



FINE ABRASIVES TAIWAN CO., LTD.

No.160, Daxing 10th St., Luzhu Dist., Taoyuan City 33862, TAIWAN

TEL: 886-3-313-3343

FAX: 886-3-313-3228

WEBSITE: <http://www.factdiamond.com>

E-MAIL: fact@factdiamond.com

MATERIAL SAFETY DATA SHEET

PcBN

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : SPCBN 、PCBN95 、PCBN90 、PCBN80 、PCBN60 、PCBN50

PRODUCT DESCRIPTION : POLYCRYSTALLINE CUBIC BORON NITRIDE(PCBN)

COMPANY NAME : FINE ABRASIVES TAIWAN CO.,LTD.

COMPANY INFO. : NO.160, Daxing 10St, Luzhu Dist, Taoyuan City 33862, TAIWAN

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DATA UPDATE : 17/10/2023

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

MATERIAL	CAS NO.	%BY WEIGHT	OSHA PEL-TWA	ACGIH TLV-TWA
CBN	10043-11-5	25-90%	10mg/m ³	10mg/m ³
COBALT	7440-48-4	10-15%	0.1mg/m ³	0.02mg/m ³
ALUMINIUM NITRIDE	24304-00-5	1-20%	-	-
TITANIUM CARBIDE	12070-08-05	1-10%	5mg/m ³	-
TITANIUM ALUMINIDE	12004-78-3	1-2%	-	-
TUNGSTEN CARBIDE	12070-12-1	0-50%	5mg/m ³	5mg/m ³



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SECTION 3 HAZARD IDENTIFICATION

Sintered polycrystalline Cubic Boron Nitride does not in its intact form present a health hazard. Cubic Boron Nitride is non-toxic. Dust, fumes and vapours generated during operations can enter the body through inhalation, ingestion and skin contact.

Eye: May cause eye irritation. Dust on surface may cause mechanical irritation

Skin: May cause skin irritation. Exposure may cause irritation characterized by redness, dryness, and inflammation.

Ingestion: May cause irritation of tract. Low hazard for usual industrial handling.

Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.

Boron compounds are toxic and can cause boron poisoning.

Aluminium compounds are found commonly in industry

and active chemically and may exhibit dangerous toxic and reactive properties.

SECTION 4 FIRST AID MEASURE

Eye Contact : Remove contact areas. Flush eye with clear water 15 minutes. Seek medical treatment if irritation develops

Skin Contact : Wash affected areas thoroughly with soap and water. Seek medical treatment if rash occurs.

Ingestion : Seek medical treatment. DO NOT induce vomiting.

Inhalation : If high concentrations are inhaled or if worker exhibits, remove to fresh air, If symptoms persist, seek medical treatment



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SECTION 5 FIRE FLGHTING MEASURES

Polycrystalline diamond is not a fire hazard and under normal conditions.However dust produced from working may be flammable and may pose a fire hazard .

Flash point : N/A

Upper Explosion Limits : N/A

Lower Explosion Limits : N/A

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal protection : Use proper protective equipment as indicated in SECTION 8
Respiratory protection should be worn if hazardous components exceed exposure limits listed in section 2

Environmental : Isolate the area the spill has occurred.

Method of Cleaning-up : Clean-up spilled material.Avoid generating dust during clean-up

SECTION 7 HANDING AND STORAGE

Handing : Polycrystalline Cubic Boron Nitride products used under normal operating conditions do not require special safety precautions other than the normal safety procedures for handing and using cutting tools, such as safety glasses and gloves. In grinding,cutting burning or welding operations, generated dust or fume may require special consideration.

Storage:Keep in a tightly closed containners and store in a cool dry area.



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SECTION 8 EXPOSE CONTROLS/PERSONAL PROTECTION

Engineering Measures : Provide local exhaust ventilation in areas where debris, dust or fumes may be released , to ensure that concentrations do not exceed exposure limits.

Hygiene Measures : Wash hand before eating or drinking.

Personal Protection Equipment : Wear safety glasses with side shields when grinding or cutting this product. Wear safety glove to avoid contact directing. Wear protective appropriate clothing to avoid skin contact with dust generated during operations.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Black layer of polycrystalline diamond on a tungsten carbide back.

Odour : none

pH : N/A

Flash point : N/A

Flammability : N/A

Boiling point : N/A

Explosive properties : N/A

Vapor pressure : N/A

Vapour Density : N/A

Solubility in water : N/A

Partition coefficient : N/A

SECTION 10 STABILITY AND REACTIVITY

Chemical stability : stable

Conditions to avoid : Excess heat & strong acids.

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SECTION 11 TOXICOLOGICAL INFORMATION

- Cobalt :** The international Agency for research on Cancer (IARC) lists cobalt and cobalt compounds as a category 2B carcinogens (possible carcinogen to humans). Cobalt fumes or dust may cause pulmonary, skin, or eye irritation. Cobalt may be a sensitising agent for skin and respiratory systems. Chronic exposure may affect the heart, pancreas, thyroid gland or bone marrow.
- Rat Oral LD₅₀ : 1500mg/kg Rabbit Oral LD₅₀ : 20mg/kg
Rat intraperitoneal LD₅₀ : 2500mg/kg
Rabbit intraperitoneal LD₅₀ : 100mg/kg
Rabbit intravenous LD₅₀ : 100mg/kg
- Inhalation exposure to cobalt dust can produce two types of lung condition : Interstitial lung disease (hard metal disease) or occupational asthma (hypersensitivity allergic obstructive airway syndrome).
- Skin Exposure can result in an allergic red rash (cobalt itch). Cobalt is an anticipated human carcinogen based on animal studies (IARC group 2B). Cobalt is listed as an animal carcinogen (A3) by ACGIH and as a possible human carcinogen by IARC (2B).
- Medical restrictions :** Persons should not work with this product if they have an allergy.
- Tungsten carbide :** Toxicity has not been quantified, may cause pulmonary and skin sensitisation and mucous membrane irritation in dust form.



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SECTION 12 ECOLOGICAL INFORMATION

Mobility : No influence
Persistence/Degradabil No influence
Bioaccumulation : No influence
Eco-toxicity : This product is not expected to be toxic to the environment.
Adopt sound working practices,so that the product is not
releasr into the environment.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with appropriate government regulation.May be sold as scrap
for reclaim.

SECTION 14 TRANSPORT INFORMATION

ADR : Not regulated.
RID : Not regulated.
IMDG : Not regulated.
ICAO/IATA : Not regulated.

SECTION 15 REGULATORY INFORMATION

Regulations : This MSDS has been prepare according to EU regulation.EC Directives
67/548/EEC & 88/379/EEC

OSHA : This product is hot hazardous under normal conditions of use.Dust
generated when grinding,cutting,burning or welding this product may be
hazardous.



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TSCA : Components of this product are listed he TSCA inventory.This product complies with chemicals substance inventory requirements of the US EPA toxic substance control act.

SARA : Cobalt is subject to the requirements of Section 313 of Title III of superfund Amendment and Reauthorisation Act of 1986.

State Regulatory Information : This product contains cobalt,which is listed in California Proposition 65 as a known cancer causing chemical.

SECTION 16 OTHER INFORMATION

The information contained herein is base on our state of knowledge at the above-specified date.If refers solely to the product indicated and constitutes no guarantee of particular quality.It is the duty of user that this information is appropriate and complete with respect to the specific use intended.The MSDS cancels an replaces any preceding release.