

SAFETY INFORMATION SHEET HARDMETAL PRODUCTS

INTERNAL NO.: 203EN ISSUED: 31 JANUARY 2014

I: IDENTIFICATION OF THE ARTICLE/PRODUCT AND OF THE COMPANY / UNDERTAKING

I.1: Product identifier

Article/Product Name	Sintered hardmetal products containing tungsten carbide with cobalt.
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I.2: Relevant identified uses of the article and uses advised against

Identified Uses	Mining Tools, Construction Tools, Round Tools, Metalworking Tools, Metallurgical Products and Inserts.
Uses advised against	Avoid re-shaping or re-grinding finished hardmetal articles without appropriate exposure controls (e.g. ventilation, personal protection equipment). Cutting, sharpening, or grinding hardmetal tools may produce dusts of hazardous substances, which may be inhaled, ingested or come in contact with eyes and skin. Return tools to appropriate locations for reconditioning or recycling services.

I.3: Details of the supplier of the article information data sheet

Name

Address

Phone

Fax

E-mail of competent person responsible for the Article Information Data Sheet

sds@sandvik.com

I.4 : Emergency telephone number

Emergency No.	Not applicable.
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2: HAZARDS IDENTIFICATION

WARNING

Fragmentation hazard: Cutting tools and holders may fragment in use. Always wear safety equipment and keep machine guards in place.

Breathing hazard: Wet or dry grinding of cutting tools may produce hazardous dust or mist. Use ventilation control and respiratory protection.

2.1: Classification of the article

Classification according to EC 1272/2008:	Not applicable for articles.
Classification according to 67/548/EEC:	

2.2: Label elements (according to EC 1272/2008)

Hazard pictogram(s):	Not applicable for articles.
Signal word:	
Hazard Statement(s):	
Precautionary statement(s):	

2.3: Other Hazards

PBT or vPvB	Not applicable for articles.
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3: ARTICLE COMPOSITION

3.1: Information on article constituents

Identification Name	EINECS No.	CAS No.	Weight % Content	Classification CLP	Classification DSD
Tungsten Carbide	235-123-0	12070-12-1	>50%	Tungsten carbide is not classified under CLP	Tungsten carbide is not classified under DSD/CLP
Cobalt	231-158-0	7440-48-4	0,3 – 25%	Carc. 1B, H350i Eye Irrit. 2, H319 Repr. 2; H361f, Acute Tox. 1, H330 Acute Tox. 4, H302 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Aquatic Acute 1 (M=10), H400 Aquatic Chronic 1, (M=1), H410	Carc. Cat. 2 ; R49 T+; R26, Xi; R36, Xn; R22, Xn;R42/43, Repr. Cat. 3; R62 N;R50/53

4: FIRST AID MEASURES

4.1: Description of first aid measures

As sintered hardmetal articles, exposure to high volumes of powder/dust is not anticipated under normal conditions and use. If tool chips, breaks, fragments or is reground/re-sharpen may produce exposure to dusts of hazardous substances, which may be inhaled, ingested or come in contact with eyes and skin.

Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Inhalation	Remove to fresh air. Seek medical attention if required.
Ingestion	Rinse mouth with water and drink plenty of water afterwards. Seek medical advice if required.
Skin	Remove contaminated clothing. Immediately wash with soap and water and rinse thoroughly. Seek medical attention if required.
General advise	After first aid, get appropriate medical attention.

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

In the case of generation of dust, metal powders or dust may cause mechanical eye and skin irritation. Inhalation of powder or dust may cause mild respiratory tract irritation. Inhalation of powder or dust may cause mild respiratory tract irritation. Chronic inhalation of hardmetal powder/dust has the potential for causing transient or permanent respiratory disease, including occupational asthma and interstitial lung fibrosis. Hardmetal powders may cause an allergic skin reaction.

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

None known.

5: FIREFIGHTING MEASURES

5.1: Extinguishing media

Hardmetal sintered articles as provided are not a fire hazard.

5.2: Special hazards arising from the article use

During normal operation and usage, hardmetal articles are not a fire hazards.

5.3: Advice for firefighters

Not Applicable.

