

Safety DATA SHEET

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For chemical emergency spill, leak, fire, exposure or accident call (CHEMTREC) 800-424-9300. This SDS complies with 29 CFR 1919.1200 (The OSHA Hazard Communication Standard).

Section 1: Identification

Product / Chemical Name:

Metal Bond Diamond Polishing Disc (WET ONLY)

Product Identification No: N/A

Chemical Family: N/A

Trade Name and Synonyms: N/A

Molecular Weight: N/A

Chemical Name: N/A

Chemical Formula: N/A

Recommended use: Wet polishing tool

Distributor Name:

Alpha Professional Tools®

Address:

103 Bauer Drive, Oakland, NJ 07436

Emergency Tel. No.:

800-648-7229

Section 2: Hazard(s) Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200; Physical Hazards Not classified

Health Hazards

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

Respiratory or skin sensitization: Category 1

Skin or skin sensitization: Category 1

Carcinogenicity: Category 1

Reproductive toxicity: Category 2

Specific target organ toxicity single exposure:

Category 1 (Digestive, respiratory system, kidney)

Category 3 (Respiratory tract irritation)

Specific target organ toxicity repeated or prolonged exposure: Category 1 (Respiratory system, lung)

Environmental Hazards

Hazardous to the aquatic environment (acute) Category 1

Hazardous to the aquatic environment (chronic) Category 1

Other Hazards No information

Signal word Danger

Hazard Statement(s) Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause respiratory irritation

May cause cancer

Suspected of damaging fertility or the unborn child

Causes damage to digestive, respiratory system, kidney

Causes damage to respiratory system, lung through prolonged or repeated exposure

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

Precautionary Statement(s)

[Prevention]

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 hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

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.

Section 2: Hazard(s) Identification (Cont')

[Emergency response]

If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention. Call a poison center/doctor/if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.

Take off contaminated clothing and wash it before reuse.
 Wash contaminated clothing before reuse.
 Collect spillage.
[Storage] Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
[Disposal] Dispose of contents/container in accordance with local/regional/national/international regulations.
Description of any hazards not otherwise classified;
 No information
Ingredient with unknown acute toxicity in the mixture
 Not applicable

Section 3: Composition/Information on Ingredients

Chemical name*	CAS No.	Concentration/concentration ranges (wt %)
Tungsten	7440-33-7	0-70
Copper	7440-50-8	10-50
Cobalt	7440-48-4	0-85
Bisphenol A type epoxy resin	25068-38-6	0.5-25
Silicon carbide	409-21-2	0-20
Tin	7440-31-5	0-10
Nickel	100-42-5	0-2

*Grindstone part: This product consists of the adhesive (urethane resin) and base material part (plastic fastener and titanium dioxide) in addition to the grindstone part.

Section 4: First-Aid Measures

Necessary first-aid measures by relevant routes of exposure;

IF INHALED Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 If symptoms continue, call a doctor/physician.
IF ON SKIN Rinse with plenty of water.
 If symptoms continue, call a doctor/physician.
IF IN EYES Immediately rinse cautiously with water for 15 - 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms continue, call a doctor/physician.
IF SWALLOWED Rinse mouth. Immediately get medical advice/attention.

Most important symptoms/effects, acute and delayed;

Causes skin irritation
 May cause an allergic skin reaction
 Causes serious eye irritation
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 May cause respiratory irritation
 May cause cancer
 Suspected of damaging fertility or the unborn child
 Causes damage to digestive, respiratory system, kidney
 Causes damage to respiratory system, lung through prolonged or repeated exposure

Indication of immediate medical attention and special treatment needed, if necessary;

No information

Section 5: Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media;

Suitable extinguishing media: Small fire: dry chemical, carbon dioxide, water spray, alcohol-resistant foam
Large fire: water spray, water spray, alcohol-resistant foam

Unsuitable extinguishing media

Applying direct water may be dangerous because fire may expand to surroundings.

Specific hazards arising from the chemical;

May ignite with frictional heat, sparks or flame.
In case of fire, irritating or corrosive decomposition products may be generated.

