

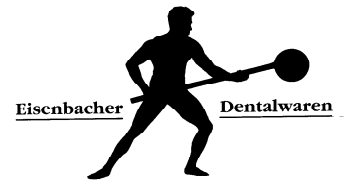


0434

# Safety Data Sheet

## -Cobalt-

According to EG 1907/2006 (REACH)



### 1. Identification of substance and company

Product details: Cobalt alloy, Dental Continuous casting; or other casting process

Product form: Rod, disc, cylinder, or varying geometries

Trade name: KERAGEN, KERA C, VEGA, KERA 501, TENER 350, TENER IT, ROBUR 400, DENTES, DENTIUM, KERASYS, MAIN METALL, TENER C, TENER X, KERA LA-CON, KERA WEL-CON, KERA S-POWDER, KERA-DISC, KERA C-DISC, KERA 501-DISC, VEGA-DISC, TENER IT-DISC, TENER 350-DISC, ROBUR 400-DISC, DENTES-DISC, DENTIUM-DISC, KERASYS-DISC, MAIN METALL-DISC, TENER C-DISC, TENER X-DISC

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### 2. Hazards identification

Hazard designation: Not applicable

Information pertaining to particular dangers for man and environment: Due to the calculation procedure of the "General rating principles for the preparation of the EG" in the ultimate version the product is not subject to marking.

Classification system: The classification is in line with the current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

Hazard warning:



**BEFÄHR**

See "other information item 16"

### 3. Composition/Data on components

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

Co-Cr-Alloy	Chemical characterization / Dangerous components:	
Cobalt Co	Rest 50 - 70 %	CAS: 7440-48-4 EINECS: 231-158-0
Chrom Cr	19 - 30 %	CAS: 7440-47-3 EINECS: 231-157-5
Silicium Si	0 - 2 %	CAS: 7440-21-3 EINECS: 231-130-8

### 4. First aid measures

General information: No special measures required

After inhaling: Fresh air; in case of disorders, please contact a doctor.

After swallowing: Rinse out the mouth and drink water afterwards. In case of continuous disorders, a doctor should be consulted

After skin contact: Wash with water and soap

After eye contact: Rinse eyes under running water and consult a doctor

Information for the doctor: Control examination according to the BG-guidelines G38, G39 and G40

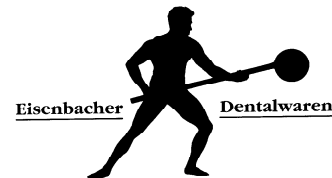


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### 5. Fire fighting measures

Suitable extinguishing aids: Adapt fire extinguishing methods to site

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases: No special measures required

Protective equipment: The product itself does not burn. In case of a fire metal fumes and metal oxides can be set free in the form of smoke

### 6. Accidental release measures

Person-related safety precautions: In case of release of fumes; dust/Aerosol only work with a protection mask. Arrange for sufficient ventilation

Measures for environmental protection: Remains/Dental scrap should be disposed environmentally friendly. Swarf is not allowed to enter drainage system, surface or ground water

Measures for cleaning/collecting: Dispose of swarf mechanically. Try to avoid formation of dust

### 7. Handling and storage

Handling: Information for safe handling: Arrange good ventilation/exhaustion at workplace. Prevent formation of dust

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

Storage and container: Only store in original package. The delivery units need to be protected against sliding, overturning, rolling and falling.

Information about storage in one common storage facility: Not required

Further information about storage conditions: None

Storage class: -

Classification according to Ordinal on Industrial Safety and Health: -

### 8. Exposure controls and personal protection

Additional information about design of technical systems: No further data, see item 7

Components with critical values that require monitoring at the workplace: Particulate matter MAK 6 mg/m<sup>3</sup>  
1317-35-7 Manganese oxide  
MAK 1 mg/m<sup>3</sup>  
7440-48-4 Cobalt (2, 3,25; TRGS 901-12)  
MAK 0,1 E mg/m<sup>3</sup>  
7440-47-3 Chrome  
AGW 2 E mg/m<sup>3</sup> (1 (I); 10, EU)  
IOELV (EU) 2 mg/m<sup>3</sup> als Cr

Additional information: The lists that were valid during the compilation were used as basis

Personal protective equipment: General protective and hygienic measures: Do not inhale dust, fume, haze

Breathing equipment: Filter device - Filter FFP2 (abrasive treatment)

