

Safety data sheet

CADtools Cobalt-Chrome Dental Alloy

1. Name of substance / preparation and company

Name of substance / preparation and company	
Product name	CADtools Cobalt-chrome Dental Alloy
Use of the substance / mixture	Medical technology
Details of the supplier who provided the safety data sheet	CADtools GmbH Max-Josef-Metzger-Str. 6 86157 Augsburg
Address	
Telephone	+49 821 455252-0
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Emergency information	Poison emergency number of the Charité Universitätsmedizin Berlin
Telephone	+49 30 19240

2. Possible hazards

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP)

Hazard Category	Category	Hazard class and category	Hazard Statements	Text
Hazardous to the aquatic environment (chronic aquatic toxicity)	4	Aquatic Chronic 4	H413	May be harmful to aquatic organisms with long-term effects.
Respiratory sensitization	1	Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization	1	Skin Sens. 1	H317	May cause an allergic skin reaction.

Precautionary Statements	Safety instructions
P102	obtain special instructions before use
P202	read and understand all safety precautions before use
P260	do not inhale dust, smoke, gas, mist, vapor, aerosol
P270	do not eat, drink or smoke during use
P280	wear protective gloves, protective clothing, eye protection, face protection
P501	dispose of contents / container in accordance with the applicable regulations

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP Regulation)

Hazard pictograms	Signal word
	Health hazard

Hazardous component(-s) that must be indicated on the label:

- cobalt

Hazard warnings	
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H413	May be harmful to aquatic organisms with long-term effects.

Safety instructions	
P273	Avoid release to the environment.
P302 + P352	In case of contact with skin, wash with plenty of water and soap.
P304 + P3412	If inhaled, move the person into fresh air and ensure that they can breathe freely.
P342 + P311	Call a poison center or doctor if you experience respiratory symptoms.
P363	Wash contaminated clothing before reuse.

Labeling information

In the form in which it is placed on the market, the product does not cause any health hazard for humans through inhalation, ingestion or contact with the skin.

There is therefore no obligation to label the product in accordance with:

- Regulation 1272/2008 (CLP: Annex I; 1.3.4.: metals in massive form, alloys, mixtures containing polymers, mixtures containing elastomers).

2.3 Other hazards

If the product shape in the delivery condition is changed through further processing (e.g. by grinding, polishing, spark erosion, welding or melting) and dust or vapors are generated, there may be a risk from dangerous components of the product.

PBT assessment: no data available

vPvB assessment: no data available

3. Composition / information on the components

Chemical name	Molecular formula	CAS number	Concentration
Poly(methyl methacrylate)	$(C_5O_2H_8)_n$	9011-14-7	72,5 %
Methyl methacrylate	$C_5H_8O_2$	80-62-6	27,0 %
Pigment	-	-	0,5 %

4. Description of the measures

Description of the measures	
After inhalation	Get fresh air and consult a doctor if there is irritation to the airways.
After skin contact	Thoroughly clean with warm water and soap. Get medical advice in case of skin irritation.
After eye contact	Rinse carefully and thoroughly with the eye shower or with cold, clean water, if necessary consult an ophthalmologist.
After ingestion	If a larger amount is swallowed, only if you are conscious, induce vomiting and consult a doctor.

5. Fire-fighting measures

Fire-fighting measures	
Suitable extinguishing agents	Metal fire powder, sand
Unsuitable extinguishing agents	Water, foam, CO ₂ , dry chemicals
Fire fighting hazards	not known
Special protective equipment for fire fighters	In the event of fire, wear self-contained breathing apparatus and standard extinguishing equipment.

6. Accidental release measures

Personal protective measures

See section 8

Environmental protection measures

Collect contaminated water separately. Do not discharge into sewers, surface water, waters or ground water. Do not let it get into the subsoil.

Methods for cleaning up

Treat the material as described under "Disposal information".

Additional information

None

7. Handling and storage

Precautions for safe handling

Ensure good ventilation of the work area (local aspiration if necessary). Do not breathe fumes or dust. Wash hands before breaks and after work. Do not eat, drink or smoke while working. Keep away from food and beverages.

Information about fire and explosion protection

Store in a cool and dry place. Store away from open flames, hot surfaces and sources of ignition.

Precautions for safe storage

Keep container tightly closed in a well-ventilated place. Do not store together with explosive substances.

