

EG-MATERIAL SAFETY DATA SHEET



according to 1907/2006/EC, Article 31 (Reach)
Date of issue: 29.04.2014

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Revised on: 03.04.2014

Hinri-Alloy N

1. Identification of the Substance / Preparation and Company:

Identification of the substance or preparation:

Commercial product name: Hinri-Alloy N
Application of the substance: Metal alloy for dental technology
Company / Manufacturer: ERNST HINRICHS GmbH
Borsigstr. 1
D - 38644 Goslar
0 53 21 / 5 06 24
0 53 21 / 5 08 81
info@hinrichs-dental.de / www.hinrichs-dental.de

2. Composition / Information on Ingredients:

2.1 Description: The product is not a substance but an alloy which contains:

Ingredients:	CAS number	EINECS number	%
Nickel (Ni) max	7440-02-0	231-111-4	66
Nickel (Ni)	7440-02-0	231-111-4	63
Chromium (Cr)	7440-47-3	231-157-5	27
Molybdenum (Mo)	7439-98-7	231-107-2	8
Silicon (Si)	7440-21-1	215-609-9	1
Niobium (Nb)	7440-03-1	231-113-5	1

3. Hazards Identification:

3.1 Classification of the substance or mixture

Classification in accordance with Directive (EC) n. 1272/2008:

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.
H413: May cause long lasting harmful effects to aquatic life.

Classification in accordance with Directive 67/458/EC or with Directive 1999/45/EC:

R42/43 May cause sensitisation by inhalation or skin contact.
R53 May cause long-term adverse effects in the aquatic environment.

Hazardous components to be indicated on label, contains:

R-Phrases:

R42/43 May cause sensitisation by inhalation or skin contact.
R53 May cause long-term adverse effects in the aquatic environment.

S-Phrases:

S2: Keep out of reach of children.
S23: Do not breathe vapour.
S50: Do not mix with perchlorates, nitrates, hydrazine, alkali, oxidants, acids.

2.2 Labelling Information:

In the form which 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 (EC) n. 1272/2008 (CLP), annex I, 1.3.4. ("Metals in massive form, alloys, mixtures containing polymers, mixtures containing elastomers");
- Directive 1999/45/EC (DPD), annex VII (Directive n. 67/548/EC, Annex VI, 9.3: "Alloys preparations containing polymers, preparations containing elastomers")

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2.3	Other hazardous:	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.
	PBT assessment:	No data available.
	vPvB assessment:	No data available.
4. First aid measures:		
4.1	General information:	No special measures required.
4.2	After inhalation:	If large amount is inhaled remove to fresh air and contact a doctor.
4.3	After skin contact:	Wash off contaminated areas with water or remove contaminated clothing and have a shower. Wash clothing before reuse. Avoid prolonged or repeated skin contact.
4.4	After eye contact:	Irrigate with water for at least 15 minutes.
4.5	After ingestion:	If a large amount is ingested induce vomiting only if the person is conscious and contact a doctor.
5. Fire Fighting measures:		
5.1	General information:	Coherent forms of Nickel-Chrome alloys run no risk of fire or explosion. At the contrary, if the material is fine divided (powder) it can explode at open air.
5.2	Suitable extinguishing agents:	Metal fire powder, sand.
5.3	Unsuitable extinguishing agents:	Water, Foam, CO ₂ , Dry chemicals.
5.4	Special hazards caused by the material, its products of combustion or flue gases:	Intoxication, see point 11.
5.5	Protective equipment:	Wear self-contained respiratory protective device and protective clothing...
6. Accidental release measures:		
	Person-related safety precautions:	In case of dust formations ensure adequate ventilation. Dust is toxic by inhalation! Formation of dust must be avoided! Use breathing protection against the effects of fumes/dust/aerosol.
	Measures for environmental protection:	Do not allow concentrated solutions to enter drainage system, surface or ground water. Do not discharge into the subsoil/soil.
	Measures for cleaning / collecting:	See point 13.
7. Handling and Storage:		
7.1	Handling:	No special measures required.
7.2	Storage:	No special measures required.
8. Exposure controls / Personal protection:		
8.1	Personal protective equipment:	
	Respiratory:	If solid Nickel-Chrome alloy forms are converted in manufacturing processes to particulates, maintain working environment below the recommended limits by use of appropriate ventilation (Cr<0,050 mg/m ³) if ventilation is not adequate, then respiratory protection should be used.
	Hand protection:	Wear protective gloves.
	Eye protection:	Wear Safety goggles with side-shields (EN 166).
	Skin and body protection:	Wear suitable protective clothing.

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9. Physical and chemical properties:

9.1	General information	
	Form:	Solid
	Colour:	Silver-coloured
	Smell:	Odourless
9.2	Change in condition	
	Melting point / Melting range:	No data available.
	Boiling point / Boiling range:	> 1200°C
	pH-value at supply:	Not applicable.
	Flash point:	Not applicable.
	Flammability:	Not applicable.
	Self-flammability:	Not applicable.
	Danger of explosion:	Not applicable.
	Fire supporting:	Not applicable.
	Steam pressure at standard temperature:	Not known.
	Absolute density at standard condition:	8,5 g/cm ³
	Solubility at standard condition:	Insoluble in water.
	Liposolubility:	Insoluble.
	Coefficient of distribution: n-octanol / water:	Not applicable.

10. Stability and Reactivity:

10.1	Conditions to be avoided:	Not applicable.
10.2	Substances to be avoided:	Perchlorates, ammonium nitrate, hydrazine, alkali, oxidizing, acids.
10.3	Dangerous decomposition products:	Not applicable.
10.4	Necessary / existing stabilizer:	Not applicable.
10.5	Dangerous exothermic reactions:	Not applicable.
10.6	Change of state of aggregation:	Not applicable.
10.7	Dangerous decomposition products for contact with water:	Not applicable.

11. Toxicological Information:

	Under normal handling and use, exposure to massive forms of Nickel-Chrome alloys presents few health hazards. If however, massive forms are converted to particulates then both acute and chronic health hazards are possible.	
11.1	After inhalation:	Rare cases of asthma have been reported to have occurred in individuals exposed to some forms of particulates. Effects on respiratory tract and gastrointestinal disorder may occur.
11.2	After skin contact:	Exposure to Nickel-Chrome alloys may cause dermatitis or other allergic reactions in sensitive individuals.
11.3	After eye contact:	Irritation due to mechanical causes. Some workers exposed to aerosol of electrolyses reported eye irritation.
11.4	After ingestion:	Nickel-Chrome alloys scarcely absorbed by the intestine, acute dose; however, may cause abdominal pains, vomit, anuria, and uraemia. If the material is absorbed for long period, kidney harm may occur.

12. Ecological Information:

12.1	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:	No data available.
12.6	Other adverse effects:	No data available.

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13. Disposal Considerations:

13.1 The processing scrap must be disposed of as special waste in accordance with the EC directives 91/156/EC on waste, 91/689/EC on hazardous waste and 94/62/EC on packaging and packaging waste and in compliance with national legislation in force on the subject.

14. Transport Information:

According to regulations dental alloys are not considered as dangerous goods.

15. Regulatory Information:

National legislation and European legislation.

This product is a medical device according to European Normative 93/42/EC.

16. Further Information:

Sources of key data used to compile the data sheet:

Regulation 67/548/EC or 99/45/EC in the corresponding relevant version in force. Regulation EC n. 1907/2006 (REACH), 1272/2008 (CLP) in the corresponding relevant version in force.

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EC.

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.