

SECTION 1: Identification of the substance / mixture and of the company**1.1 Product****Cobalt based alloy**

Realloy C | Realloy C Blank | Realloy C Softblank | Realloy C Softblank R
Realloy CH | Realloy CH Blank
Realloy Classic | Realloy Classic Softblank | Realloy Classic Softblank R
Realloy Ga280
Realloy BC | Realloy BC Blank | Realloy BC Softblank | Realloy BC Softblank R
Modell FH
Modell EH
Realloy LFC
Realloy Universal Lot
Realloy Laserwire

Nickel based alloy

Realloy N+
Realloy N
Realloy Base

1.2 Relevant identified uses of the substance or mixture

Manufacturing of dental prostheses in dental laboratories

1.3 Producer**Address:**

German Special Alloys GmbH
Carl-Friedrich-Benz-Str. 1-b
D-47877 Willich

Phone: +49 (0)2154-88 09 180
E-Mail: info@gs-alloys.de
Web: www.german-special-alloys.com

Information provided by

Realloy e.K.
Moerser Straße 232
47803 Krefeld
Telefon-Nr.: +49 (0)2151-486 49 78
E-Mail: info@realloy.net
Web: www.realloy.net

1.4 Emergency phone number

For medical advice (*in german and in english*):
+49 (0)551 192 40 (Information center Germany North for poisonous substances)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- Resp. Sens. 1; H334
- Skin Sens. 1; H317

2.2 Label elements**Classification in accordance with regulation (EC) No 1272/2008 (CLP)**

Remark: All relevant data given here are not related to the solid alloy sold to the market but rather for fumes, smoke and dust created when processed in dental laboratories.

Hazard pictograms



GHS08

Signal word: Danger

Hazardous component(s) to be indicated on label:

Cobalt metal and / or Nickel metal (not applicable for alloys)

Hazard statements

H317 May cause an allergic skin reaction.

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

Precautionary statements

P285 In case of inadequate ventilation wear respiratory protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/ spray.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P304+P341 IF INHALED: Remove person to fresh air and keep comfortable for breathing

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

P363 Wash contaminated clothing before reuse.

Labelling information

In the form in which it is marketed, the product causes no danger to health for humans by inhalation, swallowing or contact with the skin. There is no obligation to label the product in accordance with:

- regulation (EC) 1272/2008 (CLP: annex I, 1.3.4.: „Metals in massive form, alloys“

2.3 Other hazards

If the product is processed (grinding, polishing, electrical discharge machining, welding or melting) dusts, vapours or fumes are produced. In these cases there may be danger from hazardous components in the product.

PBT-assessment: The alloys under concern are not known to be persistent, bioaccumulating nor toxic.

SECTION 3: Composition / information on ingredients

3.1 Substances

Not applicable. The product is an alloy and is not a substance.

3.2 Mixtures: Hazardous components

No	Substance Name	Classification (EG) 1272/2008 (CLP)	Additional information
	CAS / EG / Index		Concentration
1a	Cobalt in cobalt-based alloys		
	7440-48-4	Resp. Sens. 1; H334	28 – 68 %-b.w.
	231-158-0	Skin Sens. 1; H317	
	027-001-00-9	Aquatic Chronic 4; H413	
		Carc. 1B; H350	
or			
1b	Nickel in nickel-based alloys		
	7440-02-0	Resp. Sens. 1; H334	28,00 – 68,00 %-b.w.
	231-111-4	Skin Sens. 1; H317	
	028-002-00.7	Carc 2, H351	
		Aquatic Chronic 3, H412	
2	Chromium		
	7440-47-3	not classified	9,00 – 31,00 %-b.w.
	231-157-5		

Full text for all H-phrases and EUH-phrases: See section 16

Section 4: First aid measures**4.1 First aid measures (only for dusts, vapours or fumes generated by processing in dental labs)****After inhalation:**

Provide fresh air. Do not leave affected persons unattended. If you experience respiratory symptoms: Call a POISON CENTER / doctor. If medical advice is required, have the packaging / label ready

After skin contact:

Wash off immediately with plenty of soap and water. In case of skin response consult a doctor.

After eye contact:

Rinse eyes thoroughly with running water for several minutes with the eyelid wide open. Remove any existing contact lenses if possible. Continue rinsing. Then visit an ophthalmologist.

After swallowing:

Rinse out mouth immediately and then drink plenty of water. In case of unconsciousness give nothing by mouth. Do not induce vomiting.

Beware of vomiting: risk of aspiration!

If swallowed with subsequent vomiting, aspiration into the lungs can occur which can lead to chemical pneumonia or asphyxiation. Immediately consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

May cause allergic or asthma symptoms or breathing difficulties if dust is inhaled.

May cause allergic skin reactions.

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

Suitable extinguishing media: metal fire powders; sand

unsuitable extinguishing media: water;

5.2 Special hazards arising from the substances or mixtures

No data available

5.3 Advice for firefighters

Use breathing apparatus, adapt fire fighting measures to the environment.

Additional notes:

Avoid the penetration of extinguishing water into surface water or groundwater.

Fire residues and contaminated extinguishing water must be disposed in accordance with the local and official regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Avoid dust formation. Do not inhale vapours or dust.

Wear protective equipment. Keep unprotected people away.

6.2 Environmental precautions

Collect contaminated water / firefighting water separately. Do not discharge into the drains or into surface water.