Protection for hands: Protection gloves

Material of gloves: Natural rubber

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

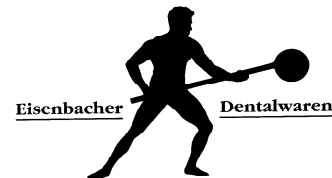


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### 9. Physical and chemical properties

Form:	Rod, disc, cylinder or varying geometries
Colour - product specification:	Metallic bright
Smell:	odorless
Change in condition:	
Melting point/Melting range (Solidus/Liquidus):	1.250 - 1.420 °C
Boiling point/Boiling range:	>2000° C
Flash point:	Not applicable
Ignition point:	-
Corrosion temperature:	uncertain
Density at 20°C:	~ 8 g/cm <sup>3</sup>
Danger of explosion:	Product is not explosive
pH-number:	Not applicable
Solubility in / Miscibility with water:	insoluble

### 10. Stability and reactivity

Thermal corrosion/Conditions to avoid:	No decomposition if used and stored according to specifications
Dangerous reactions:	No dangerous reactions known
Dangerous products of Corrosion:	No dangerous products of corrosion known

### 11. Toxicological information

Acute toxicity:	Results of animal experiments are not known
Toxicological tests:	LD <sub>50</sub> /LC <sub>50</sub> values are not known
Primary irritant effect	
- on the skin:	No irritant effect
- on the eye:	Moderate effect
Sensitization:	Sensitization after inhaling or skin contact
Additional toxicological information:	The product is not subject to classification according to the calculation method of the General ED Classification Guidelines for Preparations as issued in the latest version. Dust is occurring while grinding. The composition of the dust depends on the chemical analysis of the alloy. Essential oxide is released from silicon, molybdenum, tungsten, cobalt. Manganese compound, cobalt oxides and chrome oxides can also occur. Do not inhale grinding dust.

### 12. Ecological information

General notes:	Do not let it pour undiluted or in huge amounts into ground water, surface or drainage system.
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### 13. Disposal considerations

Recommendation:	Contact waste material market (alloy) regarding recycling
European waste catalogue:	06 03 15 metallic oxides containing heavy metals (Waste which occurs while grinding)
Uncleaned packagings:	
Recommendation:	Packagings that cannot be cleaned are to be disposed off in the same manner as the product

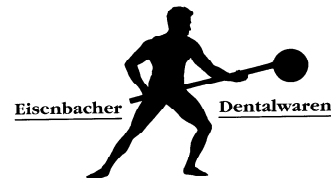


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**14. Transport information**

Ground transport ADR/RID und GGVS/GGVE (cross-border/domestic): -  
 Maritime transport IMDG/GGV sea: -  
 Air transport ICAO-TI und IATA-DGR: -  
 Transport/other information: Not classified as dangerous goods in the meaning of transport regulations

**15. Regulatory information**

Designation according to EC guidelines: Observe the normal safety regulations when handling with chemicals. The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).

National regulations:  
 General Classification Guideline for Preparations of the EC: n. a.  
 Classification letter and hazard description of the product: Xn Dangerous to health  
 Hazard defining components for labeling: Cobalt, Chrome

**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 R- und S-phrases

This/These phrase(s) apply(ies) to one of the substance of content(s) and do not necessarily mention the classification of the preparation!

S22 Do not inhale dust (Cobalt)  
 S23 Do not inhale gas, fume, haze, aerosol  
 S24 Avoid skin contact  
 S37 Appropriate protection gloves should be worn  
 S29 Do not let it pour into drainage system (waste/mud)  
 S38 Wear protection mask if not ventilated properly  
 R42/43 May cause sensitization by inhalation and skin contact  
 R53 May cause long-term adverse effects in the aquatic environment  
 H334 Allergies or asthmatic symptoms can occur when inhaling  
 H317 Can cause allergic skin reactions  
 H413 Can be dangerous for water organisms, with longtime effect

Prevention:

P280 Wear protective gloves/clothes/ eye cover/ facemask  
 P260 Do not inhale dust

Reaction:

P342+P311 If symptoms of the air passages should occur, please contact toxic information centre or doctor  
 P304+P341 Please get fresh air or get into position which makes breathing easier inhaling  
 P333+P313 Consult doctor after rash

Responsible: Eisenbacher Dentalwaren ED GmbH  
 Contact: Oliver Hagedorn