

1. IDENTIFICATION

Product identifier: Resin, Rubber Resin and Rubber products

Trade Name: Cutting-Off Wheels, Regulating Wheels, Cylinders, Sticks, Slabs, Polishing & Grinding Wheels Including Reinforced Wheels

Responsible Party Radiac Abrasives, Inc.
 A Tyrolit Company
 1015 S. College Avenue
 P.O. Box 1410
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Phone Number: (800) 851-1095

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2. HAZARD(S) IDENTIFICATION

As sold, this product is a manufactured article. During processing, dust generated has the following hazards:

Classification:

Physical	Health	Environment
Not Hazardous	Specific Target Organ Toxicity – Repeated Exposure Category 1	Aquatic Acute Toxicity Category 3 Aquatic Chronic Toxicity Category 2

Hazards not otherwise classified: None

Symbol(s)



Signal word

Danger!

Hazard statement(s)

H372 Causes damage to organs through prolonged or repeated exposure.

H402 Harmful to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260 Do not breathe dust.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release into the environment.

P280 Wear eye protection

P314 Get medical attention if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents in accordance with local, regional and national regulations.

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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	≤35
Cryolite	15096-52-3	≤25
Cured Rubber	NA	≤25
Kyanite	1302-76-7	≤25
Phenol Formaldehyde Polymer	9003-35-4	≤25
Garnet	1302-62-1	≤20
Fibrous Glass	NA	≤20
Acrylic Latex (Synthetic Rubber Latex)	NA	≤15
Calcium Carbonate	471-34-1	≤15
Kaolin (China Clay)	1332-58-7	≤15
Black Beauty	68476-96-0	≤10
Potassium Sulfate	7778-80-5	≤10
Sulfur	7704-34-9	≤10
Barium Sulfate	7727-43-7	≤6
Calcium Oxide	1305-78-8	≤3
Fluorspar	7789-75-5	≤3
Potassium Fluoroborate	14075-53-7	≤3
Aluminum Hydroxide	21645-51-2	≤2
Magnesium Oxide	1309-48-4	≤2
Zinc Oxide	1314-13-2	≤2
Wollastonite	13983-17-0	≤2
Graphite	7782-42-5	≤2
Feldspar	68476-25-5	≤2
Pyrophyllite	12269-78-2	≤2
Carbon Black*	1333-86-4	≤2

* The carbon black in this product is inextricably bound in the polymer matrix.

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: If exposed to dust from grinding: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical attention if breathing is difficult.

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 develops or persists.

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. Prolonged exposure to grinding dust may cause fluorosis, respiratory problems or aggravate existing conditions. Inhalation during grinding can cause coughing and shortness of breath. Consideration should also be given to the airborne concentration of the material being ground.

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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 fire.

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 fire-fighters: 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: Avoid breathing 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Aluminum Oxide	15 mg/m ³ TWA OSHA PEL (total dust) 5 mg/m ³ TWA OSHA PEL (respirable fraction)
Silicon Carbide	0.1 mg/m ³ f/cc(F) TWA ACGIH TLV (including whiskers) 15 mg/m ³ TWA OSHA PEL (total dust) 5 mg/m ³ TWA OSHA PEL (respirable fraction)
Zirconium Oxide	None Established
Iron Pyrites	None Established
Cryolite	2.5 mg/m ³ TWA OSHA PEL (as F)

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Cured Rubber	None Established
Kyanite	None Established
Phenol Formaldehyde Polymer	None Established
Garnet	None Established
Fibrous Glass	None Established
Acrylic Latex (Synthetic Rubber Latex)	None Established
Calcium Carbonate	15 mg/m ³ TWA OSHA PEL (total dust), 5 mg/m ³ TWA (respirable fraction)
Kaolin (China Clay)	2 mg/m ³ TWA ACGIH TLV (respirable) 15 mg/m ³ TWA OSHA PEL (total dust), 5 mg/m ³ TWA (respirable fraction)
Black Beauty	None Established
Potassium Sulfate	None Established
Sulfur	None Established
Barium Sulfate	5 mg/m ³ TWA ACGIH TLC (inhalable) 15 mg/m ³ TWA OSHA PEL (total dust) 5 mg/m ³ TWA OSHA PEL (respirable fraction)
Calcium Oxide	2 mg/m ³ TWA ACGIH TLV 5 mg/m ³ TWA OSHA PEL
Fluorspar	None Established
Potassium Fluoroborate	None Established
Aluminum Hydroxide	None Established
Magnesium Oxide	10 mg/m ³ TWA ACGIH TLV (inhalable) 15 mg/m ³ TWA OSHA PEL (total particulate)
Zinc Oxide	5 mg/m ³ TWA OSHA PEL
Wollastonite	None Established
Graphite	2 mg/m ³ TWA ACGIH TLV (respirable) 15 mppcf mg/m ³ TWA OSHA PEL (based on impinger samples counted by light field technologies)
Feldspar	None Established
Pyrophyllite	None Established
Carbon Black	3 mg/m ³ TWA ACGIH TLV (inhalable) 3.5 mg/m ³ TWA OSHA PEL

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 face shield over safety glasses with side shields.