6: ACCIDENTAL RELEASE MEASURES

6.1: Personal precautions, protective equipment and emergency procedures

Hardmetal sintered articles as provided do not present hazards that require accidental release measures. However, wet or dry grinding of cutting hardmetal articles may produce hazardous dust or mists. Avoid inhalation and contact with skin and eyes. Re-sharpen tools using appropriate safety and extraction systems to avoid dust exposure. Use personal protective equipment (i.e. gloves, safety goggles, dust respirator) as specified in Section 8 of this article information data sheet. Ventilate area if necessary.

6.2: Environmental precautions

In the case of generation of dust/mist, avoid release into the environment.

6.3: Methods and material for containment and cleaning up

Broken hardmetal tools and articles should be recycled.

6.4: Reference to other sections

See sections 8 and 13 for exposure controls and disposal considerations.

7: HANDLING AND STORAGE

Hardmetal articles as provided do not present hazards requiring precautions for safe handling and storage. However, operations such as grinding, cutting, re-sharpening of hardmetal articles may generate dusts or fumes which may require special handling procedures. The procedures described below relate to these operations.

7.1: Precautions for safe handling

Under normal operating conditions, the use of hardmetal articles do not require special safety precautions beyond normal safety procedures for handling and using cutting tools, such as safety glasses and gloves. No smoking, eating, or drinking while using hardmetal articles. Wash hands thoroughly after handling. Minimize generation of powder/dust and avoid dispersion of dust in air. Do not shake clothing, rags or other items to remove dust.

7.2: Conditions for safe storage, including any incompatibilities

Hardmetal articles as provided do not present hazards requiring precautions for safe storage.

7.3: Specific end use(s)

Hardmetal articles are used as cutting and machining tools, mining and drilling tools, wear parts.

8: EXPOSURE CONTROLS / PERSONAL PROTECTION

The exposure control parameters listed below are for operations with hardmetal articles that generate dusts or fumes including grinding, cutting, or re-sharpening.

8.1 : Control parameters

Country	For tungsten and insoluble compounds, as tungsten		Cobalt	
	8-h Limit Value (mg/m ³)	Short-term Limit (mg/m ³)	8-h Limit Value (mg/m ³)	Short-term Limit (mg/m ³)
ACGIH TLV	5	-	0,02	-
Austria	5*	10*	0,1	0,4
Belgium	5	10	0,02	-
Canada (Québec)	5	10	0,02	-
Denmark	5	10	0,01	0,02
Hungary	-	-	0,1	0,4
Poland	5	-	-	-
Spain	5	10	0,02	-
Sweden	5	-	0,02	-
Switzerland	5*	-	0,05*	-
USA - NIOSH	5	10 [†]	0,05	-
USA – OSHA	-	-	0,1	-
United Kingdom	5	10	0,1*	-

* Inhalable aerosol; †15-minutes-

8.2: Exposure controls

Appropriate engineering controls:

In the case of dust generation during wet or dry grinding of cutting hardmetal articles, engineering controls may include local ventilation systems with dust filters depending on degree of process automation and containment (e.g. closed vs. open processes).

Individual protection measures:

Eye/face protection	Use of safety glasses as appropriate and reasonably necessary.
Skin protection	Use of work gloves and work clothes as appropriate and reasonably necessary.
Respiratory protection	In the case of dust generation, use of respiratory protection as appropriate and reasonably necessary.

9: PHYSICAL AND CHEMICAL PROPERTIES

Not applicable for hardmetal articles.

10: STABILITY AND REACTIVITY

10.1: Reactivity

Hardmetal articles are not reactive.

10.2: Chemical stability

Hardmetal articles are chemically stable.

10.3: Possibility of hazardous reactions

Not applicable.

10.4: Conditions to avoid

Avoid re-shape or re-grind finished hardmetal articles. Cutting, sharpening, or grinding hardmetal tools may produce dusts of hazardous substances, which may be inhaled, ingested or come into contact with eyes and skin. Return tools to appropriate locations for reconditioning services. Operations such as grinding, cutting, burning, re-sharpening of such articles may release dusts which may present a fire or explosion hazard under rare favoring conditions of particle size, dispersion, concentration, and strong ignition source.

10.5: Incompatible materials

None known.

10.6: Hazardous decomposition products

None known.

11: TOXICOLOGICAL INFORMATION

Hardmetal articles as provided do not present a human hazard. However, during the cutting, sharpening, or grinding of hardmetal articles, some dust containing hazardous substances are produced which may be inhaled, swallowed or come into contact with the skin or the eyes. The toxicity section described below relate to these operations.

