficient (n-octanol/water): Not applicable

. Viscosity:

dynamic: Not applicable
 kinematic: Not applicable

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9.2 Other information

No further relevant information available.

10 Stability and reactivity

- . **10.1 Reactivity** No hazardous reactions when stored and handled according to instructions.
- . **10.2 Chemical stability**
- . **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:** Formation of metal vapor when melting

11 Toxicological information

- . **11.1 Information on toxicological effects**
- . **Acute toxicity:**
- . **LD/LC50 values that are relevant for classification:**
- . **Components**

Components	Type	Value	Species
Product	LD50: oral	> 2000 mg/kg	rat
- . **Primary irritant effect:**
- . **on the skin:** No irritant effect.
- . **on the eye:** Moderate irritation
- . **Subacute to chronic toxicity:**
- . Do not breathe dust.
- . Harmful: possible risk of irreversible effects through inhalation.
- . **Sensitisation** May cause sensitisation by inhalation and skin contact.
- . **Repeated dose toxicity** No further relevant information available.
- . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- . No further relevant information available.

12 Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:** No further relevant information available.
- . **12.2 Persistence and degradability** Inorganic salts are basically not biodegradable.
- . **12.3 Bioaccumulative potential** Does not accumulate in organisms
- . **12.4 Mobility in soil** No further relevant information available.
- . **Ecotoxicological effects:**
- . **Remark:** No data
- . **Other information:**
- . No COD, no BOD, no AOX
- . No VOC according to EC-directive 1999/13/EC
- . **Additional ecological information:**
- . **General notes:**
- . Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- . **12.5 Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.
- . **12.6 Other adverse effects** No further relevant information available.

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13 Disposal considerations

. 13.1 Waste treatment methods

. Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

Must be specially treated in adherence to official regulations.

. European waste catalogue

11 02 07* other wastes containing dangerous substances

. Uncleaned packaging:

. Recommendation:

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

Dispose of packaging according to regulations on the disposal of packagings.

. Recommended cleaning agent: Water, if necessary with cleaning agent.

14 Transport information

. 14.1 UN-Number

. ADR, IMDG, IATA Void

. 14.2 UN proper shipping name

. ADR, IMDG, IATA Void

. 14.3 Transport hazard class(es)

. ADR, IMDG, IATA

. Class Void

. 14.4 Packing group

. ADR, IMDG, IATA Void

. 14.5 Environmental hazards:

Not applicable.

. 14.6 Special precautions for user

Not applicable.

. 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

. Transport/Additional information:

Not dangerous according to the above regulations.

. UN "Model Regulation":

-

15 Regulatory information

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

. National regulations

. Information about limitation of use: Employment restrictions concerning young persons must be observed.

. 15.2 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

H228 Flammable solid.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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H413 May cause long lasting harmful effects to aquatic life.

R42/43 May cause sensitisation by inhalation and skin contact.

R53 May cause long-term adverse effects in the aquatic environment.

Department issuing data specification sheet: Product Safety and Regulatory Affairs

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 Organization

ADR: Accord européen sur le transport 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 Harmonized 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

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