

Safety Data Sheet acc. to OSHA HCS

Printing date 06/15/2018

Reviewed on 06/15/2018

1 Identification

- **Product name:** CBN Wafering Blades
- **Part number:**
60-20071 - 60-20087
60-30000 - 60-30020
- **Application of the substance / the mixture** Abrasive blade
- **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.
Repr. 1A	H360-H362	May damage fertility or the unborn child. May cause harm to breast-fed children.
STOT RE 1	H372	Causes damage to the gastro-intestinal tract through prolonged or repeated exposure.



GHS09 Environment

Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.
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GHS07

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

Aquatic Acute 2 H401 Toxic to aquatic life.

· **Label elements**

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

· **Hazard pictograms**



GHS08 GHS09

· **Signal word** *Danger*

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

cobalt

nickel

lead

tungsten carbide

· **Hazard statements**

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

May cause an allergic skin reaction.

May cause cancer.

May damage fertility or the unborn child. May cause harm to breast-fed children.

Causes damage to the gastro-intestinal tract through prolonged or repeated exposure.

Toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dusts or mists.

Avoid contact during pregnancy/while nursing.

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.

Avoid release to the environment.

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.

Collect spillage.

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 = 1

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· HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	1	Reactivity = 1

- **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.

· Hazardous Components:

7440-50-8	copper	10-25%
7440-48-4	cobalt ⚠ Resp. Sens. 1, H334; Carc. 2, H351; ⚠ Skin Sens. 1, H317; Aquatic Chronic 4, H413	2.5-10%
1314-13-2	zinc oxide ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	2.5-10%
7440-33-7	tungsten	2.5-10%
7440-02-0	nickel ⚠ Carc. 2, H351; STOT RE 1, H372; ⚠ Skin Sens. 1, H317	2.5-10%
7440-47-3	chromium	2.5-10%
7440-31-5	tin	2.5-10%
12070-12-1	tungsten carbide ⚠ Carc. 1B, H350	2.5-10%
7439-92-1	lead ⚠ Acute Tox. 3, H301; ⚠ Carc. 2, H351; Repr. 1A, H360-H362; ⚠ Acute Tox. 4, H332	≤2.5%

· Non-hazardous Components:

7439-89-6	iron	25-50%
10043-11-5	boron nitride	≤2.5%

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** No further relevant information available.

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- **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** 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 product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **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.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

7439-89-6	iron	3.2 mg/m ³
7440-50-8	copper	3 mg/m ³
7440-48-4	cobalt	0.18 mg/m ³
1314-13-2	zinc oxide	10 mg/m ³
7440-33-7	tungsten	10 mg/m ³
7440-02-0	nickel	4.5 mg/m ³
7440-47-3	chromium	1.5 mg/m ³
7440-31-5	tin	6 mg/m ³
12070-12-1	tungsten carbide	11 mg/m ³
7439-92-1	lead	0.15 mg/m ³

- **PAC-2:**

7439-89-6	iron	35 mg/m ³
7440-50-8	copper	33 mg/m ³
7440-48-4	cobalt	2 mg/m ³
1314-13-2	zinc oxide	15 mg/m ³
7440-33-7	tungsten	330 mg/m ³
7440-02-0	nickel	50 mg/m ³
7440-47-3	chromium	17 mg/m ³
7440-31-5	tin	67 mg/m ³
12070-12-1	tungsten carbide	120 mg/m ³

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7439-92-1	lead	120 mg/m ³
· PAC-3:		
7439-89-6	iron	150 mg/m ³
7440-50-8	copper	200 mg/m ³
7440-48-4	cobalt	20 mg/m ³
1314-13-2	zinc oxide	2,500 mg/m ³
7440-33-7	tungsten	2,000 mg/m ³
7440-02-0	nickel	99 mg/m ³
7440-47-3	chromium	99 mg/m ³
7440-31-5	tin	400 mg/m ³
12070-12-1	tungsten carbide	730 mg/m ³
7439-92-1	lead	700 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **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.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** 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:**

7440-50-8 copper

PEL	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
REL	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
TLV	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume; as Cu

7440-48-4 cobalt

PEL	Long-term value: 0.1* mg/m ³ as Co; *for metal dust and fume
REL	Long-term value: 0.05 mg/m ³ as Co; metal dust & fume
TLV	Long-term value: (0.02) NIC-0.02* mg/m ³ *inh. fraction; NIC-Skin, DSEN, RSEN, BEI

