

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

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

1.1 Product identifier

Trade name

Cobalt chromium alloys for partial dentures (REF 50020)

Wironit (REF 50020, 50030)

Wironit extra hard (REF 50050, 50060)

Wironit LA (REF 50100, 50103)

Wironium (REF 50065)

Wironium extra hard (REF 50175)

Wironium Plus (REF 50190)

Wironit select (REF 50294, 50295)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture

Manufacturing of dental prosthesis in a dental laboratory

1.3 Details of the supplier of the safety data sheet

Address

BEGO Bremer Goldschlägerei

Wilh. Herbst GmbH & Co. KG

Wilhelm-Herbst-Str. 1

28359 Bremen

Telephone no. +49/ 421/ 2028 – 0

Fax no. +49/ 421/ 2028 – 115

Email msds@bego.com

Information provided by / telephone

Research & Development Department - Materials, alloys and ceramics; +49/ 421/ 2028 – 130 (Chief Development Officer alloys)

Advice on Safety Data Sheet

msds@bego.com

1.4 Emergency telephone number

For medical advice (in German and English):

+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Skin Sens. 1; H317

Resp. Sens. 1; H334

Aquatic Chronic 4; H413

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

R42/43

R53

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms



GHS08

Signal word

Danger

Hazardous component(s) to be indicated on label:

cobalt

Hazard statements

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 statements

P260	Do not breathe dust.
P273	Avoid release to the environment.
P285	In case of inadequate ventilation wear respiratory protection.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Labelling information

In the form in which it is marketed, the product causes no danger to health for humans through inhalation, swallowing 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 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).

PBT assessment

No data available.

vPvB assessment

No data available.

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable. The product is not a substance.

3.2 Mixtures**Hazardous ingredients**

No	Substance name			Additional information	
	CAS / EC / Index / REACH no	Classification 67/548/EEC	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	cobalt				
	7440-48-4 231-158-0 027-001-00-9 -	R42/43 R53	Aquatic Chronic 4; H413 Resp. Sens. 1; H334 Skin Sens. 1; H317	> 50.00 - < 70.00	%-b.w.
2	chromium				
	7440-47-3 231-157-5 - -	-	-	> 30.00 - < 50.00	%-b.w.

Full Text for all R-phrases , H-phrases and EUH-phrases: pls. see section 16

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

In case of allergic symptoms, especially respiratory tract related, seek medical help immediately.

After inhalation

Ensure supply of fresh air. Remove affected person from the immediate area. When vapours are intensively inhaled, seek medical help immediately.

After skin contact

Wash off immediately with soap and water.

After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart and seek medical advice.

After ingestion

Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Metal fire powders; Sand

Unsuitable extinguishing media

Water; Foam; Carbon dioxide; Dry chemicals

5.2 Special hazards arising from the substance or mixture

No data available.

5.3 Advice for firefighters

Use self-contained breathing apparatus. Adapt extinguisher and fire-fighting measures to fire in the environment. Wear protective clothing.

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ensure adequate ventilation. Do not inhale vapours. Avoid dust formation. Refer to protective measures listed in sections 7 and 8.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Collect contaminated water / firefighting water separately. Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Take up mechanically. Avoid raising dust. When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation, if necessary).

General protective and hygiene measures

Wash hands before breaks and after work. Do not eat, drink or smoke during work time. Remove soiled or soaked clothing immediately. Keep away from foodstuffs and beverages. Do not inhale vapours or dust.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air. Take precautionary measures against static charges. Keep away from sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed in a well-ventilated place.

Requirements for storage rooms and vessels

No special measures required.

Advice on storage assembly

Do not store together with: explosive substances

7.3 Specific end use(s)

No data available.

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limit values**

No	Substance name	CAS no.	EC no.
1	cobalt	7440-48-4	231-158-0
	List of approved workplace exposure limits (WELs) / EH40		
	Cobalt		
	TWA	0.1	mg/m ³
	List of approved workplace exposure limits (WELs) / EH40		
	Cobalt compounds		
	Co		
	TWA	0.1	mg/m ³
2	chromium	7440-47-3	231-157-5
	List of approved workplace exposure limits (WELs) / EH40		
	Chromium		
	TWA	0.5	mg/m ³

8.2 Exposure controls**Appropriate engineering controls**

No data available.

Personal protective equipment**Respiratory protection**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses with side protection shield (EN 166)

Hand protection

In case of thermal processing, thermally insulating protective gloves are to be used. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Form/Colour
solid
white
Odour
odourless

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

Region: GB

Odour threshold	
No data available	
pH value	
No data available	
Boiling point / boiling range	
No data available	
Melting point / melting range	
Value	1260 - 1350 °C
Remarks	The various products have different melting intervals within the indicated melting range.
Decomposition point / decomposition range	
No data available	
Flash point	
No data available	
Auto-ignition temperature	
No data available	
Oxidising properties	
No data available	
Explosive properties	
No data available	
Flammability (solid, gas)	
No data available	
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapour pressure	
No data available	
Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	8.2 g/cm ³
Solubility in water	
Remarks	insoluble
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
No data available	
Viscosity	
No data available	

9.2 Other information

Other information	
No data available.	

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)**Current version :** 2.0.4, issued: 11.02.2015**Replaced version:** 2.0.3, issued: 16.12.2014**Region:** GB**SECTION 10: Stability and reactivity****10.1 Reactivity**

Dangerous reactions are not expected if the product is handled according to its intended use.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Possible hydrogen formation upon contact with acids.

10.4 Conditions to avoid

None, if handled according to intended use.

10.5 Incompatible materials

Acids

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute oral toxicity**

No data available

Acute dermal toxicity

No data available

Acute inhalational toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Reproduction toxicity

No data available

Carcinogenicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation of vapours in high concentration may cause metal fume fever and may cause damage of the central nervous system in case of repeated and prolonged exposure. Repeated and prolonged exposure to high dust concentrations may lead to irritation of the respiratory tract. Inhalation of metal-containing dusts may cause acute poisoning, leading to nausea, vomiting and abdominal pain.

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

Replaced version: 2.0.3, issued: 16.12.2014

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SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)
No data available
Toxicity to Daphnia (chronic)
No data available
Toxicity to algae (acute)
No data available
Toxicity to algae (chronic)
No data available
Bacteria toxicity
No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	No data available.
vPvB assessment	No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

Trade name: Cobalt chromium alloys for partial dentures (REF 50020)

Current version : 2.0.4, issued: 11.02.2015

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SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, PREPARATIONS AND ARTICLES

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

Restriction of occupation

Adhere to the national sanitary and occupational safety regulations when using this product.

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks

Annex I, part 1 + 2: not mentioned. With regard to possibly appropriate decomposition products see Chapter 10.

15.2 Chemical safety assessment

No data available.

SECTION 16: Other information

Sources of key data used to compile the data sheet:

EC Directive 67/548/EC resp. 1999/45/EC as amended in each case.

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

EC Directives 2000/39/EC, 2006/15/EC, 2009/16/EU

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

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Full text of the R-, H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

R42/43

May cause sensitization by inhalation and skin contact.

R53

May cause long-term adverse effects in the aquatic environment.

Department issuing safety data sheet

UMCO Umwelt Consult GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 183, Tel.: +49(40)79 02 36 300, Fax: +49(40)79 02 36 357, e-mail: umco@umco.de

This information is based on our present state of knowledge and experience.

The security data sheet describes products with a view to the security requirements.

However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.