

Safety data sheet

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according to 1907/2006/EC, Article 31

Versionnummer 0

Revision: 15.04.2024

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

- . **1.1 Product identifier** . Trade name **FAB Cobalt-Chrome T4**
- . **Article number: COCR-W-10, COCR-W-12, COCR-W-13,5, COCR-W-15, COCR-W-18, COCR-W-20**
- . **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** For the production of dental prostheses in the dental laboratory

. 1.3 Details of the supplier of the safety data sheet

. **Manufacturer/Supplier:**

Adentatec GmbH
Konrad-Adanauer-Str. 13 50996 Köln
Tel.: +49-221-3596-100 Fax: +49-221-3596-170
E-mail: info@adentatec.com www.adentatec.com

. 1.3a Dealer:

MINDFAB GmbH
Max-Josef-Metzger Str. 6
86157 Augsburg
Telefon: +49 821 455 252-0
Fax: +49 821 455 252-44
E-Mail: augsburg@mindfab.com

. Information department:

Product Management Tel.: +49-221-3596-100 or
by e-mail: info@adentatec.com

. 1.4 Emergency telephone number:

Tel.: +49-221-3596-100, Monday to Friday 8 a.m. to 5 p.m., in German and English, also contact the poison control centers

SECTION 2: Hazards identification

Medical devices according EG 2017-745 in their final state are exempted from the GB CLP legislation.

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

The following classification is not applicable to the alloy but only for the fumes, smokes and dusts formed during the processing and machining.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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Skin Sens. 1 H317 May cause an allergic skin reaction.
Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

Additional information:

The specified classification and labelling relates to safe handling of the alloy and the manufacturing of dental prostheses and not for application in the oral cavity.

2.2 Label elements

Medical devices according EG 2017-745 in their final state are exempted from the GB CLP legislation. The following labelling is not applicable to the alloy but only for the fumes, smokes and dusts formed during the processing and machining.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms

GHS08

Signal word Danger**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

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P284 [In case of inadequate ventilation] wear respiratory protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description:

Cobalt-based alloy

Cobalt based alloy

Dangerous components:

CAS: 7440-48-4	cobalt	≥50-≤100%
EINECS: 231-158-0	Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360F; Skin	
Index number: 027-001-00-9	Sens. 1, H317; Aquatic Chronic 4, H413	
CAS: 7440-47-3	chromium	≥10-<50%
EINECS: 231-157-5	substance with a Community workplace exposure limit	
CAS: 7440-33-7	tungsten	≥2.5-<25%
EINECS: 231-143-9	substance with a Community workplace exposure limit	
CAS: 7440-21-3	silicon	≥0-<10%
EINECS: 231-130-8	Flam. Sol. 2, H228	

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; 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 No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 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

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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.

SECTION 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.

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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Prevent formation of dust.

Provide suction extractors if dust is formed.

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.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

7440-48-4 cobalt

WEL (Great Britain) Long-term value: 0.1 mg/m³
as Co; Carc, Sen

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: 10 mg/m³
Long-term value: 5 mg/m³
as W

7440-21-3 silicon

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

Ingredients with biological limit values:

CAS No.	Designation of material	%	Type	Value	Unit
	General dust exposure limit, measured as alveolic part		German TRGS 900 (2015)	1,25	mg/m ³

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

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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

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

SECTION 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.
not applicable

Change in condition

Melting point/freezing point: 1,390-1,415 °C
Initial boiling point and boiling range: 2000 °C

Flash point: Not applicable
not applicable

Inflammability (solid, gaseous) not applicable

Auto-ignition temperature: not applicable

Decomposition temperature: not determined

Explosive properties: Product is not explosive.

Critical values for explosion:

Lower: not applicable
Upper: not applicable

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. Dust explosion class:	
Oxidising properties	not applicable
. Steam pressure:	Not applicable. not applicable
. Density at 20 °C	8 g/cm ³
. Evaporation rate	not applicable
. Solubility in / Miscibility with Water:	Unsoluble
. Partition coefficient: n-octanol/water:	not applicable
. Viscosity:	
dynamic:	Not applicable. not applicable
kinematic:	Not applicable. not applicable
. Solvent content:	
Solids content:	100.0 %
. 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- . 10.1 Reactivity**
No further relevant information available.
No further relevant information available.
- . 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

SECTION 11: Toxicological information

- . 11.1 Information on toxicological effects**
- . Acute toxicity** Based on available data, the classification criteria are not met.
- . LD/LC50 values that are relevant for classification:**
Oral LD50 >2,000 mg/kg (rat)

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- . **Primary irritant effect:**
- . **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.
- . **Subacute to chronic toxicity:**
 - Do not breathe dust.
 - Harmful: possible risk of irreversible effects through inhalation.
- . **Additional toxicological information:**
- . **Repeated dose toxicity** No further relevant information available.
- . **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - May cause cancer.
 - Suspected of causing genetic defects.
- . **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- . **Carcinogenicity** Based on available data, the classification criteria are not met.
- . **Reproductive toxicity** 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.

SECTION 12: Ecological information

- . **12.1 Toxicity**
- . **Aquatic toxicity:** No further relevant information available.
- . **12.2 Persistence and degradability** No further relevant information available.
- . **Other information:** 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 (0%) according to EC-directive 1999/13/EC
- . **Additional ecological information:**
- . **General notes:**
 - Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
 - Danger to drinking water if even extremely small quantities leak into soil.
- . **12.5 Results of PBT and vPvB assessment**
- . **PBT:** Not applicable.
- . **vPvB:** Not applicable.

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. 12.6 Other adverse effects No further relevant information available.

SECTION 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.

. 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.

SECTION 14: Transport information

. 14.1 UN-Number

. ADR/RID/ADN, IMDG, IATA Void

. 14.2 UN proper shipping name

. ADR/RID/ADN, IMDG, IATA Void

. 14.3 Transport hazard class(es)

. ADR/RID/ADN, IMDG, IATA

. Class Void

. 14.4 Packing group

. ADR/RID/ADN, 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 Marpol and the IBC Code Not applicable.

. Transport/Additional information: Not dangerous according to the above regulations.

. UN "Model Regulation": 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.

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. National regulations**. Information about limitation of use:** Employment restrictions concerning young persons must be observed.**. Other regulations, limitations and prohibitive regulations**The general dust exposure limit of 1.25 mg/m³, measured as alveolic part has to be observed (German TRGS 900, 2015).**. 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 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.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360F May damage fertility.

H413 May cause long lasting harmful effects to aquatic life.

. Contact: info@adentatec.com**. 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)

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

Flam. Sol. 2: Flammable solids – Category 2

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

. Sources: source ECHA: European Chemicals Agency, <http://echa.europa.eu/>**. * Data compared to the previous version altered.**