Safety
DATA SHEET

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Alpha Professional Tools®

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:
Resin Bond Diamond Polishing Disc (WET&DRY)

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 and dry polishing tool

Distributor Name:
Alpha Professional Tools®

Address:
16 Park Dr Ste 9, Franklin, NJ 07416

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 1
Respiratory or skin sensitization: Category 1
Skin or skin sensitization: Category 1
Carcinogenicity: Category 1
Reproductive toxicity: Category 1
Specific target organ toxicity single exposure: Category 1 (Respiratory system, kidney, nervous system), Category 2 (Lung) Category 3 (Respiratory tract irritation)
Specific target organ toxicity repeated or prolonged exposure: Category 1 (Lung, respiratory system, nervous system, kidney), Category 2 (Adrenal gland)

Environmental Hazards
Hazardous to the aquatic environment (acute) Category 1
Hazardous to the aquatic environment (chronic) Category 1

Other Hazards NA
Hazard Statement(s)
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
May cause cancer
May damage fertility or the unborn child
Causes damage to respiratory system, kidney, nervous system
May causes damage to lung
Causes damage to lung, respiratory system, nervous system, kidney through prolonged or repeated exposure
May causes damage to adrenal gland 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.

Description of any hazards not otherwise classified;
No information
Ingredient with unknown acute toxicity in the mixture
Not applicable

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Section 3: Composition/Information on Ingredients

Chemical name*	CAS No.	Concentration/concentration ranges (wt %)
Aluminum oxide	1344-28-1	0-75
Silicon carbide	409-21-2	0-50
Trisodium hexafluoroaluminate	13775-53-6	0-60
Cerium oxide	1306-38-3	0-55
Nickel	7440-02-0	0-10
Chromium oxide (III)	1308-38-9	0-30
Tritolyl = phosphate	1330-78-5	0-15
Ferric oxide (III)	1309-37-1	0-8
Calcium hydroxide	1305-62-0	0-5
Zinc stearate	557-05-1	0-2
Silica	14808-60-7	0-1
Titanium oxide	13463-67-7	0-2
Carbon black	1333-86-4	0-1.5

*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: If the polishing debris and polishing water during polishing is attached to the skin. Rinse with water and soap.
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. Do not induce vomiting. Get medical advice/attention.

Most important symptoms/effects, acute and delayed;
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
May cause cancer
May damage fertility or the unborn child
Causes damage to respiratory system, kidney, nervous system
May causes damage to lung
Causes damage to lung, respiratory system, nervous system, kidney through prolonged or repeated exposure
May causes damage to adrenal gland 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.

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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.
Conditions for safe storage,
including any incompatibilities
Technical measures:
After use, it is recommended that to wash away the polishing debris in the water, and store the tool in a dry area.
Incompatible materials:
Oxidizing agents, strong acids and strong bases
Conditions for safe storage:
Keep away from heat/sparks/open flames/hot surfaces.
Avoid sunlight. Store in a dry and cool place.
Packing material:
Use a sealed container.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits;
US OSHA PEL
2.5 mg/m3 (Fluoridea as F)
1 mg/m3 (Nickel elemental)
0.5 mg/m3 (Chromium (III) inorganic compounds as Cr)
10 mg/m3 (Iron oxide(Fe2O3)) (Fume)
5 mg/m3 (Calcium hydroxide) (Respirable fraction)
(10 mg/m3)
%SiO2+2 (Respirable dust)
3.5 mg/m3 (Carbon black)
15 mg/m3 (Titanium dioxide) (Total dust)

ACGIH TLV-TWA (2014)
1 mg/m3 (Aluminium metal and insoluble compounds) (Respirable fraction)
3 mg/m3 (Silicon carbide nonfibrous) (Respirable fraction)
2.5 mg/m3 (Fluoridea as F)
2 mg/m3 (Tin oxide as Sn)
1.5 mg/m3 (Nickel elemental)
0.5 mg/m3 (Chromium (III) inorganic compounds as Cr)
5 mg/m3 (Iron oxide(Fe2O3)) (Respirable fraction)
5 mg/m3 (Calcium hydroxide)
10 mg/m3 (Stearates)
0.025 mg/m3 (Silica, crystalline-α-quartz and cristobalite) (Respirable fraction)
3 mg/m3 (Carbon black) (Inhalable fraction)
10 mg/m3 (Titanium dioxide)

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.

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Section 9: Physical and chemical properties

Appearance: Yellowish brown molded solid
(physical state, color, etc.)
Odor: Faint phenol odor
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: 1.3-1.7 (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;

Information on product: No information
Information on ingredients:
Aluminum oxide
Acute toxicity (oral): Rat LD50>5,000mg/kg
Specific target organ toxicity single exposure: Upper respiratory irritation is reported.
Specific target organ toxicity repeated exposure: By occupational exposure of aluminum oxide, pulmonary fibrosis was occurred.

