

PRESIDENT DENTAL - CERAPLUS S -

MSDS NUMBER MSDS - Ceraplus S

Dental Ingot - Issue 3.doc

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1. IDENTIFICATION OF THE PREPARATION AND COMPANY

EMERGENCY NUMBER +49 (0) 203 392 28772

CAS Number N/A

EINECS Number N/A

IDENTIFICATION OF THE PRODUCT

Nickel Based Alloy
Supplied as Metallic Ingots or Rods

IDENTIFICATION OF THE MANUFACTURER

DE. PRESIDENT DENTAL GmbH

OTHER:

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Munchen

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INTENDED USE OF PRODUCT: MANUFACTURE OF REMOVABLE DENTAL APPLIANCES
(ALLOY IS REMELTED WHEN CASTING)

2. COMPOSITION/ INFORMATION ON INGREDIENTS:

ELEMENT	% (Nominal)	CAS #	EINECS #	R PHRASE (See section 15 for full details)
Cobalt	0,50	7440-48-4	231-158-0	R42, R43
Chromium - (in supplied form)	24	7440-47-3	231-157-5	Not classified in supplied form
Molybdenum	10,5	7439-98-7	231-107-2	Not classified
Silicon	1,8	7440-21-3	231-130-8	Not classified
Carbon	0,05	7440-44-0	231-153-3	Not classified
Iron	1,5	7439-89-6	231-096-4	Not classified
Nickel	Balance	7440-02-0	231-111-4	R40 , R43

3. HAZARDS IDENTIFICATION

ELEMENT	CLASSIFICATION	ADVERSE EFFECTS		
		HUMAN EFFECTS	CHEMICAL HAZARDS	ENVIRONMENTAL EFFECTS
Chromium - (in supplied form)	Not classified	None	None	Very toxic to aquatic organisms
Nickel	Xn – Cat 3 Carcinogen	Possibly cancer causing in humans	None	None
Fume - may contain Cr ⁶	T – Cat 2 Carcinogen if Cr ⁶ is present	Possibly cancer causing in humans	None	Very toxic to aquatic organisms
Cobalt	Xn – Harmful	known to cause "hardmetal disease"	None	None

4. FIRST AID MEASURES

ROUTE OF EXPOSURE	IMMEDIATE MEDICAL ATTENTION REQUIRED		SYMPTOMS	EFFECTS
	YES	NO		
Skin Contact		X	Itching, Redness, Rash	Acute – Contact with dust may cause irritation & dermatitis. Chronic – Repeated or prolonged exposure may result in chrome holes, sensitisation and kidney lesions
Eye Contact		X	Itching, Redness Discharge, Blurred vision	Acute – May cause irritation Chronic – Repeated or prolonged exposure may cause conjunctivitis and lacrimation
Inhalation		X	Coughing and soreness. Short-term memory and attention span disturbances. Nose bleeds, Difficulty breathing, Generally feeling unwell	Acute – High concentrations of dust may cause irritation Chronic – Ulceration and perforation of the nasal septum, pulmonary fibrosis or pneumoconiosis and acute hepatitis with jaundice. May cause fibrosis
Ingestion	X		Absorption in sufficient amounts may result in dizziness, intense thirst, abdominal pain and vomiting	Excessive ingestion may result in kidney damage

5. FIRE FIGHTING MEASURES

Suitable extinguishing method	Water, CO ₂ , Powder are all safe
Extinguishing media which must not be used	None
Exposure hazards and combustion products	In the event of a fire this preparation may release a Toxic Fume
Special protective equipment for fire fighters	Suitable respiratory equipment should be used by fire fighters

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use gloves to avoid skin contact Use a mask to avoid inhalation of any dust
Environmental precautions	Chrome, Cobalt, Nickel, and their compounds are List II substances under the Ground Water Directive. If the substance enters watercourses or sewers, inform the appropriate local water authority or National Regulatory body immediately
Methods for cleaning up	Manual clean up is recommended for solid pieces If excessive dust is produced, damp area down before cleaning up Always dispose of any waste as detailed in section 13

7. HANDLING AND STORAGE

Storage	Should be stored in sealed containers with original labels intact. Store in a dry environment
Ventilation	Not applicable
Handling	Use gloves when handling this product. Do not eat or drink in the work area. Wash with soap and water after exposure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