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1314-13-2 zinc oxide

PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction and fume
REL	Short-term value: 10** mg/m ³ Long-term value: 5 mg/m ³ Ceiling limit value: 15* mg/m ³ *dust only **fume
TLV	Short-term value: 10* mg/m ³ Long-term value: 2* mg/m ³ *as respirable fraction

7440-33-7 tungsten

PEL	and insoluble compounds, as We
REL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as W
TLV	Long-term value: 3* mg/m ³ as W; * respirable fraction

7440-02-0 nickel

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 0.015 mg/m ³ as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m ³ elemental, *inhalable fraction

7440-47-3 chromium

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 0.5* mg/m ³ *metal+inorg.compds.as Cr;See Pocket Guide App. C
TLV	Long-term value: 0.003* 0.5** mg/m ³ inh. fraction, *as Cr(III), **metal

7440-31-5 tin

PEL	Long-term value: 2 mg/m ³ metal
REL	Long-term value: 2 mg/m ³
TLV	Long-term value: 2 mg/m ³ metal

12070-12-1 tungsten carbide

REL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³ as W
TLV	Long-term value: 3* mg/m ³ as W; * respirable fraction

7439-92-1 lead

PEL	Long-term value: 0.05* mg/m ³ *see 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m ³ *8-hr TWA ;See PocketGuide App.C

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TLV	Long-term value: 0.05* mg/m ³ *and inorganic compounds, as Pb; BEI
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· 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)

7439-92-1 lead

BEI	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

· **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.

· **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

· **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.

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· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Solid
· Color:	According to product specification
· Odor:	Odorless
· Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

· **Water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· Dynamic:	Not applicable.
· Kinematic:	Not applicable.

· **Solvent content:**

· VOC content:	0.00 %
	0.0 g/l / 0.00 lb/gl

· **Solids content:** 100.0 %

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· **Other information** 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 heat.
 - Keep away from sources of ignition - No smoking.
 - Keep away from open flames. - No smoking.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

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

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

ATE (Acute Toxicity Estimate)

Oral	LD50	14,201 mg/kg
Inhalative	LC50/4 h	72.4 mg/l (rat)

7440-48-4 cobalt

Oral	LD50	6,170 mg/kg (rat)
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1314-13-2 zinc oxide

Oral	LD50	>5,000 mg/kg (rat)
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7440-02-0 nickel

Dermal	LD50	5,010 mg/kg (rat)
Inhalative	LC50/4 h	2.55 mg/l (rat)

7439-92-1 lead

Oral	LD50	100 mg/kg (ATE)
Inhalative	LC50/4 h	1.5 mg/l (ATE)

- **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 eye irritant
 - Abrasive skin irritant

- **Carcinogenic categories**

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

7440-48-4	cobalt
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7440-02-0	nickel	2B
7440-47-3	chromium	3
12070-12-1	tungsten carbide	2A
7439-92-1	lead	2B

· **NTP (National Toxicology Program)**

7440-48-4	cobalt	R
7440-02-0	nickel	R
7439-92-1	lead	R

· **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.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms
- **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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- | | |
|--|-----------------|
| · Transport hazard class(es) | |
| · DOT, IMDG, IATA | |
| · Class | not regulated |
| · Label | - |
| · ADN/R Class: | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | |
| · Marine pollutant: | No
Yes (DOT) |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | |
| | Not applicable. |
| · UN "Model Regulation": | 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):**

7440-50-8	copper
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7440-48-4	cobalt
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1314-13-2	zinc oxide
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7440-02-0	nickel
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7440-47-3	chromium
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7439-92-1	lead
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

7440-48-4	cobalt
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7440-02-0	nickel
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7439-92-1	lead
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· **Chemicals known to cause reproductive toxicity for females:**

7439-92-1	lead
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· **Chemicals known to cause reproductive toxicity for males:**

7439-92-1	lead
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· **Chemicals known to cause developmental toxicity:**

7439-92-1	lead
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-50-8	copper	D
1314-13-2	zinc oxide	D, I, II
7440-47-3	chromium	D
10043-11-5	boron nitride	I (oral)
7439-92-1	lead	B2

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

7440-48-4	cobalt	A3
7440-02-0	nickel	A5
7440-47-3	chromium	A4
7439-92-1	lead	A3

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

7440-02-0	nickel	
12070-12-1	tungsten carbide	

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials:**

Carcinogenic hazardous material group III (dangerous).

· **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** 06/15/2018 / -

· **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

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*Acute Tox. 3: Acute toxicity – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**Carc. 1B: Carcinogenicity – Category 1B**Carc. 2: Carcinogenicity – Category 2**Carc. 2: Carcinogenicity – Category 2**Repr. 1A: Reproductive toxicity – Category 1A**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4*

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