Carcinogenicity: Cobalt metal when inhaled is presumed to have carcinogenic potential for humans largely based on animal evidence. Cobalt metal with tungsten carbide was categorized by IARC as probably carcinogenic to humans (Group 2A). The US NTP considers cobalt-tungsten carbide (powders and hardmetals) as reasonably anticipated to be a human carcinogen.

STOT- Repeated Exposure: Chronic inhalation has the potential for causing transient or permanent respiratory disease, including occupational asthma and interstitial fibrosis. It is reported that cobalt dust is the most probable cause of such respiratory diseases. Symptoms include productive cough, wheezing, shortness of breath, chest tightness and weight loss. Interstitial fibrosis (lung scarring) can lead to permanent disability. Certain pulmonary conditions may be aggravated by exposure.

I2: ECOLOGICAL INFORMATION

Hardmetal articles as provided do not present an environmental hazard.

I2.1: Persistence and degradability

Not applicable.

I2.2: Bioaccumulative potential

Not applicable.

I2.3: Mobility in soil

Not applicable.

I2.4: Results of PBT and vPvB assessment

Tungsten carbide, cobalt and nickel are inorganic substances, and therefore the PBT and vPvB assessment is not required.

I2.5: Other adverse effects

None known.

I3: DISPOSAL CONSIDERATIONS

Responsibility for proper waste disposal of hardmetal waste/residues rests with the owner of the waste. Owners are encouraged to take advantage of hardmetal recycling programs. Hardmetal sintered scrap and sludges should be sent to an appropriate reclamation facility, if available. If material cannot be sent to a reclamation facility, dispose of all waste product and containers in accordance with local, state/provincial, federal, and national regulations.

I4: TRANSPORT INFORMATION

Hardmetal articles are not classified or regulated.

I5: REGULATORY INFORMATION

I5.1: Safety, health and environmental regulations/legislation specific for the article

EU Regulations: Hardmetal articles do not contain substances of very high concern (SVHC).

National Regulations: None known.

I5.2: Chemical safety assessment

Chemical safety reports (CSR)/chemical safety assessments (CSA) are not required for articles. CSR/CSAs have been carried out on tungsten carbide, cobalt and nickel.

16: ANNAN INFORMATION

Full text of Classifications (CLP/GHS)	Eye Irrit. 2, H319 Repr. 2; H361f, Acute Tox. 1, H330 Acute Tox. 4, H302 Carc. 1B, H350i Resp. Sens. 1B, H334 Skin Sens.1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Eye irritation, category 2 Reproductive toxicity, category 2 Acute toxicity, category 1 Acute toxicity, category 4 Carcinogenicity, category 1B Respiratory sensitization, category 1B Skin sensitization, category 1 Aquatic Toxicity (Acute), category 1 Aquatic Toxicity (Chronic), category 1
Full text of abbreviated H statements	H302 H330 H350i H334 H317 H319 H361f H400 H410	Harmful if swallowed. Fatal if inhaled. May cause cancer by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging fertility. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effect.
Full text of classifications (DSD/DPD) and of R phrases	T+: R26: Xn: R22: Xi: R36: Repr. Cat. 3; R62: Carc. Cat. 2; R49: Xn; R42/43: N; R50-53:	Very toxic by inhalation Harmful if swallowed Irritating to eyes Suspected of damaging fertility. May cause cancer by inhalation May cause sensitisation by inhalation and skin contact Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Revision(s):	Safety information sheet prepared on 31 januari 2014.	

ABBREVIATIONS:

Carc	Carcinogenic
CAS	Chemical Abstracts Service
Cat	Category
CLP	Classification, Labelling and Packaging
DSD	Dangerous Substances Directive
EC	European Commission
EEC	European Economic Community
EINECS	European Inventory of Existing Commercial chemical Substances
EU	European Union
h	Hours
m ³	Cubic meter
mg	Milligram(s)
MS	Member State
NIOSH	National Institute for Occupational Safety and Health
N	Dangerous for the Environment
No.	Number
OEL	Occupational Exposure Level
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulative, and Toxic
R	Risk Phrase
RE	Repeated Exposure
REACH	Registration, Evaluation, Authorization and Restriction of CHemical substances
Resp	Respiratory
Sens	Sensitiser
STOT	Specific Target Organ Toxicity
SVHC	Substance of Very High Concern
T	Toxic
vPvB	very Persistent, very Bioaccumulative
Xn	Harmful

End of Safety Information Sheet.