Other: Protective clothing as needed to prevent contamination of personal clothing. Hearing protection may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Solid.

Odor: Heat from use may give off typical rubber odor.

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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: Not applicable	Auto-ignition temperature: Not applicable
Partition coefficient: n-octanol/water: Not applicable	Viscosity: Not applicable
Decomposition temperature: Not applicable	

10. STABILITY AND REACTIVITY

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.

11. TOXICOLOGICAL INFORMATION

Likely routes of exposure:

Inhalation: Dust may cause respiratory irritation.

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: Contact with 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, fluorosis, shortness of breath and diminished breathing capacity. 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:

Aluminum Oxide: Oral rat LD50 > 10,000 mg/kg, inhalation rat LC50 > 2.3 mg/L/4 hr

Silicon Carbide: Not acutely toxic.

Zirconium Oxide: Not acutely toxic.

Iron Pyrites: Not acutely toxic.

Cryolite: Not acutely toxic.

Cured Rubber: Not acutely toxic.

Kyanite: Not acutely toxic.

Phenol Formaldehyde Polymer: Not acutely toxic.

Garnet: Not acutely toxic.

Fibrous Glass: Not acutely toxic.

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Acrylic Latex (Synthetic Rubber Latex): Not acutely toxic.

Calcium Carbonate: Oral rat LD50 > 2,000 mg/kg, inhalation rat LC50 > 3 mg/L/4 hr, dermal rat LD50 > 2,000 mg/kg

Kaolin (China Clay): Not acutely toxic.

Black Beauty: Not acutely toxic.

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

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

Barium Sulfate: Oral rat LD50: 307000 mg/kg

Calcium Oxide: Oral rat LD50 > 2000 mg/kg, dermal rabbit LD50 > 2500 mg/kg

Fluorspar: Inhalation rat LC50 > 5.07 mg/L

Potassium Fluoroborate: Oral rat LD50 > 2,000 mg/kg, inhalation rat LC50 > 5.3 mg/L/4 hr

Aluminum Hydroxide: Oral rat LD50 > 2000 mg/kg, inhalation rat LC50 > 2.3 mg/L

Magnesium Oxide: Not acutely toxic.

Zinc Oxide: Oral rat LD50 > 5000 mg/kg, inhalation rat LC50 > 5.7 mg/L, dermal rat LD50 > 2000 mg/kg

Wollastonite: Not acutely toxic.

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

Feldspar: Not acutely toxic.

Pyrophyllite: Not acutely toxic.

Carbon Black: Not acutely toxic.

Carcinogenicity: This product carbon black which is listed by IARC as a suspected carcinogen (Group 2B). Carbon black only presents a risk of cancer by inhalation of very fine dust. In this product, the carbon black is bound in a polymer matrix and is not present as a respirable dust. None of the components of this product is listed as a carcinogen by IARC, NTP, US OSHA or the European CLP.

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

Potassium Fluoroborate: Leuciscus idus LC50: 760 mg/L/96 hr

Aluminum Hydroxide: Lepomis cyanellus NOEC > 50 mg/L/96hr

Zinc Oxide: Pimephales promelas LC50: 0.33 mg/L/96hr

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

Calcium Oxide: Oncorhynchus mykiss LC50: 5.6 mg/L/96hr

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

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

Bioaccumulative potential: No data available

Mobility in soil: No data available.

Other adverse effects: No data available.

13. 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.

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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

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None identified.

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		

California Proposition 65: WARNING You create dust when you cut, sand, drill or grind materials such as wood, paint, cement, masonry or metal. This dust often contains chemicals known to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 0 Instability = 0
HMIS Rating: Health = 1* Flammability = 0 Physical Hazard = 0
 *Chronic Health Hazard

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The information and recommendations set forth are taken from sources believed to be accurate. Radiac Abrasives, Inc., a Tyrolit Company, makes no warranty with respect to the accuracy of this information or the suitability of these recommendations, assumes no liability to any user thereof. It is the responsibility of the user to investigate and understand pertinent sources of information to comply with all laws and procedures applicable to the safe use and handling of the product and to determine the suitability of the product for its intended use.

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DANGER



Hazard statement(s)

H372 Causes damage to organs through prolonged or repeated exposure.

H402 Harmful to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

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