

## SAFETY DATA SHEET for high-speed steel tools (HSS, HSS-E05, HSS-E08)

*The information on this data sheet is based on our knowledge at the time of writing*

*The information and recommendations in this Safety Data Sheet do NOT constitute an express or implied warranty and do not create a legal contractual relationship. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for a particular purpose.*

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## 1. identification of the product and the company

### 1.1 Product labeling

Cutting tool made of high-speed steels with and without cobalt content (also known as HSS, HSS-E, HSS-Co, HSS-E05, HSS Co8, HSS-E08 HSS-E PM, powder metal)

### 1.2 Relevant identified uses of the product

Cutting tool: If used improperly, the tool can break and

### 1.3 Details of the supplier of the safety data sheet

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## 2. identification of hazards

In the case of melting, grinding or any other manufacturing process that generates dust, fumes or oxides, sections 8 and 10.6 must be observed.

## 3. composition / information on ingredients

High-speed steel can be coated with the following substances: TiN, AlTiN, AlCrN, DLC, diamond

### HSS steel composition in percent :

	C	Cr	Mo	W	Co	V	Fe
HSS	0.9	4.2	5	6.4	0	1.8	81.7
HSS-E05 / HSS Co 5%	0.93	4.2	5	6.4	4.8	1.8	76.87
HSS-E08 / HSS Co 8%	1.08	3.8	9.4	1.5	8	1.2	75.02
HSS-E PM / ASP	1.67	4.8	2	10.5	8	4.85	68.18

### Hazardous components :

#### CHROME:

- Labeling: EC N. 246-140-8 / CAS N. 7440-47-3
- Classification: none.

#### COBALT:

- Labeling: EC No. 231-158-0 / CAS No. 7440-48-4
- Classification : H302, H334, H317, H350i, H361f, H413

#### NICKEL:

- Labeling: EC No. 231-111-4 / CAS No. 7440-02-0
- Percentage by weight : < 1% (trace element)
- Classification: H351, H372, H317

See section 16.5 for classification details.

## 4. first aid measures

### 4.1 Description of first aid measures

#### 4.1.1 In case of skin contact

Remove contaminated clothing and wash immediately with plenty of soap and water. If skin irritation occurs, consult a doctor.

#### 4.1.2 In case of contact with the eyes

If dust comes into contact with the eyes, rinse them under running water for at least a few minutes.

#### 4.1.3 When inhaling

Remove to fresh air immediately. Get medical attention if necessary.

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

Dust particles can damage the eyes or cause skin irritation. Inhalation of dust may cause irritation of the respiratory tract.

### 4.3 Indication of immediate medical assistance and special treatment required

If in doubt or if symptoms persist, you should always consult a doctor.

## 5. fire-fighting measures

### 5.1 Fire extinguishing agents

Coordinate fire-fighting measures with the fire environment.

### 5.2 Special hazards arising from the product

The product itself does not burn.

### 5.3 Notes for firefighters

#### 5.3.1 Protection during firefighting

Wear a self-contained breathing apparatus

#### 5.3.2 Other information

Do not allow waste water from fire fighting to enter the sewage system or watercourses.

## 6. measures in case of accidental release

### 6.1 Personal precautions, protective equipment and emergency procedures

See protective measures under points 7 and 8. Use personal protective equipment if necessary.

## 6.2 Precautionary measures for the environment

Do not allow to enter surface waters or drains.

## 6.3 Methods and material for retention and cleaning

Avoid dust formation.

## 6.4 Reference to other sections

Treat the recovered material as described in the section on waste disposal.

# 7. handling and storage

## 7.1 Precautions for safe handling

### 7.1.1 Additional hazards during processing

May cause sensitization, especially in sensitive people.

### 7.1.2 Precautions for safe handling

Avoid dust formation.

### 7.1.3 Hygiene measures

Contaminated work clothing must not leave the workplace.

## 7.2 Conditions for safe storage, including incompatibilities

Keep away from acids, oxidizing agents and reducing agents.

## 7.3 Specific end uses

None

# 8. exposure controls and personal protective equipment

## 8.1 Controlled parameters / substances

CHROMIUM (EC N. 246-140-8 / CAS N. 7440-47-3)

COBALT (EC N. 231-158-0 / CAS N. 7440-48-4)

NICKEL (EC N. 231-111-4 / CAS N. 7440-02-0)

Exposure limit value in air for each substance according to local legislation.

## 8.2 Exposure control

### 8.2.1 Appropriate technical controls

- Technical measures and the use of suitable work procedures have priority over personal protective equipment.
- In the event that dust and/or fine particles are generated when working with this product, it is advisable to minimize them. In case of prolonged inhalation exposure to these forms, the occupational exposure limit value must not be exceeded.
- Ensure adequate ventilation to minimize the concentration of dust.

### 8.2.2 Personal protective equipment

- Eye protection : Wear safety goggles in case of dust formation.
- Skin and body protection : Wear suitable protective clothing in case of dust formation.
- Respiratory protection : Use filtering half mask in case of dust formation

## 9. physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 9.1.1 Physical condition

Firm

#### 9.1.2 Color

Steel (gray-silver)

#### 9.1.3 Odor

Odorless

#### 9.1.4 Safety data

- Melting point            1200 - 1500°
- Relative density (20°)        8
- Explosive properties    Not explosive
- Oxidizing properties    Non-oxidizing

### 9.2 Other information

None

## 10. stability and reactivity

### 10.1 Reactivity

No further information available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No further information available.

### 10.4 Conditions to avoid

The product as supplied is not dust explosive; however, the accumulation of fine dust leads to an increased risk of dust explosion.

### 10.5 Incompatible materials

Acids, oxidizing agents and reducing agents.

## 10.6 Hazardous decomposition products

Metal oxides

## 11. toxicological data

### 11.1 Information on toxicological effects

No data available

## 12. ecological data

### 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 the PBT and vPvB assessment

No data available

### 12.6 Other adverse effects

No data available

### 12.7 Further ecological information

No data available

### 12.8 Overall assessment

Do not empty the product into the sewage system and do not store it in public storage areas.

Disposal: in accordance with local regulations.

## 13. notes on disposal

### 13.1 Waste treatment methods

Material recycling possible. Collection and reprocessing of chips, offcuts, etc.

### 13.2 Ecology - Material waste

Do not dispose of waste in the sewage system. Dispose of in accordance with legal regulations.



## 14. transportation information

Nothing is regulated for transportation

## 15 Regulatory information

### 15.1 EU regulations

Article according to the REACH Regulation 1907/2006/EC: According to the REACH Regulation there is no legal obligation to provide a safety data sheet for an article.

However, this safety data sheet has been prepared to provide information on the safe use of this product.

No restrictions according to Annex XVII of the REACH Regulation.

Contains no substance from the REACH candidate list.

## 16 Other information

### 16.1 Display of changes

None

### 16.2 Abbreviations and acronyms

None

### 16.3 Important literature references and data sources

None

### 16.4 Classification for mixtures and assessment method used

No data available

### 16.5 Hazardous substance data (R-phrases, H-phrases and EUH-phrases)

H302 Harmful if swallowed

H317 May produce an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H350i May cause cancer by inhalation

H351 Suspected of causing cancer

H361f Suspected of damaging fertility

H372 Causes damage to organs through prolonged or repeated exposure

H413 May cause long lasting adverse effects to aquatic organisms