



Safety Data Sheet

according to 1907/2006/EC, Article 31

Print Date: 01.12.2015

Revision Date: 30.11.2015
Version 2 / E

Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: Friction Pins
Ø 0,7, 0,8, 0,85, 0,9, 0,95, 1,0, 1,1, 1,2, 1,3, 1,4, 1,6, 1,65, 1,8 mm etc.
(Product-No. 30-1050, 30-1052 - 30-1056 + 30-1058 + 30-1060 - 30-1072)

REACH Registration No.: If available, listed in Chapter 3

1.2. Relevant identified uses of the substance or mixture and uses that are discouraged

Relevant identified uses For dental use only.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

SAE DENTAL VERTRIEBS GMBH
- INTERNATIONAL -
Langener Landstr. 173
27580 Bremerhaven
Deutschland

Telephone + 49 471 98487 45

Telefax + 49 471 98487 44

Email info@sae-dental.de

Further information obtainable from: SAE DENTAL VERTRIEBS GMBH

1.4 Emergency telephone number:

Telephone + 49 471 98487 45

Telefax + 49 471 98487 44

Email info@sae-dental.de

2. Hazard identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]



GHS08 health hazard
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07
Skin Sens. 1 H317 May cause an allergic skin reaction.
Aquatic Chronic 4 H413 May cause long-lasting harmful effects to aquatic life.

2.2 Labelling elements:

Labelling according to Regulation (EC) No 1272/2008: Void

Hazard pictograms: Void

Signal word: Void

Hazard statements: Void

Precautionary statements: Void



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Additional information:

Metals in massive form, alloys, mixtures containing polymers and mixtures containing elastomers do not require a label according to this Annex if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of this Annex. (Regulation (EC) No 1272/2008, Annex I, 1.3.4.1.)

2.3 Other hazards:

With thermal processing, may cause reaction to chromium(VI) compounds.
 Possible release of metallic vapors when melted.
 Cobalt vapor will be released while processing.
 Limited evidence of a carcinogenic effect.
 A PBT/vPvB evaluation is not available since a chemical safety evaluation is not required / has not been carried out.

3. Composition/information on ingredients

Information on ingredients / Hazardous components as per EU-CLP Regulation (EC) No. 1272/2008

cobalt	60% - 66%				
CAS-No.	7440-48-4	EC-No.	231-158-0		
Respiratory sensitization				Category 1	H334
Skin sensitization				Category 1	H317
Chronically hazardous to inshore waters				Category 4	H413
chromium	27% - 32%				
CAS-No.	7440-47-3	EC-No.	231-157-5		
molybdenum	5% - 7%				
CAS-No.	7439-98-7	EC-No.	231-107-2		
silicium	< 1%				
CAS-No.	7440-21-3	EC-No.	215-609-9		
manganese	< 1%				
CAS-No.	7439-96-5	EC-No.	231-105-1		
carbon	< 1%				
CAS-No.	1333-86-4				

on ingredients / Hazardous components as per Directive 67/548/EC or Directive 1999/45/EC

cobalt	60% - 66%				
CAS-No.	7440-48-4	EC-No.	231-158-0		
	R42/43				
	R53				
chromium	27% - 32%				
CAS-No.	7440-47-3	EC-No.	231-157-5		
molybdenum	5% - 7%				
CAS-No.	7439-98-7	EC-No.	231-107-2		
silicium	< 1%				
CAS-No.	7440-21-3	EC-No.	215-609-9		
manganese	< 1%				
CAS-No.	7439-96-5	EC-No.	231-105-1		
carbon	< 1%				
CAS-No.	1333-86-4				
				Texts of H phrases	see Chapter 16
				Texts of risk phrases	see Chapter 16

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4. First aid measures

4.1. Description of first aid measures

Inhalation

Move to fresh air.

If symptoms persist, call a doctor.

Skin contact

Wash off with soap and water.

In case of skin irritation or allergic reactions see a doctor.

Eye contact

Rinse with plenty of water.

If eye irritation persists, consult a specialist.

Ingestion

Wash mouth out with water and drink plenty of water afterwards.