Silicon carbide
Carcinogenicity: This substance is classified into A2 in ACGIH (ACGIH (2003)).
Specific target organ toxicity single exposure: Pulmonary edemas, pulmonary hemorrhage, interstitial pneumonia, bronchioles collapse, and the alveolar atelectasis were acknowledged.
Specific target organ toxicity repeated exposure: Pneumoconiosis, change in chest radiography pictures, lung fibrosis, knot, and silicosis were observed in humans.

Trisodium hexafluoroaluminat
Acute toxicity (oral): Rat LD50 >2,000 mg/kg
Acute toxicity (dermal): Rat LD50 > 2,000 mg/kg
Specific target organ toxicity single exposure: There are no test data available on this substance (synthetic mineral).

With regard to Cryolite (natural mineral), the following have been observed: irritation in the mouth or pharynx in humans, cases of nausea and vomiting in workers, coughing caused by irritation of the nose, throat or lungs through inhalation, possible pulmonary edema induced by respiratory tract irritation or high dose exposure.

Cerium oxide
Acute toxicity (oral): Rat LD50>5,000 mg/kg
Acute toxicity (dermal): Rat LD50>2,000mg/kg
Specific target organ toxicity single exposure: 4-hour inhalation exposure were tested in rats, labored respiration, coat of disturbance, incomplete collapse of diffuse was seen in the lungs.
Specific target organ toxicity repeated exposure: Accumulation of rare earth elements were found in the lung of the receiving workers for many years the exposure of the rare-earth element fume. Granuloma, emphysema, lung lesions of interstitial fibrosis, reduction in vital capacity have been reported.

Nickel
Acute toxicity (oral): Rats LD50 > 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)).

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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).

Cerium oxide
Respiratory sensitization: Chromium is classified into "Respiratory Sensitizing Substance" by the ad hoc committee of the Japanese Society of Occupational Allergy, and "Respiratory Sensitizing Substance: Group 2"* by the Japan Society for Occupational Health.
Skin sensitization: Chromium is classified into "Skin Sensitizing Substance" by the ad hoc committee of the Japanese Society of Occupational Allergy, and "Skin Sensitizing Substance: Group 1"* by the Japan Society for Occupational Health.

Tritolyl = phosphate
Acute toxicity (oral): Rat LD_{50}=5,190 mg/kg
Acute toxicity (dermal): Rabbit LD_{50}>7,900 mg/kg
Reproductive toxicity: There is s description as follows in the study where preparation with o- isomer content rate of less than 9% was orally administered to rats, "Dose independency was observed in the increase of sperm morphology abnormalities and the number of females giving birth to live pups markedly decreased.

Although the number of child animals per litter and their survival capability decreased, no effect on the generation was observed, and after thorough review of the primary literature, there is a description as follows, "Neither of female and male parent animals showed clinical symptoms and body weight decrease.

Specific target organ toxicity single exposure: As for the human case, there is a description that "the recovery takes time because it is easily changed from the muscle weakness of the leg to significant paralysis. Although axonal degeneration is seen histopathologically, the individual difference is large". In addition, there is no animal data for this article (isomer mixture). The single-dose oral administration test on o-isomer with the strongest toxicity which employed rats has a description that "the degeneration of the spinal cords was seen".
Specific target organ toxicity repeated exposure:
As an impact on human, there is a description of "The occurring case of the laborers who became permanent paralysis of the legs at the manufacturing plant of this substance (less than 1% of o-isomer) has been reported, and 6-10% of o-isomer had been exposed to him at the manufacturing process." For animals, although there is a description of "Authors concluded that hazard was low in the short term since the impact was not seen histopathologically" in the three months oral administration test employing rats by the pharmacy which hardly contains o-isomer, it has been described that, in the test where this substance containing 1% o-isomer was administered orally for 13 weeks forcibly or administered with feed to the rat, "the cytoplasmic vacuolization of the adkidney adrenal gland were seen dose-dependently" in both cases.

Ferric oxide (III)
Skin corrosion/irritation: The description of redness and moderate irritation on humans.
Serious eye damage/irritation: The description with corrosive in humans.
Specific target organ toxicity single exposure: The coughing was seen in human.
Specific target organ toxicity repeated exposure:
There is the statement that although abnormalities are found on a chest x-rays test in humans, it is clinically satisfactory, and there is also a statement if it accumulates in a lungs, it will become siderosis, but it is benign and does not progress to fibrosis.

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Section 11: Toxicological Information (Cont.)

Calcium dihydroxide
Acute toxicity (oral): Rats LD_{50} = 7,340 mg/kg
Skin corrosion/irritation: It has moderate stimulativeness on all body surface exposure including eyes and airways. It indicates moderate, severe, and a corrosive stimulation on human skin.
Serious eye damage/irritation: Moderate, severe, and corrosive irritations are indicated to the eyes in humans. Corrosive irritations are indicated to the rabbits.
Specific target organ toxicity single exposure: It stimulates human respiratory organ and respiratory tract to induce lung edema.
Specific target organ toxicity repeated exposure: Human lung may be risked by this substance.