Special protective equipment and precautions for fire-fighters;

Move container to a safe area if it can be done without risk. Cool containers with flooding quantities of water until well after fire is out.

Wear appropriate self-contained compressed air breathing apparatus and chemical protective clothing (heat resistance) when fire-fighting.

Since there is no effect of extinguishing by fire extinguishing media other than watering, use watering for large-scale fire.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures;

Wear suitable protective equipment described in "Section 8: Exposure controls/personal protection".

Do not touch or walk through spilled material.

Keep out except responsible personnel.

Ventilate a closed place.

Avoid release into the environment because product may cause local effects.

Methods and materials for containment and cleaning up;

Sweep up scattered materials or vacuum them using a vacuum cleaner so as not to cause dust then collect them into an empty container.

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent to flowing into drains, sewers, basements or closed areas.

Section 7: Handling and Storage

Precautions for safe handling

Protective measures:

Install appropriate equipment and wear suitable protective apparatus described in "Section 8: Exposure controls/personal protection".

Use this product with water injection device.

Use dust collector and local exhaust ventilation.

Install the device which can recover polishing water. While the work is being carried out, keep the surface of the generated dust be covered with a layer of water by injecting water.

Use only outdoors or in a well-ventilated area.

Do not handle near open flame or under excess high temperature conditions.

Advice on general occupational hygiene:

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits;

US OSHA PEL 1 mg/m³ (Copper, dusts and mists as Cu)

0.1 mg/m³ (Cobalt and compounds, metal dust and fume as Co)

2 mg/m³ (Tin metalas)

1 mg/m³ (Nickel elemental)

ACGIH TLV-TWA (2014) 5 mg/m³ (Tungsten and insoluble compounds as W)

1 mg/m³ (Copper, dusts and mists as Cu)

0.02 mg/m³ (Cobalt and compounds as Co)

3 mg/m³ (Silicon carbide nonfibrous) (Respirable fraction)

2 mg/m³ (Tin metalas)

1.5 mg/m³ (Nickel elemental)

ACGIH TLV-STEL (2014) 10 mg/m³ (Tungsten and insoluble compounds as W)

Appropriate engineering controls;

Install closed facilities or local exhaust ventilation systems.

Individual protection measures, such as personal protective equipment;

Respiratory protection Wear appropriate protective mask or air aspirator as required.

Hand protection Wear impervious protective gloves.

Eye protection Wear safety glasses or goggles.

Skin and body protection Wear impervious protective clothing.

Section 9: Physical and chemical properties

Appearance (physical state, color, etc.)
Silver white, pale bronze color molded solid

Odor Odorless

Odor threshold No information

pH No information

Melting point/freezing point No information

Initial boiling point and boiling range No information

Flash point No information

Evaporation rate No information

Flammability (solid, gas) No information

Upper/lower flammability or explosive limits No information

Vapor pressure No information

Vapor density No information

Relative density 8.9-15.1 (grindstone part)

Solubility (ies) Water: insoluble

Partition coefficient: n-octanol/water No information

Auto-ignition temperature No information

Decomposition temperature No information

Viscosity No information

Other information No information

Section 10: Stability and Reactivity

Reactivity

Stable under normal handling condition.

Chemical stability

Stable under normal handling condition.

Possibility of hazardous reactions

No hazardous reaction expected under normal handling.

Conditions to avoid

Avoid sunlight. Store in a dry and cool place.

Incompatible materials

Oxidizing agents, strong acids and strong bases

Hazardous decomposition products

In case of fire, toxic decomposition products (carbon monoxide, etc.) may be generated.

Section 11: Toxicological Information

Symptoms related to the physical, chemical and toxicological characteristics;

Tungsten

Serious eye damage/irritation: There is the report that tungsten metal powder has irritation for the eyes.

Copper

Skin sensitization: The Japan Society for Occupational Health (SanMamoru Society recommendation (2012)), the copper and its compounds are classified in skin sensitizer second group.

Specific target organ toxicity single exposure: From the knowledge of the person, in case the oral exposure of ingesting drinking water or the like including a large amount of copper, gastrointestinal symptoms (nausea, vomiting, abdominal pain, etc.) were observed, mainly nausea, resulting in vomiting. From description that an upper respiratory tract is stimulated.