Consult a doctor immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms

None known

Hazards

None known

4.3. Indication of any immediate medical attention and special treatment needed

None known

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing agents: special powder against metal fires
quenching powder

dry sand

common salt

Unsuitable extinguishing agents: water
carbon dioxide (CO₂)

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: cobalt oxide.

5.3. Advice for firefighters

The product itself does not burn.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

In the event of fire, wear self-contained breathing apparatus.



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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.
Avoid breathing in dust.
In case of dust being released, provide for adequate extraction.
Ensure suitable suction/ventilation of the work place or where the machines are situated.

6.2. Environmental precautions

Do not flush into surface water or sewage water system.

6.3. Methods and material for containment and cleaning

Use mechanical handling equipment.
Avoid dust formation.
Fill into marked, sealable containers.

6.4. Reference to other sections

Wear personal protective equipment; see section 8.
Disposal instructions; see section 13.

7. Handling and storage

7.1. Precautions for safe handling

When melting, soldering or grinding:
Ventilation.
Avoid dust formation.
In case of dust or vapor: Wear personal safety equipment
Dusts and vapors: Do not inhale.

7.2. Conditions for safe storage, including any incompatibilities

Storage

No special storage conditions required.

German storage class

13 – Non-combustible solids

7.3. Specific end use(s)

We are unaware of any specific end uses which go beyond the data reported in Section 1.



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8. Exposure controls/personal protection

8.1. Control parameters

cobalt			
CAS-No.	7440-48-4	EC-No.	231-158-0
Maximum values			(DFG MAK)
Type of exposure	inhalable fraction		
	Contained in regulation but without data. See regulation for further details.		
Maximum values			Kennzeichnung hautresorbierender Stoffe:(DFG MAK)
Type of exposure	inhalable fraction		
	May be absorbed through the skin.		
chromium			
CAS-No.	7440-47-3	EC-No.	231-157-5
Maximum values	2 mg/m ³		Time Weighted Average (TWA):(EU ELV)
	Indicative limit value		
Maximum values	2 mg/m ³		AGW:(TRGS 900)
Short term value	1		
Type of exposure	inhalable fraction		
molybdenum			
CAS-No.	7439-98-7	EC-No.	231-107-2
Maximum values			(DFG MAK)
	No set MAK value.		
manganese			
CAS-No.	7439-96-5	EC-No.	231-105-1
Maximum values	0,5 mg/m ³		AGW:(TRGS 900)
Type of exposure	inhalable fraction		
	If the AGW and BGW values are adhered to, no harmful effects on fertility to be expected.		
Maximum values	0.2 mg/m ³		MAK(DFG MAK)
Type of exposure	inhalable fraction		
	Listed		
Maximum values	0,02 mg/m ³		MAK(DFG MAK)
Type of exposure	alveolar fraction		
	Listed		

8.2. Exposure controls

Engineering measures

Cobalt vapor will be released while processing.

Adequate extraction system / ventilation of the work place or machinery must be assured. On-tool extraction.

Personal protective equipment

Respiratory protection

In case of working with / without sufficient on-tool extraction:

Respirator with P3 particle filter

Hand protection

Protective gloves

Glove material butyl rubber, nitrile rubber, natural rubber/natural latex (NR)



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Eye protection

Safety glasses with side protection
In case of smoke or dust: goggles

Skin and body protection

If cobalt vapour occurs: Change contaminated clothing.
Apply adequate skin protection agents before handling the product. Ensure skin is cleaned and skin care applied after work. Preventive skin protection is recommended.

Hygiene measures

If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.
Do not eat, drink, smoke or chew tobacco while at work. Wash your hands and/or face before breaks and when you finish work.
Do not inhale smoke, dust, vapour.
If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Form	solid
Colour	white
Odour	odourless
Melting point/range	1300 - 1370 °C
Density	ca. 8.3 g/cm ³
Autoinflammability	Not capable of spontaneous combustion or self-heating.

9.2. Other information

Other information No further physic-chemical data was determined.

10. Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No dangerous reactions known.

