Safety Data Sheet
Resin Bonded Abrasive Products

Issue Date: 03/01/2019

1. Product and Company Identification

GHS Product Identifier: POWER ABRASIVE, POWERPLUS, POWERXTREME, SUPERCHOP, SUPERCHOP XL, Cutting and Grinding Wheels

Manufacturer/Supplier

Supplier: JET EQUIPMENT & TOOLS
Address: 49 Schooner Street, Coquitlam, BC Canada
Telephone: 604-523-8665
Fax: 604-523-7691

2. Hazards identification

The hazard identification is based on a formalistic procedure as the hazard statements of the ingredients are summarized in Section 3. This does not correspond to the hazardousness of the product itself.
A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

Physical	Health	Environment
Not Hazardous	Carcinogen Category 2 Specific Target Organ Toxicity Single Exposure Category 3 Specific Target Organ Toxicity Repeat Exposure Category 1	Not Hazardous

Hazard statement(s)
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H372 Causes damage to respiratory tract through prolonged or repeated inhalation.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P281 Use personal protective equipment as required.
P314 Get medical attention if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice or attention.

3. Composition/Information on Ingredients

Mixtures: Chemical Name	CAS No.	Concentration
Aluminum Oxide	1344-28-1	≤ 95
Silicon Carbide	409-21-2	≤ 95
Zirconium Oxide	NA	≤ 50
Iron Pyrites	12068-85-8	≤ 33.2
Kyanite	1302-76-7	≤ 22.7
Phenol Formaldehyde Polymer	9003-35-4	≤ 20
Garnet	1302-62-1	≤ 20
Graphite	7782-42-5	<20
Fibrous Glass	NA	≤ 16
Black Beauty	68476-96-0	≤ 9.1
Cryolite	15096-52-3	≤ 7.9
Potassium Sulfate	7778-80-5	≤ 7.2
Calcium Carbonate	471-34-1	≤ 5.6
Barium Sulfate	7727-43-7	≤ 5.1
Calcium Oxide	1305-78-8	≤ 2.8
Cured rubber	NA	> 2.6
Potassium Fluoroborate	14075-53-7	≤ 2.5
Fluorspar	7789-75-5	≤ 2.5
Wollastonite	13983-17-0	≤ 1.5
Sulfur	7704-34-9	>1.3
Feldspar	68476-25-5	≤ 1.1
Pyrophyllite	12269-78-2	≤ 1.1
Titanium Dioxide	13463-67-7	≤1%
The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret and to cover products of variable composition. For more information about the composition for sampling purposes, contact Tyrolit Industrial Abrasives.		

4. First Aid Measures

Inhalation: If exposed to dust from grinding: Remove victim to fresh air. Give artificial respiration if needed. If breathing is difficult, oxygen should be administered by qualified personnel. Get medical attention if breathing is difficult or irritation persists.

Skin contact: Wash dust from skin with soap and water. Launder contaminated clothing before reuse.

Eye contact: Do not rub. Flush eyes thoroughly with plenty of water, holding open eyelids. Get medical attention if irritation persists. Obtain immediate medical attention for foreign body in the eye.

Ingestion: If grinding dust is swallowed, seek medical attention.
Most important symptoms/effects, acute and delayed: Eye and skin contact with grinding dust may cause mechanical irritation. Inhalation of dust may cause dizziness, headache, and other central nervous system effects. Prolonged inhalation of dust or fumes from this product may cause perforation of the nasal septum and lung damage. Exposure to dust generated from processing the base material or coatings may present additional health hazards. This product contains titanium dioxide, which are suspected of causing cancer based on animal studies. Risk of cancer depends on duration and level of exposure.
Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is generally not required.

5. Fire Fighting Measures

Suitable (and unsuitable) extinguishing media: Use any media that is appropriate for the surrounding materials.
Specific hazards arising from the chemical: This product is not combustible; however, consideration must be given to the potential fire or explosion hazards from the base material being processed. Many materials create flammable or explosive dusts or turnings when machined or ground.
Special protective equipment and precautions for firefighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.
Environmental precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.
Methods and materials for containment and cleaning up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

7. Handling and Storage

Precautions for safe handling: Do not breathe dust. Use with adequate ventilation. Avoid eye and skin contact with grinding dust. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the base materials or coatings being ground. Refer to OSHA’s substance specific standards for additional work practice requirements where applicable.

Conditions for safe storage, including any incompatibilities: Store in accordance with ANSI B7.1. Protect abrasive wheels from damage.

