

## Safety Data Sheet according to 1907/2006/EG (REACH)

Date of Print: 30.06.2017

rev.04

Revised on: 30.06.2017

**Trade name: Cobalt-Based Alloys Powder**

### 1 Identification of substance and company

- **Product information**  
**Trade name:**  
 Starbond CoS Powder (REF 133716, 133730, 133715, 133755)  
 Starbond Easy Powder (REF 140730)  
 Modelstar S Powder (REF 132716, 132165)
- **Relevant identified uses of the substance or mixture and uses advised against**  
**Application of the substance:** Cobalt based alloy powder for the manufacturing of dental prostheses
- **Manufacturer / Supplier:**  
 S&S Scheftner GmbH  
 Dekan-Laist-Str. 52  
 D-55129 Mainz
- **Further information obtainable from:**  
 Adrian Jossek  
[a.jossek@schefthner24.de](mailto:a.jossek@schefthner24.de)
- **Emergency information:**  
 For medical information (in german and english language):  
 +49/6131/19240 (poison control center Mainz)

### 2 Hazards identification

- **Classification of the substance or mixture:** Regulation (EC) 1272/2008 (CLP)
 

Chronic aquatic toxicity	Category 4	H413
Skin sensitization	Category 1	H317
Respiratory sensitization	Category 1	H372

- **Label Elements:**



Signal word: Danger

**Hazard statement(s)**

H317 May cause an allergic skin reaction.

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

H413 May cause long lasting harmful effects to aquatic life

**Precautionary statement(s)**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing should not be allowed out of the workplace.

P281 Use personal protective equipment as required.

P404 Store in a closed container.

P501 Dispose of contents/container in accordance with local and national regulations P273 Avoid release to the environment.

**Other hazards:**

If the product form in the as-supplied state is changed through further processing (e.g. through grinding, polishing, electrical discharge machining, welding or melting) and dust or vapours are produced, there may be danger from hazardous components in the product (see information in chapter 3).

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### 3 Composition

- **Mixture:** Cobalt-Based Alloys Powder

CAS Number	Name	Content	Risk phrases / remarks
7440-48-4	Cobalt	Max. 65 %	See Point 2
7440-47-3	Chromium	Max. 30 %	Acute aquatic toxicity (Category 1) This substance is not classified as hazardous under Directive 67/548 / EEC
7440-33-7	Tungsten	Max. 12 %	No hazardous substance or mixture according to Regulation (EC) no. 1272/2008. This substance is not classified as hazardous under Directive 67/548 / EEC
7439-98-7	Molybdenum	Max. 10 %	
7440-21-3	Silicon	Max. 3 %	
	Andere Bestandteile: C, Fe, Mn, N	<1%	

### 4 First Aid measures

- **Description of first aid measures:**  
 Skin Contact: Wash off thoroughly with soap and water. If rash develops seek medical attention.  
 Eye Contact: Irrigate thoroughly with water for at least 10 minutes – obtain medical attention if irritation persists  
 Inhalation: Remove from exposure, rest and keep warm. In severe cases or if exposure has been great, obtain medical attention.  
 Ingestion: Wash out mouth thoroughly with water. Obtain medical attention if further symptoms develop.
- **Most important symptoms and effects, both acute and delayed:**  
 Skin Contact: Rash may develop.  
 Eye Contact: Mechanical irritation.  
 Inhalation: Possible asthma like symptoms.  
 Ingestion: No information
- **Indications of any immediate medical attention and special treatment needed:**  
 Skin Contact: Treat symptomatically  
 Eye Contact: Treat symptomatically  
 Inhalation: Treat symptomatically

### 5 Fire fighting measures

- **Extinguishing Media:** extinguishing type D powder or sand.
- **Special Hazards arising from the substance or mixture:**  
 Avoid formation of dust cloud as this may lead to an increased risk of a dust explosion.
- **Advice for fire fighters:** In case of fire and / or explosion do not breathe fumes.

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### 6 Accidental release measures

- **Personal precautions:**  
For non-emergency personnel: Wear suitable protective clothing and equipment.  
For emergency responders: Wear suitable protective clothing and equipment.
- **Environmental precautions:** Take precautions to ensure product does not contaminate ground or enter the drainage system.
- **Methods and material for containment and clear up:**  
For containment: Not applicable  
For cleaning up:  
Small spillage: Vacuum with equipment fitted with HEPA filtration.  
Large spillage: Solids should be carefully transferred to salvage containers. Any residues should be treated as small spillages.
- **Other information:** No Information.

### 7 Handling and storage

- **Precautions for safe handling**  
Protective measures: Avoid contact with skin and eyes. Do not breathe dust. Wash hand and face thoroughly after working with material.  
Measures to prevent fire: Not applicable.  
Measures to protect the environment: Use appropriate containment to avoid environmental hazard.  
Advice on general occupational hygiene: Work using a suitable extraction/ventilation system.  
Contaminated clothing should be removed and washed before re-use.
- **Conditions for safe storage**  
Technical measures and storage conditions: Store in sealed container in dry conditions and keep the container closed when not in use  
Packaging materials: Keep in the container supplied, or suitable metal, plastic or polythene container.  
Requirements for storage rooms and vessels: Containers should be stored under cover in a clean and dry environment.  
Storage class: Not applicable.  
Further information on storage conditions: Local regulations should be followed regarding the storage of this material.
- **Specific end uses:** Identified uses:
 