8. Exposure controls and personal protective equipment

8.1 Parameters to be controlled

Occupational exposure limit values (TRGS 900)

Description	CAS number EINECS number	ppm	mg / m ³	F / m ³	Top limit
Chrome	7440-47-3 231-157-5	-	2 E	-	1l

Substance-specific acceptance and tolerance concentration (TRGS 910)

Description	CAS number EINECS number	Assessment standard	ppm	mg / m ³	F / m ³	Notes / OF
Cobalt	7440-48-4 231-158-0	Acceptance concentration	-	0,0005 (A)	-	b)
		Tolerance concentration	-	0,005 (A)	-	

Limitation and monitoring of exposure

Exposure limit values	not known
Limitation of exposure monitoring	not known
Limitation and monitoring of exposure in the workplace	Do not smoke, eat or drink while working. Keep away from food and beverages. In the event of accidental ingestion, rinse out your mouth immediately and then drink plenty of water.
Eye protection	Safety glasses with side protection (EN 166) must be used.
Respiratory protection	If solid cobalt-chrome alloy forms are converted into particles in manufacturing processes, keep the work environment below recommended limits by means of suitable ventilation.
Skin protection	Suitable protective clothing must be used.
Hand protection	Heat-insulating protective gloves must be used for thermal processing. Before use, the protective gloves must be checked for their suitability for specific workplaces. Follow the manufacturer's instructions and information regarding the use, storage, care and replacement of protective gloves. Protective gloves must be replaced immediately if they are physically damaged or worn. Design the work processes in such a way that the permanent use of protective gloves is avoided.
Other	Normal chemical work clothes.

9. Physical and chemical properties

Physical and chemical properties	
Appearance	industrially manufactured solid
Colour	white
Odour	odourless
Odour threshold	not determined
Melting temperature	1460 °C
Boiling point	not determined
Flash point	not determined
Decomposition point	not determined
Auto-ignition temperature	not determined
Explosion hazard	not determined
Oxidizing properties	not determined
Flammability (solid, gaseous)	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapor pressure	not determined
Vapor density	not determined
Evaporation rate	not determined
Relativ density	not determined
Density	8,8 g / cm ³
Water solubility	insoluble
Solubility (-ies)	not determined
Partition coefficient: n-octanol / water	not determined
Viscosity	not determined

10. Stability and reactivity

Stability and reactivity	
Reactivity	Dangerous reactions are not to be expected if the product is handled according to its intended use.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Possible hydrogen formation on contact with acids.
Conditions to avoid	not known
Substances to be avoided	not known
Incompatible materials	acids

11. Toxicology

With normal handling and use, exposure to massive forms of cobalt-chrome alloys presents few health hazards. However, when massive forms are converted into particles, both acute and chronic health hazards are possible.

Information on toxicological effects

Acute oral toxicity	not known
Acute dermal toxicity	not known
Acute inhalation toxicity	not known
Skin corrosion / irritation	not known
Serious eye damage / irritation	not known
Respiratory / skin sensitization	not known
Germ cell mutagenicity	not known
Reproductive toxicity	not known
Carcinogenicity	not known
STOT single exposure	not known
STOT repeated exposure	not known
Aspiration hazard	not known
Delayed and immediate effects as well as chronic effects from short and long-term exposure	Inhalation of vapors in high concentrations can cause metal fume fever and can damage the central nervous system in the event of repeated and prolonged exposure. Repeated and prolonged exposure to a high concentration of dust can cause irritation to the respiratory tract. Inhaling dusts containing metal can cause acute poisoning, which leads to nausea, vomiting and abdominal pain.

12. Information on ecology

Information on ecology

Ecotoxicity	If handled and used properly, no ecological problems are to be expected.
Mobility	not known
Persistence and degradability	not known
Bioaccumulative potential	not known
PBT and vPvB assessment	not known
Other harmful effects	not known

13. Disposal considerations

The processing wastage is to be disposed of as hazardous waste in accordance with EC directives 91/156 / EC on waste, 91/689 / EC on hazardous waste and 94/62 / EC on packaging and packaging waste and in compliance with the applicable national legislation.

14. Transport information

Transport information	
Transport ADR / RID / AND	The product is not subject to ADR / RID / ADN regulations.
Transport IMDG	The product is not subject to the IMDG regulations.
Transport ICAO-TI / IATA	The product is not subject to the ICAO-TI / IATA regulations.
Environmental hazards	not known
Special precautionary measures for the user	not known

15. Disclaimer

The information in this safety data sheet corresponds to the best of our knowledge at the time of revision. The information is intended to provide you with guidelines for the safe handling of the product named in this safety data sheet during storage, processing, transport and disposal. The details are not transferable to other products. Insofar as the product named in this safety data sheet is blended, mixed or processed with other materials or subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless otherwise expressly stated.