Exposure Controls/Personal Protection

Exposure guidelines: Aluminum Oxide	15 mg/m3 TWA OSHA PEL (total dust) 5 mg/m3 TWA OSHA PEL (respirable fraction)
Silicon Carbide	0.1 mg/m3 f/cc(F) TWA ACGIH TLV (including whiskers)
15 mg/m3 TWA OSHA PEL (total dust) 5 mg/m3 TWA OSHA PEL (respirable fraction)	
Zirconium Oxide	None Established
Iron Pyrites	None Established
Kyanite	None Established
Phenol Formaldehyde Polymer	None Established
Garnet	None Established
Graphite	2 mg/m3 TWA ACGIH TLV (respirable) 15 mppcf mg/m3 TWA OSHA PEL (based on impinger samples counted by light field technologies)
Fibrous Glass	None Established
Black Beauty	None Established
Cryolite	None Established
Potassium Sulfate	None Established
Calcium Carbonate	15 mg/m3 TWA OSHA PEL (total dust) 5 mg/m3 TWA OSHA PEL (respirable fraction)
Barium Sulfate	5 mg/m3 TWA ACGIH TLC (inhalable) 15 mg/m3 TWA OSHA PEL (total dust) 5 mg/m3 TWA OSHA PEL (respirable fraction)
Calcium Oxide	2 mg/m3 TWA ACGIH TLV 5 mg/m3 TWA OSHA PEL
Cured rubber	None Established
Potassium Fluoroborate	None Established
Fluorspar	None Established
Wollastonite	None Established
Sulfur	None Established
Feldspar	None Established
Pyrophyllite	None Established
Titanium Dioxide	10 mg/m3 TWA ACGIH TLV 15 mg/m3 TWA OSHA PEL (total dust)

*Product may release formaldehyde during use.

Appropriate engineering controls: Use local exhaust or general ventilation as required to minimize exposure to dust and maintain the concentration of contaminants below the TLVs.
Individual protection measures, such as personal protective equipment:
Respiratory protection: Use NIOSH approved respirator if exposure limits are exceeded or where dust exposures are excessive. Consider the potential for exposure to components of the coatings or base material being ground in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use respirators in accordance with OSHA 1910.134 and good industrial hygiene practice.
Skin protection: Cloth or leather gloves recommended.
Eye protection: Safety goggles or safety glasses with side shields are recommended where splashing is possible.
Other: Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

8. Physical and Chemical Properties

Appearance (physical state, color, etc.): Solid wheel or stone of various colors.
Odor: No odor

Odor Threshold: Not applicable	**pH:** Not applicable
Melting point/freezing point: Not applicable	**Initial boiling point and boiling range:** Not applicable
Flash point: Non-combustible	**Evaporation rate:** Not applicable
Flammability (solid, gas): Not applicable	**UEL:** Not applicable
Flammable limits: LEL: Not applicable	**Vapor density:**
Vapor pressure: Not applicable	**Solubility(ies):** Very slightly
Relative density: Varies	**Auto-ignition temperature:** Not applicable
Partition coefficient: n-ctanol/water: Not applicable	**Viscosity:** Not applicable
Decomposition temperature: Not applicable	

9. Chemical Stability and Reactivity Information

Reactivity: Not reactive.
Chemical stability: Stable
Possibility of hazardous reactions: Will not occur.
Conditions to avoid: None known.
Incompatible materials: Strong acids and bases.
Hazardous decomposition products: Dust from grinding could contain ingredients listed in Section 3 and other, potentially more hazardous components of the base material being ground or coatings applied to the base material.

10. Toxicological Information

Likely routes of exposure:

Inhalation: May cause respiratory tract irritation with coughing, mucous production and shortness of breath. High concentration is irritating to the respiratory tract and may cause dizziness, headache and anesthetic effects.

Ingestion: None expected under normal use conditions. Swallowing large pieces may cause obstruction of the gastrointestinal tract.

Skin contact: None expected under normal use conditions. Rubbing product across the skin may cause mechanical irritation or abrasions.

Eye contact: Dust particles may cause abrasive injury to the eyes.

Chronic effects from short- and long-term exposure: Long-term overexposure to respirable dust may cause lung damage (fibrosis) with symptoms of coughing, shortness of breath and diminished breathing capacity. Risk of cancer depends on the level and duration of exposure. Chronic effects may be aggravated by smoking. Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated.

Numerical measures of toxicity:

Potassium Sulfate: Oral rat LD50 > 2000 mg/kg, dermal rat LD50 > 2000 mg/kg

Barium Sulfate: Oral rat LD50: 307000 mg/kg

Fluorspar: Inhalation rat LC50 > 5.07 mg/L

Sulfur: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 5.43 mg/L,
dermal rat LD50 > 2000 mg/kg

Graphite: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 2 mg/L

Carcinogenicity: Titanium dioxide is listed by IARC as a group 2B carcinogen (possible human carcinogen). None of the other components are listed as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

12. Ecological information

Ecotoxicity:

Potassium Sulfate: Pimephales promelas LC50: 680 mg/L/96 hr

Barium Sulfate: Danio rerio LC50 > 3.5-174 mg/L/96hr

Sulfur: Oncorhynchus mykiss NOEC > 5ug/L/96hr

Graphite: Danio rerio LC50 > 100 mg/L/96hr

Persistence and degradability: Biodegredation is not applicable to inorganic compounds.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

11. Disposal Considerations

Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

14. Transport Information

	UN NUMBER	PROPER SHIPPING NAME	HAZARD CLASS	PACKING GROUP	ENVIRONMENTAL HAZARD
DOT	None	Not regulated	None	None	None
TDG	None	Not regulated	None	None	None

15. Regulatory Information

SARA Section 311/312 Hazard Categories: Not Applicable (manufactured articles)

SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 (Toxic Chemical Release Reporting): **Components**

C.A.S. #

WT %

None

16. Other Information

NFPA Rating: Health = 0 Flammability = 0 Instability = 0

HMIS Rating: Health = 1* Flammability = 0 Physical Hazard =0

*Chronic health hazard