Zinc stearate
Acute toxicity (oral): Rats LD50 > 5,000 mg/kg
Acute toxicity (inhalation: dust/mist): Rats LC50 > 50 mg/L
Skin corrosion/irritation: The possibility of the skin stimulus for humans is indicated.
Serious eye damage/irritation: The possibility of eye irritations in humans is indicated.
Specific target organ toxicity single exposure: The possibility of respiratory irritant in humans is indicated.

Silica
Carcinogenicity: IARC68 (1997) is classified into 1, NTP RoC (11th, 2005) is classified into K and industrial hygene academic recommendation (2005) is classified into 1.
Specific target organ toxicity single exposure: Its short-term exposure also affects the respiratory system in humans in case of high inhalation concentration although there is much little data compared with repeated exposure.
Specific target organ toxicity repeated exposure: There is description that the respiratory system and the kidney are affected in humans.

Titanium oxide
Acute toxicity (oral): Rat LD_{50} > 20,000 mg/kg
Acute toxicity (dermal): Rabbit approxLD_{50} >10,000 mg/kg
Acute toxicity (inhalation: dust/mist): Rat LC > 6.82 mg/L/4h
Serious eye damage/irritation: Report on a result of "mild irritation" in a rabbit test.
Carcinogenicity: Since IARC classified the substance into "Group 2B" based on the data for ultrafine grades of titanium dioxide (particle size of 10-50 nm). In 103-week feeding tests in rats and mice, it was concluded that the substance was not carcinogenic for both species. Chronic inhalation of ultrafine grades of titanium dioxide produced an increased incidence of lung tumors in rats but not in mice. In contrast, the available case reports and epidemiological tests do not show clear evidence for this relationship with the substance.

Carbon black
Acute toxicity (oral): Rat LD_0 > 8,000 mg/kg
Acute toxicity (dermal): Rabbit LD_{50} > 3 gm/kg
Carcinogenicity: The substance is classified as Group 2B for IARC (Vol. 65, 93; 2010).
Specific target organ toxicity repeated exposure: Numerous epidemiological tests for carbon black workers were conducted. In workers exposed for long term (10 years and more), the following symptoms characteristic of the lung occurred; cough, sputum, chronic bronchitis, lung function disturbances, pneumoconiosis, emphysema, disturbance of lung perfusion, obstructive disturbance of ventilation, bronchial hyper-reactivity and decrease in airway resistance and expiratory flow.

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 damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
May cause cancer
May damage fertility or the unborn child
Causes damage to respiratory system, kidney, nervous system
May causes damage to lung
Causes damage to lung, respiratory system, nervous system, kidney through prolonged or repeated exposure
May causes damage to adrenal gland 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: Nickel, metallic and alloys, Titanium dioxide, Carbon black,
Group 1: Silica dust, crystalline, in the form of quartz or cristobalite)
NTP Report: Listed (Group R: Nickel (Metallic))
OSHA: Listed (Group K: Silica, crystalline (respirable size))

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Section 12: Ecological information

Ecotoxicity:
Information on product: No information

Information on ingredients:

Trisodium hexafluoroaluminat
Aquatic acute toxicity: Crustaceans (Daphnia magna) 48h-EC_{50} = 5.0 mg/L
Aquatic chronic toxicity: Algae 96h-EC_0 = 5,000 mg/L

Nickel
Aquatic acute toxicity: Insufficient data available.
Aquatic chronic toxicity: Insufficient data available.

Chromium oxide (III)
Aquatic acute toxicity: Ccrustacea (Daphnia magna) 48h-LC50 = 0.162mg/L
Aquatic chronic toxicity: No information

Tritolyl = phosphate
Aquatic acute toxicity: Fish (Bluegill) 96h-LC_{50} = 0.15mg/L
Aquatic chronic toxicity: No information

Carbon black
Aquatic acute toxicity: Algae (Scenedesmus) 72h-ErC_{50} > 10,000 mg/L
Crustacea (Daphnia magna) 24h-LC_{50} > 5,600 mg/L
Fish (Tribolodon hakonensis) 96h-LC_{50} > 1,000 mg/L
Aquatic chronic toxicity: No information

Persistence and degradability:
Information on product: No information
Information on ingredients:
Tritolyl = phosphate
Rapid degradation
Bioaccumulative potential:
Information on product: No information
Information on ingredients:
Tritolyl = phosphate
BCF = 165
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): Aluminum oxide (fibrous forms), 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 (Nickel)

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Section 16: Other Information

Update history:

Date of issue: 31th May, 2021

SDS Creation Date: 05/31/2021

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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