Cobalt

Acute toxicity (oral): Rat LD₅₀ = 6,171 mg/kg

Respiratory sensitization: Reported on the classification by the Japan Society for Occupational Health and the Japanese Society of Occupational Allergy (Respiratory Tract Sensitizing Substance).

Skin sensitization: Reported on the classification by the Japan Society for Occupational Health and the Japanese Society of Occupational Allergy (Skin Sensitizing Substance).

Carcinogenicity: Due to the fact that the substance is classified as Category A3 (as cobalt and inorganic compounds) by ACGIH (2001), Group 2B (cobalt and cobalt compounds) by IARC (1991) and Category 1 (as cobalt and cobalt compounds) by the Japan Society for Occupational Health.

Reproductive toxicity: Histological changes of testes and reduction in survival rates of offspring are observed, though no descriptions are available regarding the general conditions of parental animals.

Specific target organ toxicity single exposure: There is the human evidence including "respiratory irritation"

Specific target organ toxicity repeated exposure: There is the human evidence including "respiratory irritation, stridor, asthma, pneumonia, fibrosis, myocardiosis, functional effects on the cardiac vehicles, cardiac hypertrophy, cardiac failure due to occupational exposure to cobalt".

Bisphenol A type epoxy resin

Acute toxicity (oral): Rat LD₅₀ = 11,400 mg/kg

Acute toxicity (dermal): Rat LD₅₀ => 1,600 mg/kg

Skin corrosion/irritation: Report on rabbit primary skin irritation tests, the substance does not cause or causes moderate irritation to the skin, though the results of 4-hour application are not available. The substance is considered "irritating."

Section 11: Toxicological Information (Cont.)

Serious eye damage/irritation: Report on rabbit eye irritation tests, the substance does not cause or causes moderate irritation to the eyes. The substance is considered "mildly irritating."

Skin sensitization: Report on human cases and tests on human volunteers, the results of guinea pig skin sensitization tests and the classification by the Japanese Society of Occupational Allergy (category: skin sensitizing substance). The substance causes skin sensitization.

Silicon carbide

Carcinogenicity: This substance is classified into A2 in ACGIH (ACGIH (2003)).

Specific target organ toxicity single exposure:

Reported on the statement that pulmonary edemas, pulmonary hemorrhage, interstitial pneumonia, bronchioles collapse, and the alveolar atelectasis were acknowledged.

Specific target organ toxicity repeated exposure:

Reported on a statement that shows pneumoconiosis, change in chest radiography pictures, lung fibrosis, knot, and silicosis were observed in humans.

Tin

Specific target organ toxicity repeated exposure: The pneumoconiosis was seen in workers handling metallic tin.

Nickel

Acute toxicity (oral): Rats $LD_{50} > 9,000$ mg/kg

Respiratory sensitization: It is rated as a respiratory tract sensitizers (Group 2) by the Recommendations of Occupational Exposure Limits (Japan Society for Occupational Health, 2008). Similarly, it is rated as a respiratory tract sensitizer by Japanese Society of Occupational and Environmental Allergy (2004) and the DFG (MAK/BAT No. 43 (2007)).

Skin sensitization: In human cases, eczema, contact dermatitis and positive reaction to patch tests have been reported. In addition, it is rated as a skin sensitizer (Group 1) by the Recommendations of Occupational Exposure Limits (Japan Society for Occupational Health, 2008). Similarly, it is rated as a skin sensitizer by Japanese Society of Occupational and Environmental Allergy (2004) and the DFG (MAK/BAT No.43 (2007)).

Carcinogenicity: According to previously conducted classifications, the substance was rated as "2B" by the IARC (IARC (1990)), "R" by the NTP (NTP (2005)), and "Carc. Cat. 3; R40" by the EU (EU (2007)).

Specific target organ toxicity single exposure: In inhalation exposure tests (intratracheal single administration) using male rats, pneumocyte damage was induced at 0.5 mg or higher doses. In addition, in humans exposed to the substance through inhalation, alveolar wall damage and edema in alveolar spaces, and marked tubular necrosis in the kidneys were noted.