IMPORTANT

– Always ensure that exposure is below the recommendations set in the country of use. In the Deutschland the limits are set by the H.S.E. and are published in a document called the EH40. These limits are published annually. In the U.S.A. refer to the document ANSI Z49.1: 1999 Safety in Welding, Cutting and Allied Processes. The DE Exposure Limits are as follows:

Constituent	8Hr TWA (mg.m ⁻³)	Type – (MEL/OES)
Chromium – Cr	0.5	OES
Chromium VI – Cr ⁶	0.05	MEL
Carbon – C	3.5	OES
Molybdenum	5	OES
Nickel – Ni	0.1	MEL
Iron – Fe	1	OES
Silicon – Si – (Respirable Dust)	4	OES
Fume	5	OES
Cobalt	0.1	MEL

A suitable and sufficient risk assessment should be completed prior to use. This will determine the level of control measures required. A monitoring programme should be established and used where necessary in order to determine the extent of exposure of individuals in comparison with the Maximum Exposure Limit.

Personal Protection

Respiratory Protection

Fume should be removed with Local Exhaust Ventilation – In case of insufficient ventilation suitable respiratory equipment should be used. Always use engineering control measures in preference to personal protective equipment.

Hand protection

Use suitable gloves to avoid contact with the skin and to protect from heat when melting.

Eye Protection

Use suitable eye protection to guard against the effect of melting.

Body Protection

Use suitable body protection to avoid the risk of skin damage when melting.

Health and Safety Controls in the Deutschland

The user should check the Health and Safety Executive's guidance on respiratory protection, personal protective equipment and occupational exposure limits and ensure compliance with the Health and Safety at Work Act 1974 (as amended), the Control of Substances Hazardous to Health Regulations 2002 (as amended) and other health and safety legislation relative to the product.

Environmental Exposure Controls in the Deutschland

The user should ensure that their processes are compliant with the provisions of the Environmental Protection Act 1990 and other legislation relevant to the intended use of the product. Further information can be obtained by contacting Envirowise on the Environment and Energy national helpline – 0800 585794

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Metallic coloured rod or cylinder	Oxidising Properties:	Non oxidising
Odour:	None	Vapour Pressure:	No data available
pH:	Insoluble in water	Relative Density:	8.2 - 8.4 g/cm ³
Boiling Point:	No data available	Solubility:	Not soluble in water
Melting Range:	1170 - 1420°Cw	Partition Coefficient:	No data available
Flash point:	No data available	N-octane/water	No data available
Flammability:	Non flammable	Viscosity	Solid
Auto Flammability:	No data available	Vapour Density	No data available
Explosive Properties:	Non explosive	Evaporation Rate	No data available

10. STABILITY AND REACTIVITY

Conditions to avoid	None
Materials to avoid	None
Hazardous decomposition products	None

11. TOXICOLOGICAL INFORMATION

	Constituent	Cr	C	Mo	Ni	Fe	Si
Acute Toxicity	Oral (LD50 rat – mg/kg bw)	No data	>10000	No data	>9000	>890	>3000
	Inhalation (LC50 rat – mg/l)	No data	>64.4	No data	Not LC50 – other ca. .015	No data	No data
	Dermal (LD50 mice – mg/kg bw)	No data	No data	No data	N/A	No data	No data
Corrosivity/ irritation	Eye (Units set at test)	No data	N/A	No data	No data	Irritating (Draize test)	Slightly irritating
	Skin (Units set at test)	No data	No data	No data	No data	Irritating	No data
	Respiratory (Units set at test)	No data	No data	No data	No data	No data	No data
Sensitisation	Skin	No data	No data	No data	No data	No data	No data
	Respiratory	No data	No data	No data	No data	No data	No data
Repeated dose toxicity		No data	No data	No data	No data	No data	No data
Mutagenicity		No data	No data	No data	No data	No data	No data
Carcinogenicity		No data	No data	No data	Cat 3	No data	No data
Reproductive toxicity		No data	No data	No data	None	No data	No data

12. ECOLOGICAL INFORMATION

Ecotoxicity	In the supplied form ecotoxicity is not applicable
Mobility	In the supplied form the product is insoluble and therefore immobile
Persistence and degradability	Not biodegradable in supplied form
Bio accumulative potential	In the supplied form the product is not bio accumulative
Other adverse effects	In the form of fume which contains Cr ⁶ it is classified as dangerous to the environment and therefore release must be regulated. Hexavalent chromium is phyto-toxic but normally accumulates in plant roots

13. DISPOSAL CONSIDERATIONS

Disposal in the Deutschland

Waste should be disposed of via a licensed Waste contractor. Do not discharge into local watercourses/ sewers or allow to contaminate underground water sources.

