

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

Printing date 04/04/2016

Reviewed on 04/04/2016

**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.

Carc. 1B H350 May cause cancer.



GHS07

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

- **Additional information:** Based on health effects from dust

- **Label elements**

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

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· **Hazard pictograms**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

tungsten carbide  
cobalt

· **Hazard statements**

*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*  
*May cause an allergic skin reaction.*  
*May cause cancer.*

· **Precautionary statements**

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.  
· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

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· <b>Hazardous Components:</b>		
12070-12-1	tungsten carbide ⚠ Carc. 1B, H350	50-100%
7440-48-4	cobalt ⚠ Resp. Sens. 1, H334; Carc. 2, H351; ⚠ Skin Sens. 1, H317; Aquatic Chronic 4, H413	10-<25%
12070-06-3	Tantalum Carbide ⚠ STOT SE 3, H335	0.1-≤2.5%

## 4 First-aid measures

- **Description of first aid measures**
- **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** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **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** Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **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:**

### 12070-12-1 tungsten carbide

REL Short-term value: 10 mg/m<sup>3</sup>  
Long-term value: 5 mg/m<sup>3</sup>  
as W

TLV BEI

### 7440-48-4 cobalt

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>  
BEI

### 12070-06-3 Tantalum Carbide

PEL Long-term value: 5 mg/m<sup>3</sup>

TLV Long-term value: 5 mg/m<sup>3</sup>

- **Ingredients with biological limit values:**

### 7440-48-4 cobalt

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)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.

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- **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.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

<b>Form:</b>	Solid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

#### · Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

#### · Ignition temperature:

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

#### · Explosion limits:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.

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· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <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>Organic solvents:</b>	0.0 %
<b>VOC content:</b>	0.0 g/l / 0.00 lb/gl
<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:**

· **LD/LC50 values that are relevant for classification:**

**7440-48-4 cobalt**

Oral	LD50	6170 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.
- **Additional toxicological information:**
- Abrasive skin irritant
- Abrasive eye irritant

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*Carcinogenic assessment: The IARC found there was inadequate evidence that metallic cobalt is carcinogenic to humans, but there is sufficient evidence that it is carcinogenic to animals. IARC concluded that metallic cobalt is possibly carcinogenic to humans, but has not been classified as a known or suspected carcinogen by OSHA or the National Toxicity Program. However, the State of California regulations under Proposition 65 must be followed. See section 15.*

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

12070-12-1	tungsten carbide	2A
7440-48-4	cobalt	2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

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

· **UN-Number**

· **DOT, ADN, IMDG, IATA** not regulated

· **UN proper shipping name**

· **DOT, ADN, IMDG, IATA** not regulated

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- |  |                 |
|--|-----------------|
| <b>· Transport hazard class(es)</b>  |                 |
| <b>· DOT, ADN, IMDG, IATA</b>  |                 |
| <b>· Class</b>   | not regulated   |
| <b>· Packing group</b>   |                 |
| <b>· DOT, IMDG, IATA</b>   | not regulated   |
| <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

**· Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

**· Section 313 (Specific toxic chemical listings):**

7440-48-4 | cobalt

**· TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**· Proposition 65**
**· Chemicals known to cause cancer:**

7440-48-4 | cobalt

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Carcinogenic categories**
**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· TLV (Threshold Limit Value established by ACGIH)**

7440-48-4 | cobalt

A3

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

12070-12-1 | tungsten carbide

**· National regulations:**

- Additional classification according to Decree on Hazardous Materials:  
Carcinogenic hazardous material group III (dangerous).

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· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.  
Exceptions can be made by the authorities in certain cases.*

· **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

· **Date of preparation / last revision** 04/04/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 1B: Carcinogenicity – Category 1B

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4