Specific target organ toxicity repeated exposure:

In a 13-week inhalation exposure test using rats (OECD TG 413), pulmonary alveolar proteinosis and pulmonary granulomatous inflammation were noted in female rats and pulmonary mononuclear cell infiltration was detected in male rats at 1 mg/m³ (0.001 mg/L) or higher doses, which fall under Category 1 guidance doses. In addition, in a 21-month inhalation exposure test using rats, pleuritis, pneumonia, blood congestion, and edema were noted at the dose of 15 mg/m³ (0.015 mg/L), which falls under Category 1 guidance doses. Similarly, in a 6-month inhalation exposure test using rabbits, pneumonia was induced at 1 mg/m³ (0.001 mg/L).

Delayed and immediate effects and also chronic effects from short- and long-term exposure;

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause respiratory irritation

May cause cancer

Suspected of damaging fertility or the unborn child

Causes damage to digestive, respiratory system, kidney

Causes damage to respiratory system, lung through prolonged or repeated exposure

Numerical measures of toxicity (such as acute toxicity estimates);

Not applicable

Whether the chemical is listed in the NTP Report on Carcinogens or has been found to be a potential carcinogen in the IARC Monographs, or by OSHA;

IARC: Listed (Group 2A: Silicon carbide whiskers, Group 2B:

Cobalt and cobalt compounds, Nickel, metallic and alloys)

NTP Report: Listed (Group R: Nickel (Metallic))

OSHA: Not listed

Section 12: Ecological information

Ecotoxicity:

Information on product: No information

Information on ingredients:**Cobalt****Aquatic acute toxicity:**

Insufficient data available.

Aquatic chronic toxicity: Insufficient data available.

Bisphenol A type epoxy resin

Aquatic acute toxicity: Crustacea (Daphnia magna) 48h-
EC₅₀ = 1.7 mg/L

Aquatic chronic toxicity: No information

Nickel

Aquatic acute toxicity: Insufficient data available.

Aquatic chronic toxicity: Insufficient data available.

Persistence and degradability:

Information on product: No information

Information on ingredients:**Bisphenol A type epoxy resin**

Biodegradability by BOD = 0%

Bioaccumulative potential:

Information on product: No information

Information on ingredients: No information

Mobility in soil:

Information on product: No information

Information on ingredients: No information

Other adverse effects:

No information

Section 13: Disposal considerations

Waste treatment methods

Dispose of waste in accordance with applicable local, regional and international regulations and standards.

When disposing, consult to a certificated waste trader or local offices if they deal with the waste.

Used container should be recycled after cleaning or dispose of in compliance with related laws and local regulations.

Contents should be removed completely when dispose of empty containers.

Section 14: Transport Information (non-mandatory)

UN number Not applicable

UN proper shipping name Not applicable

Transport hazard class(es) Not applicable

Packing group Not applicable

Environmental hazards Not applicable

Transport in bulk according to Annex II of MARPOL

73/78 and IBC code Not applicable

Special precautions for user

When transporting, avoid direct sunlight. Confirm no leakage to containers. When loading, prevent containers from falling, dropping off or damaging. Take preventive measures of collapse.

Section 15: Regulatory information

OSHA: Hazardous chemical

TSCA inventory: All ingredients in this product are listed on the TSCA Inventory.

TSCA SNUR: Not applicable

SARA Title III: Section 302 (Extremely Hazardous Substances): Not applicable

Section 304 (Hazardous Substances): Not applicable

Section 313 (TRI Chemicals): Copper, Cobalt, Nickel

Clean Air Act: This product does not contain any substances regulated as hazardous air pollutants under Section 112 of the Clean Air Act.

Clean Water Act: Listed (Copper, Nickel)

Section 16: Other Information

Update history:

Date of issue: 31th May, 2015

SDS Creation Date: 05/31/2015

References:

Information of Sanwa Kenma, Ltd.

NITE GHS classification results (2015).

ACGIH, American Conference of Governmental Industrial Hygienists (2014) TLVs and BEIs.

Disclaimer

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