

MATERIAL SAFETY DATA SHEET

Revision date 09 October 2007

1 Identification of substance

- 1.1 Product details / trade name CoCr coron
- 1.2 Manufacturer / Supplier
- | | | | |
|----------------------------|--|--|--|
| Name | etkon AG | | |
| Address | Lochhamer Schlag 6, 82166 Gräfelfing | | |
| Phone | 089 / 30 90 75 0 | | |
| Fax | 089 / 30 90 75 599 e-mail info@etkon.de | | |
| Internet | www.etkon.de | | |
| Area providing information | Phone or Fax | | |
| Emergency information | As above | | |
- 1.3 Emergency Information As above

2 Composition / Data on components

- 2.1 Chemical characterization – *CoCr-milling blank-nickel-free NPM – ceramo-metal alloy (NFM) on cobalt-chromium basis*
- 2.2 Ingredients and dangerous ingredients
- | | Designation of the component(s) | Concentration | GS | R statements |
|---|---------------------------------|----------------|-----------|--------------|
| 1 | <i>Chromium</i> | <i>20 - 40</i> | | |
| 2 | <i>Cobalt</i> | <i>50 - 70</i> | <i>Xn</i> | <i>42/43</i> |
| 3 | <i>Tungsten</i> | <i>4 – 10</i> | | |
- 2.3 Application *milling blank*

3 Hazards Identification

- 3.1 Designation of the risk *No risks requiring special mention*

4 First aid measures

- 4.1 General notes *Consult physician if complaints continue*
- 4.2 After inhalation *After inhaling dusts: bring person to fresh air*
- 4.3 After skin contact *After contact with grinding dust: wash well with warm water and soap*

5 Fire fighting measures

- 5.1 Suitable extinguishing media
The product itself does not burn: match extinguishing action to fire in surroundings.

6 Accidental Release Measures

- 6.1 Person-related precautionary measures *Product is available as solid – Unintentional release as with liquids and gases is therefore impossible.*
- 6.2 Methods for cleaning / clearing up *Avoid dust formation. Avoid dust development. Clear up mechanically.*

7 Handling and storage

- 7.1 Information for safe handling *The product may be processed only by trained employees. Observe instruction for use when processing, especially:*
- *Ensure sufficient cooling in milling process*
 - *Avoid dust formation and dust deposits*
 - *Ventilate workplace sufficiently and use dust extraction*
- 7.2 Notes on fire and explosion protection *Avoid dust formation.*
- 7.3 Requirements on storage rooms and containers *No special action required.*

8 Exposure controls and personal protection

- 8.1 Constituents with workplace-related threshold limit values requiring monitoring

CAS No.	Designation of the substance	Concentration	Type	Value	Unit
7440-47-3	Chromium	20 – 40	TLV	0,500	mg/m ³
7440-48-4	Cobalt	50 – 70	TLV	0,500	mg/m ³
7440-33-7	Tungsten	4 - 10	TLV	5	mg/m ³

- 8.2 Work hygiene and personal protective equipment

Breathing protection	<i>Respirator</i>	Hand protection
Eye protection	<i>Goggles</i>	Body protection
General protective measures		Hygienic measures

9 Physical and chemical properties

- 9.1 Appearance
- | | | | | | |
|--------------|--------------------------|-------|--------------------|------|-----------------|
| Form / shape | <i>Solid body, disks</i> | Color | <i>Silver-gray</i> | Odor | <i>Odorless</i> |
|--------------|--------------------------|-------|--------------------|------|-----------------|
- 9.2.1 pH value on delivery *Not applicable*
- 9.2.2 Condition change *Not applicable*
- 9.2.3 Flame point *Not applicable*
- 9.2.4 Ignition temperature *Not applicable*
- 9.2.5 Fire-promoting properties *Not applicable*
- 9.2.6 Risk of explosion *Not applicable*
- 9.2.7 Explosion limits: LEL *Not applicable* UEL *Not applicable*
- 9.2.8 Density *8.6 g / cm³*
- 9.2.9 Solubility (mg/l) in water *Insoluble*

10 Stability and reactivity

- 10.1 Thermal decomposition / conditions to be avoided *Industrially produced solid for which thermal decomposition can be excluded in use as intended.*
- 10.2 Dangerous reactions *No dangerous reactions known.*
- 10.3 Dangerous product of decomposition *No dangerous product of decomposition known.*

11 Toxicological information

- 11.1 *No injuries to health are known in correct use.*

12 Ecological information

12.1 General notes *Product is insoluble in water.*

13 Disposal considerations

13.1 Product recommendation *Contact recycling exchange for recycling.*

14 Transport information

14.1 Land transport (ADR/RID/GGVS/GGVE)

Warning Sign. No special precautions required.

14.2 Inland water transport AND/ADNR

No special precautions required.

14.3 Sea transport IMDG/GGV Sea

Comments: marine pollutant

IMDG/GGV Sea class

UN-No. PG

EmS No.

MFAG no

14.3.1 Comments *No special precautions or action required*

14.4 Air transport ICAO/IATA

No special precautions required.

14.5 Transport – further information

No dangerous transport

15 Regulatory Information

15.1 Identification according to EU Directives

The product does not require identification according to EU Directives and the relevant national laws.

15.1.1 Hazard-determining components for labeling

15.1.2 R statements *No R statements*

15.1.3 R statements *No S statements*

15.1.4 Special identification of certain preparations *Not applicable*

15.2 National regulations

15.2.1 Notes on employment restriction Accident code

15.2.2 Water hazard class *0*

15.2.3 Other regulations, restrictions and prohibitions *Product does not require identification according to hazardous substance law.*

16 Other information

16.1 Training information *Information on use*

NOTES

The information in this safety data sheet is based on the current state of our knowledge and on our experience with the product. It serves exclusively for reducing risk in handling the product and therefore describes it only with regard to safety aspects. The information is thus no assurance of properties within the meaning of our General Terms of

Business. It also does not relieve the user from his duty to take care with regard to compliance with applicable laws, regulations and provisions.

We provide our safety data sheets on request free of charge on first-time purchase of the product, further copies can be requested against reimbursement of costs. When the safety data sheet is updated, we inform in agreement with the relevant regulations all those users who have received the safety data sheet from us in the course of the last 12 months before the update. This is done by sending the updated version free of charge. Owners of older safety data sheets can inquire the relevant revision status (=last changed).