10.4. Conditions to avoid

No restrictions

10.5. Incompatible materials

None known

10.6. Hazardous products of decomposition

Products of decomposition when heated above melting temperature
metallic vapors



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11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity	no data available
Acute inhalation toxicity	no data available
Acute dermal toxicity	no data available
Skin irritation	no data available
Eye irritation	no data available
Sensitization	no data available
Repeated dose toxicity	no data available
Mutagenicity assessment	no data available
Carcinogenicity	no data available
Toxicity to reproduction	no data available
Experience on humans	Toxic effects from handling this product are unknown as yet. The solubility of the alloy is extremely low. It must therefore be assumed that the daily intake of these elements in food is considerably higher than from the alloy. As a component of vitamin B12, cobalt is an essential element for the human body. Molybdenum is an essential element for the human body. The daily intake of chromium in food amounts to several milligrams. The data is derived from reference books and literature.
Further information	No known hazardous reactions if handled and stored correctly. Cobalt (dust and vapours): Indications of possible carcinogenic effects from animal experiments. Literature

12. Ecological information

12.1. Toxicity

No ecotoxicological data is available for this product.

12.2. Persistence and degradability

Biodegradability No data available

12.3. Bioaccumulative potential

Bioaccumulation No data available

12.4. Mobility in soil

Mobility The product is insoluble in water.
No further information available



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12.5. Results of PBT and vPvB assessment

A PBT/vPvB evaluation is not available as a chemical safety evaluation is not required / has not been carried out.

12.6. Other adverse effects

Further Information Dust and water-soluble forms of the alloy:
Avoid infiltration into soil, inshore waters or sewage system.

13. Information on disposal

13.1. Waste treatment procedures

Product

Disposal according to local authority regulations.

Uncleaned packaging

Disposal according to local authority regulations.

14. Transport information

Non-hazardous material in terms of transport regulations.

14.1. UN number: --
14.2. Correct UN shipping name: --
14.3. Transport hazard class(es): --
14.4. Packing group: --
14.5. Environmental hazards: --
14.6 Special precautions for user: No

15. Regulatory information

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

National legislation

Water pollution class Non-hazardous to water
Graded according to VwVwS (German regulation on the classification of substances hazardous to water), Annex 1

15.2. Chemical safety assessment

Chemical safety assessment No chemical safety report required for this product as per Articles 2(8), 2(9) or 14 of the REACH regulation.

16. Other information

Risk phrase (R phrase) texts

- Cobalt

R42/43 May cause sensitization by inhalation and skin contact.
R53 May cause long-term adverse effects to inshore waters.

H phrase texts

- Cobalt

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.



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Further information

Changes made to the last version will be highlighted in the margin. This version replaces all previous versions.

This information is based on our present knowledge and experience and is to the best of our knowledge. We are passing on this information, however, without any liability. Changes made in the scope of technical progress and in connection with the business development. Our information describes only the nature of our products and services and does not represent any guarantee. The customer is obliged to carefully inspect the products for functionality and possibilities of use through qualified staff. This also applies to the protection of IP rights of third parties. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

Abbreviations

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BetrSichV	German Ordinance on Industrial Safety and Health
c.c.	closed cup
CAS	Chemical Abstract Services
CESIO	European Committee of Organic Surfactants and their Intermediates
ChemG	German Chemicals Act
CMR	carcinogenic-mutagenic-toxic for reproduction
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
EINECS	European Inventory of Existing Commercial Chemical Substances
EC50	half maximal effective concentration
GefStoffV	German Ordinance on Hazardous Substances
GGVSEB	German ordinance for road, rail and inland waterway transportation of dangerous goods
GGVSee	German ordinance for sea transportation of dangerous goods
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization



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IMDG	International Maritime Dangerous Goods
ISO	International Organization for Standardization
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
PBT	Persistent, bio-accumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
REACH	REACH registration
RID	Convention concerning International Carriage by Rail
STOT	Specific Target Organ Toxicity
SVHC	Substances of Very High Concern
TA	Technical Instructions
TPR	Third Party Representative (Art. 4)
TRGS	Technical Rules for Hazardous Substances
VCI	German chemical industry association
vPvB	very persistent, very bio-accumulative
VOC	volatile organic compounds
VwVwS	German Regulation on the Classification of Substances Hazardous to Waters into Water Hazard Classes
WGK	Water Hazard Class
WHO	World Health Organization