

**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**1 Identification**

- **Product name:** Carbide End Mills
- **Part number:**  
15-922F0.25 - 15-922FP3.0  
15-924F0.7 - 15-924FP1.0-3
- **Application of the substance / the mixture** Abrasive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Allied High Tech Products Inc.  
2376 East Pacifica Place  
USA-RANCHO DOMINGUEZ, CA 90220  
USA  
info@alliedhightech.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
During normal opening times: +1 (310) 635-2466  
Chemtrec: +1 (202) 483-7616

**\* 2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 2 H341 Suspected of causing genetic defects.  
Carc. 2 H351 Suspected of causing cancer. Route of exposure: Inhalation.  
Repr. 1B H360 May damage fertility or the unborn child.  
STOT RE 1 H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.



GHS07

- Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Additional information:**

Based on health effects for dust

All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

# Safety Data Sheet

*acc. to OSHA HCS*

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 1)

**Hazard pictograms**

GHS08

**Signal word** Danger**Hazard-determining components of labeling:**

cobalt  
nickel powder (particle diameter < 1 mm)

**Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
Suspected of causing cancer. Route of exposure: Inhalation.  
May damage fertility or the unborn child.  
Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.

**Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
If on skin: Wash with plenty of water.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
IF exposed or concerned: Get medical advice/attention.  
Specific treatment (see on this label).  
Get medical advice/attention if you feel unwell.  
If skin irritation or rash occurs: Get medical advice/attention.  
If experiencing respiratory symptoms: Call a poison center/doctor.  
Wash contaminated clothing before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

### \* 3 Composition/information on ingredients

**Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Hazardous components and components with occupational exposure limits:**

12070-12-1	tungsten carbide	50-100%
7440-33-7	tungsten	25-50%
7440-48-4	cobalt	1-10%
	⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360; ⚠ Skin Sens. 1, H317; Aquatic Chronic 4, H413	
12070-06-3	Tantalum Carbide	1-10%
	⚠ STOT SE 3, H335	
7440-02-0	nickel powder (particle diameter < 1 mm)	1-<2.5%
	⚠ Carc. 2, H351; STOT RE 1, H372; ⚠ Skin Sens. 1, H317; Aquatic Chronic 3, H412	
7440-25-7	tantalum	1-10%
7440-47-3	chromium	1-10%

(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 2)

· **Additional information:** The specific chemical identity and/or exact percentage of the composition has been withheld as a trade secret.

### \* 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

Asthma attacks

Breathing difficulty

Eye irritation

Coughing

Allergic reactions

Dermatitis

Dermatitis

· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

### \* 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:** Wear fully protective suit.

### \* 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Keep away from ignition sources

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### \* 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

No special requirements.

· **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

# Safety Data Sheet

*acc. to OSHA HCS*

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 3)

- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store receptacle in a well ventilated area.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

<b>12070-12-1 tungsten carbide</b>	
REL	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as W
TLV	Long-term value: 3* mg/m <sup>3</sup> as W; * respirable fraction
<b>7440-33-7 tungsten</b>	
PEL	and insoluble compounds, as We
REL	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> as W
TLV	Long-term value: 3* mg/m <sup>3</sup> as W; * respirable fraction
<b>7440-48-4 cobalt</b>	
PEL	Long-term value: 0.1* mg/m <sup>3</sup> as Co; *for metal dust and fume
REL	Long-term value: 0.05 mg/m <sup>3</sup> as Co; metal dust & fume
TLV	Long-term value: 0.02* mg/m <sup>3</sup> *inh. fraction; DSEN, RSEN, BEI
<b>7440-02-0 nickel powder (particle diameter &lt; 1 mm)</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 0.015 mg/m <sup>3</sup> as Ni
TLV	Long-term value: 1.5* mg/m <sup>3</sup> elemental, *inhalable fraction
<b>7440-25-7 tantalum</b>	
PEL	Long-term value: 5 mg/m <sup>3</sup> metal
REL	Short-term value: 10 mg/m <sup>3</sup> Long-term value: 5 mg/m <sup>3</sup> Metal
TLV	metal; TLV withdrawn due to insufficient data
<b>7440-47-3 chromium</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 0.5* mg/m <sup>3</sup> *metal+inorg.compds.as Cr
TLV	Long-term value: 0.003* 0.5** mg/m <sup>3</sup> inh. fraction, *as Cr(III),**metal