6.3 Methods and material for containment and cleaning up

Take up mechanically. Avoid dust formation. Dispose the picked up material without dust formation.

6.4 Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation at the work area with local exhaust hood. Avoid dust formation.

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 food and beverages. Do not inhale vapours or dust.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air, keep away from sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and dry.

Indication for Combined Storage:

Keep away from food, drink and animal feed.
Do not store together with acids / bases and oxidizing agents.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limit values

Nr.	Substance Name (CAS No.)	Type	Limit value
1a	Cobalt (7440-48-4)	Great Britain: WEL-TWA Ireland: 8 hours	0.1 mg/m ³ 0.02 mg/m ³
or			
1b	Nickel (7440-02-0)	Great Britain: WEL-TWA	0.5 mg/m ³ 8 hr
2	Chrom (7440-47-3)	Europe: IOELV: TWA Great Britain: WEL-TWA Ireland: 8 hours	2 mg/m ³ (metal and compounds, inorganic, insoluble) 0.5 mg/m ³ 2 mg/m ³

8.2 Exposure controls

Provide good ventilation at the work area with local exhaust ventilation.

Personal protective equipment

Respiratory protection

Wear respiratory protection in case of insufficient ventilation. If the Occupational exposure limits (OGL) are exceeded a respiratory protective device must be worn. When dusts are formed use respiration protection (Type P3, EN 143).

Eye / face protection

Safety glasses with side protections shield according to EN 166.

Hand protection

Use Protective gloves according to EN 374, they shall be replaced immediately when physically damaged or worn.

Body protection

Wear dustproof protective clothing.

Protective and hygiene measures

Avoid breathing dust. Do not get into eyes, on skin, or on clothing. Immediately take off all contaminated clothing and wash it before reuse. Do not wear contaminated work clothing outside of the workplace. Do not eat, drink or smoke when using. Wash hands thoroughly after use.

Environmental exposure controls

See section 6.2.

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

Form / Colour / Odour	-	solid / white / odourless
pH-Value	-	no data available
Melting point / melting range	-	value: 1200 - 1400 °C The various products have different melting intervals within the indicated melting range
Boiling point / boiling range	-	no data available
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	-	When processing the product, dusts can occur and form an explosive mixture with air.
Flammability (solid, gas)	-	no data available
Lower or 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	-	8 - 9 g/cm ³
Solubility in water	-	insoluble
Viscosity	-	no data available

9.2 Other Information

No data available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

See section 10.3.

10.2 Chemical stability

Stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

Possible hydrogen formation upon contact with acids.

10.4 Conditions to avoid

Avoid dust formation.

10.5 Incompatible materials

Acids, alkalis, strong oxidizing agents.

10.6 Hazardous decomposition products

No hazardous decomposition products known if the rules for storage and handling are followed.
Thermal decomposition: no data available.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute oral toxicity	-	no data available
Acute dermal toxicity	-	no data available
Acute inhalation 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-exposures	-	no data available
Anspiration hazard	-	no data available

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

During mechanical processing, particles and dust can arise.
Contact with dust can cause mechanical irritation to the eyes. After inhalation of dust irritation of the respiratory tract can occur.

SECTION 12: Ecological information**12.1 Toxicity**

No data available.

Aquatic Toxicity (of dust, not alloys)

May be harmful to aquatic organisms with long-term effects.

Cobalt:

Algae toxicity: EC50 Pseudokirchneriella subcapitata: 0,27 mg/L/70h

Fish toxicity: LC50 Goldorfe (Leuciscus idus): >10 mg/L/48h

Nickel:

Algae toxicity: EC50 aquatic invertebrates: ≤108 µg/L/21d

Fish toxicity: LC50 >15,3 mg/L/96h

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 assesment

PBT- and vPvB-assesment: These alloys are not considered to be persistent, bioaccumulating or toxic.

12.6 Other adverse effects

Do not allow to get into the ground water, water course or the sewage system.

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

Waste removal should be carried out in agreement with the regional waste disposal company.

Packages

Emptied packages to be disposed in accordance with the regional regulations for waste removal.

SECTION 14: Transport information**14.1 Transport ADR / RID / ADN**

Not restricted.

14.2 Transport IMDG

Not restricted.

14.3 Transport ICAO-TI / IATA

Not restricted.

14.4 Other information

No data available.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and this product does not contain any substances considered as substances requiring as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

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

No data available.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: Restrictions on the manufacturer, placing on the market and use of certain dangerous substances

According to the data available this product does not contain any substances requiring authorisations as listed Annex XVII of the REACH regulation (EC) 1907/2006.

Other regulations

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

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 28, 29, 30

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: H1, E1.

15.2 Chemical safety assessment

For this mixture a chemical safety assessment is not required..

SECTION 16: Other information**Key data used**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP)

Transport regulations according to ADR, RID, IMDG, IATA a samended in each case.

Wording of the R-, H- an P-phrases:

Resp. Sens. 1	Respiratory sensitisation category 1
Skin Sens. 1	skin sensitisation category 1
Aquatic Chronic 3	Longterm Hazardous to the aquatic environment chronic 3
Aquatic Chronic 4	Longterm Hazardous to the aquatic environment chronic 4
Carc 2	Carcinogenicity category 2
Carc. 1B	Carcinogenicity category 1B
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H351	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
P285	In case of inadequate ventilation wear respiratory protection
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P341	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P363	Wash contaminated clothing before reuse.

These information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements. It does not however, constitute a guarantee for any specific product properties.