0	Other Process or activity:
AC7	Metal articles
ERC2	Formulation of preparations (mixtures)
ERC3	Formulation in materials
PROC14	Production of preparations or articles by tableting, compression, extrusion, pelletisation
PROC2	Use in closed, continuous process with occasional controlled exposure
PROC22	Potentially closed processing operations with minerals/metals at elevated temperature; industrial setting
PROC5	Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
SU17	General manufacturing

### 8 Exposure controls and personal protection

CAS No.	Substance	Basis	WEL 8hr limit		WEL 15min limit	
			ppm TWA (8 hour)	mg/m3 TWA (8 hour)	ppm TWA (short term)	mg/m3 TWA (short term)
7440-48-4	Cobalt	MAK 2014	0.01	-	-	0.500
7440-47-3	Chromium	TRGS 900	-	2 E	-	0.500
7440-33-7	Tungsten	-	-	-	-	-
7439-98-7	Molybdenum	-	-	-	-	-
7440-21-3	Silicon	-	-	-	-	-

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### Exposure Controls



- **Appropriate engineering controls:**  
 Substance/mixture related measures to prevent exposure during identified uses: Not applicable  
 Structural measures to prevent exposure: Enclosed processes  
 Organisational measures to prevent exposure: Substance/Mixture only to be used by those trained in its safe use.  
 Technical measures to prevent exposure: Enclosed processes or local exhaust ventilation
- **Personal protection equipment:**  
 Eye and face protection: Safety glasses  
 Skin protection:  
 Hand protection: Impervious gloves  
 Other skin protection: Barrier cream  
 Respiratory protection: FFP3 dust mask to EN149:2001  
 Thermal hazards: Not applicable
- **Environmental exposure controls:**  
 Substance/mixture related measures to prevent exposure: Not applicable  
 Instruction measures to prevent exposure: Not applicable  
 Organisational measures to prevent exposure: Substance/Mixture only to be used by those trained in its safe use.  
 Technical measures to prevent exposure: Not applicable

## 9 Physical and chemical properties

Appearance:	Solid (powder)
Colour:	grey
Odour:	Odourless
Melting interval:	>1100°C
Boiling Point	>2000°C
Flashpoint:	Not applicable
Explosion hazard:	The product is not explosive
Density:	8.1 - 8.8 g/cm <sup>3</sup>
Water solubility:	Insoluble (20°C)
Particle size:	100%<1mm

## 10 Stability and reactivity

- **Reactivity:** No data available.
- **Chemical Stability:** Stable under normal storage conditions.
- **Possibility of hazardous reactions:** No data available.
- **Conditions to be avoided:** None under normal use.
- **Materials to be avoided:** Strong acids
- **Hazardous decomposition products:** In contact with acids the formation of hydrogen is possible. In case of fire the formation of toxic metal oxide is possible

## 11 Toxicological information

Acute toxicity	No data
Skin corrosion/irritation	No data
Serious eye damage/irritation	No data
Respiratory or skin sensitisation	No data
Germ cell mutagenicity	No data
Carcinogenicity	No data
Reproductive toxicity	No data
Summary of evaluation of the CMR properties	No data

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- |                        |         |
|------------------------|---------|
| STOT-single exposure   | No data |
| STOT-repeated exposure | No data |
| Aspiration hazard      | No data |
- IARC: Group 2B: Cobalt and its alloys is probably carcinogenic to humans.

### 12 Ecological information

- Toxicity**  
Long-term Ecotoxicity: No data  
Persistence and degradability: No data  
Abiotic Degradation: No data  
Physical- and photo-chemical elimination: No data
- Biodegradation**  
Bioaccumulative potential: No data  
Partition coefficient n-octanol/water (log Kow): No data  
Bioconcentration factor (BCF): No data
- Mobility in soil**  
Known or predicted distribution to environmental compartments: No data  
Surface tension: No data  
Adsorption/Desorption: No data
- Results of PBT & vPvB assessment:** No data
- Other adverse effects:** No data
- Additional information:** Prevent from getting into the soil, waters and sewerage.

### 13 Disposal considerations

- Waste treatment methods**
- Product/Packaging disposal:**  
EWC for waste product, ferrous alloys 12-01-02, non-ferrous alloys 12-01-04  
EWC for non product contaminated packaging, steel drums 15-01-04, card 15-01-01, plastic 15-01-02, wood 15-01-03  
EWC for product contaminated packaging, all types 15-01-10
- Waste treatment – relevant information:**  
Chemical residues are generally classified as special waste and as such, are covered by Directive 2008/98/EC of the European Parliament. Contact your local waste disposal authority for advice or pass to a chemical recovery company.

### 14 Transport information

- UN Number:** None
- UN proper shipping name:** Not classified hazardous for transport.
- Transport hazard class(es):** Not applicable
- Packing group:** Not applicable
- Environmental hazards:** Not applicable
- Special precautions for user:** None
- Transport in bulk according to Annex II of MARPOL73/78 and the IPBC code:** Not Applicable

### 15 Regulations

- Safety, health and environmental regulations/legislation specific for the substance or mixture**  
EU EC directive 98/24/EC on the Protection of the health and safety of workers from the risks related to chemical agents at work  
DE Administrative Regulation on Substances Hazardous to Waters; VwVwS WGK 2  
UK The use of this product must be assessed in accordance with the requirements of the COSHH Regulations 2002 as amended.
- Authorisation and/or restrictions on use**  
**Authorisations:** Not applicable  
**Restrictions:** see section 1.2 on uses advised against.
- Chemical safety assessment:** No Chemical Safety Assessment has been carried out for this

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substance/mixture by the supplier

### 16 Other information

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.