(Contd. on page 5)

# Safety Data Sheet

*acc. to OSHA HCS*

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 4)

<b>· Ingredients with biological limit values:</b>	
<b>7440-48-4 cobalt</b>	
BEI	15 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (background)
	1 µg/L Medium: blood Time: end of shift at end of workweek Parameter: Cobalt (background, semi-quantitative)

**· Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

**· Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.**· Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**· Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

<b>· Information on basic physical and chemical properties</b>	
<b>· General Information</b>	
<b>· Appearance:</b>	
<b>Form:</b>	Solid
<b>Color:</b>	Dark grey
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.
<b>· pH-value:</b>	Not applicable.
<b>· Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>· Flash point:</b>	Not applicable.
<b>· Flammability (solid, gaseous):</b>	Not determined.

(Contd. on page 6)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

Product name: Carbide End Mills

(Contd. of page 5)

· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Specific gravity at 20 °C (68 °F):</b>	10-15 g/cm <sup>3</sup> (83.45-125.175 lbs/gal) (Water = 1)
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Keep away from oxidising agents and acidic substances.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.
- **Additional information:** Contact of dust with strong oxidizers may cause fires or explosions.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>7440-48-4 cobalt</b>		
Oral	LD50	6,170 mg/kg (rat)
<b>7440-02-0 nickel powder (particle diameter &lt; 1 mm)</b>		
Dermal	LD50	>5,000 mg/kg (rat)

- **Primary chemical irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 6)

- **Additional toxicological information:**

Abrasive skin irritant

Abrasive eye irritant

Carcinogenic assessment: Inhalation of air-borne cemented carbide dust may increase the risk of contracting lung cancer.

- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>		
12070-12-1	tungsten carbide	2A
7440-48-4	cobalt	2B
7440-02-0	nickel powder (particle diameter < 1 mm)	2B
7440-47-3	chromium	3
· <b>NTP (National Toxicology Program)</b>		
7440-48-4	cobalt	R
7440-02-0	nickel powder (particle diameter < 1 mm)	R
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
None of the ingredients is listed.		

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:** Contact waste processors for recycling information.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>	not regulated
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> </ul>	not regulated
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul>	not regulated
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	not regulated

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/11/2020

Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 7)

· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not regulated

## \*15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· <b>Section 355 (extremely hazardous substances):</b>
None of the ingredients is listed.

· <b>Section 313 (Specific toxic chemical listings):</b>
7440-48-4 cobalt
7440-02-0 nickel powder (particle diameter < 1 mm)
7440-47-3 chromium

· <b>TSCA (Toxic Substances Control Act):</b>
All components have the value ACTIVE.

· <b>Hazardous Air Pollutants</b>
7440-48-4 cobalt

- **Proposition 65**

· <b>Chemicals known to cause cancer:</b>
7440-48-4 cobalt
7440-02-0 nickel powder (particle diameter < 1 mm)

· <b>Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.

· <b>Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.

· <b>Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.

- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials:** Carcinogenic hazardous material group III (dangerous).
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:** Kim Dermit
- **Last revision / supersedes version:** 06/11/2020 / 3.0
- **Supersedes date:** 04/30/2020
- **Abbreviations and acronyms:**  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 9)



**Safety Data Sheet**  
**acc. to OSHA HCS**

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Version 3.1

Last revision 06/11/2020

**Product name: Carbide End Mills**

(Contd. of page 8)

LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
BEL: Biological Exposure Limit  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Muta. 2: Germ cell mutagenicity – Category 2  
Carc. 1B: Carcinogenicity – Category 1B  
Carc. 2: Carcinogenicity – Category 2  
Repr. 1B: Reproductive toxicity – Category 1B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3  
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

**\* Data compared to the previous version altered.**