In disposing of waste from this preparation in the DE, the user should have regard to the Waste Framework Directive (75/442/EEC) and the Hazardous Waste Directive (91/689/EEC).

The user should also refer to the Environmental Protection Act 1990, the Environment Act 1995, the Special Waste Regulations 1996 and all associated statutory instruments and guidance. Any waste holder who is uncertain of which legislation applies should contact their local Environment Agency office.

Disposal outside of the Deutschland

The user should have regard to any local legislation which is applicable to the disposal of waste from this preparation.

14. TRANSPORT INFORMATION

Non-dangerous product for transport by land, sea and air.

Ensure product is packaged and labelled in accordance to the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994

The user is advised to refer to the HSE guide HSG136 "Workplace Transport Safety: Guidance for Employers"

15. REGULATORY INFORMATION

Supply Classification

Not classified as a preparation in the supplied form

CHROMIUM	Carc.Cat2 T,N	R49 May cause cancer by inhalation R43 May cause sensitisation by skin contact
NICKEL	Carc.Cat3 Xn	R50 Very Toxic to aquatic organisms R40 Possible risk of irreversible effects R43 May cause sensitisation by skin contact

Hazard Pictogram

CHROMIUM





NICKEL

Risk Phrases

CHROMIUM R49 May cause cancer by inhalation
R43 May cause sensitisation by skin contact
R50 Very Toxic to aquatic organisms

NICKEL R40 Possible risk of irreversible effects
R43 May cause sensitisation by skin contact

Safety Phrases

NONE

Relevant Legislation

- EC Directives
Waste Framework Directive (75/442/EEC)
Hazardous Waste Directive (91/689/EEC)
Council Directive (76/769/EEC)
Directive (76/464/EEC)
Groundwater Directive (80/68/EEC)
- Deutschland Acts of Parliament
The Environmental Protection Act 1990 (as amended)
Environment Act 1995 (as amended)
The Health and Safety at Work Act 1974 (as amended)
- Deutschland Regulations
Control of Substances Hazardous to Health regulations 2002 (as amended)
Control of Major Accident Hazards Regulations 1999
Groundwater Regulations 1998
Special Waste Regulations 1996
Health and Safety (First Aid) Regulations 1981
Personal Protective Equipment Regulations 2002
Personal Protective Equipment at Work Regulations 1992

In addition to the principal legislation referred to above the user should also refer to other acts and implementing environmental and health and safety legislation and guidance that are relevant to the intended handling or use of the product.

- Guidance
HSE Guidance note - "COSHH Essentials: Easy steps to control chemicals" HSG193 HSE Books.
HSE Guidance note EH2 (Rev) – Chromium and its inorganic compounds.
HSE Guidance: MS(a)16 - "Chromium and You".
HSE Guide HSG136 – Workplace Transport Safety: Guidance for employers.
HSE Books – L74 – "First Aid at Work. The Health and Safety (first aid) Regulations 1981 – ACOP and Guidance
Occupational Exposure Limits – EH40
- General
In the USA refer to the document ANSI Z49. 1:1999 – Safety in Welding/ Cutting and allied processes
In all situations the local legislation must apply to enable this product to be used safely

- Useful Websites
 - <http://www.coshh-essentials.org.uk/>
 - <http://www.hse.gov.uk/a-z/index.htm>
 - <http://www.chemindustry.com/index.asp>
 - <http://www.chromium-asoc.com/index.html>
 - <http://www.osha.gov/>
 - <http://www.nipera.org/>

16. OTHER INFORMATION

Training	Ensure that the person using this product is suitably trained and is aware of the hazards associated with its use.
Restrictions on use	This product should only be used by competent persons and for the intended application.
Sources of Key Data	L124 – Approved supply list European Chemicals Bureau EH40 & EH64 – Occupational Exposure Limits Industrial Toxicity – Hamilton & Hardy BOHS – Technical Guide No. 9

NOTICE:

The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However safe as provided by law, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorisation given or implied to practice any patented invention without a licence. In addition, no responsibility can be assumed by the vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product (however, this shall not act to restrict the vendor's potential liability for negligence or under statute).