

WESTFIELD

GRINDING WHEEL COMPANY

135 APREMONT WAY — P.O. BOX 798 — WESTFIELD, MASSACHUSETTS 01086 USA • (413)568-8634 • INFO@WESTFIELDGRINDING.COM • FAX (413) 568-7917

Organic Bonded Grinding & Cutoff Wheels

Material Safety Data Sheet

EMERGENCY TELEPHONE NUMBER: 1 (413) 568-8634

HMIS RATING: 1-0-0-E

Composition as per 29 CFR 1910.1200(g)(4)

Chemical Name	Percentage	Common Name	CAS Number	OSHA PEL Permissible Exposure Limit	ACGIH TLV Threshold Limit Value	NTP/IARC/OSHA Carcinogen Status
Aluminum Oxide ~	60.0-95.0	Aluminum Oxide	1344-28-1	15 mg/M ³ ¹	1 mg/M ³	Not Listed
Silicon Carbide	55.0-95.0	Silicon Carbide	409-21-2	15 mg/M ³ ¹	10 mg/M ³	Not Listed
Zirconium Oxide	0.0-9.0	Zirconium Oxide	1314-23-4	5 mg/M ³ (as Zr)	5 mg/M ³ (as Zr)	Not Listed
Phenol/Formaldehyde binder*	5.0-20.0	Cured Phenolic Resin	None Found	None Found	None Found	Not Listed
Fiberglass [†]	0.0-7.0	Reinforcing Fiber	65997-17-3	15 mg/M ³	10 mg/M ³	Not listed
Graphite	0.0-2.0	Graphite	7782-42-5	15 mppcf	2 mg/M ³ (Dust)	Not Listed
Calcium Oxide	0.0-3.0	Lime	1305-78-8	5 mg/M ³	2 mg/M ³	Not Listed
Fluorides ^{†**}	1.0-15.0	Fluoride Cmpds.	Various	2.5 mg/M ³ (as F)	2.5 mg/M ³ (as F)	Not Listed
Calcium Compounds**	1.0-12.0	Calcium Compounds	Various	15 Mg/M ³ ¹	10 mg/M ³ (Dust)	Not Listed
Sulfates & Sulfides**	0.0-15.0	Sulfur Compounds	Various	15 mg/M ³ ¹	10 mg/M ³ (Dust)	Not Listed
Rubber	0.0-2.0	Liquid Rubber	78-79-5	None Found	None Found	Not Listed

~ Aluminum Oxide is at least 96% pure, usually containing other metallic oxides as impurities.

* Free Phenol [108-95-2] (PEL & TLV: 5ppm) and free Formaldehyde [50-00-0] (PEL: 0.75 ppm, TLV: 1ppm) may be present in trace amounts.

** Substance is a compound and/or mixture.

† Maximum Fluoride Content, as F is 9.05%. Fluoride may be released in trace amounts under normal use.

‡ Present only in fiberglass reinforced wheels.

¹ As Total Dust, 5 mg/M³ respirable fraction.

Physical and Chemical Characteristics

Specific Gravity:	2.0 to 4.0
Odor:	No Detectible Odor
Appearance:	Light or Medium Grey, Brown, Black, or Maroon Colored, Porous Solid
Solubility in Water:	Insoluble to Slight

Health Hazard Data

Primary Routes of Entry: Eyes and Inhalation.

Signs and Symptoms of Overexposure During Grinding:

Route of Entry	Acute Effect	Chronic Effect
Eyes	Dusts may irritate eyes	None Expected
Inhalation	Dusts may cause irritation to nose, throat or lungs resulting in coughing or shortness of breath	Continued excessive exposure to abrasive grains may affect breathing capacity. Signs of excessive exposure might include deposits of material in the eyes, ears, nasal passages and irritation of the mucous membranes.
Ingestion	Non-toxic, but ingestion should be avoided	None Expected
Skin	Dust may irritate some individuals	None Expected

Health Hazard Data (continued)

Medical Conditions Generally Recognized as Being Aggravated by Exposure: May aggravate existing respiratory problems.

Dust generated from the intended use of this product may contain trace amounts of inorganic fluorides. Excessive exposure to fluorides has been shown in NIOSH studies to increase bone density. Dust generated from the intended use of this product may contain trace levels of phenolic resins which may under excessive exposure cause skin sensitization and airway obstruction.

Emergency First Aid Procedures

Route of Entry	First Aid Procedure
Eyes	Irritant. Treat as a foreign body in the eye. Flush eyes with large amounts of clean water for at least 15 minutes. If irritation persists, obtain medical assistance.
Inhalation	Classified as a nuisance dust. Remove to fresh air. Provide artificial respiration as needed and obtain medical assistance.
Ingestion	Obtain medical assistance. Contact poison control center.
Skin	Wash effected areas with soap and water. Obtain medical assistance if aggravated skin conditions persist.

Fire and Explosion Hazard Data

Flash Point: Not Applicable.
 Flammable Limits: LEL: Not Applicable UEL: Not Applicable.
 Extinguishing Media: Water, foam or CO₂.
 Special Fire Fighting Procedures: Toxic fumes are evolved on burning.
 Unusual Fire & Explosion Hazards: Fumes from burning cured Phenol/formaldehyde resin contain trace formaldehyde which can cause eye, nose and throat irritation. The short term exposure limit for formaldehyde is 2 ppm. Breathing apparatus should be worn to fight serious fires in confined spaces.

Reactivity Data

Stability: Stable.
 Hazardous Polymerization: Will not occur.
 Decomposition Products: During use, dust and decomposing organic fumes are generated which may contain trace amounts of phenol, formaldehyde and fluorides. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants or other surface residues may produce other decomposition products.
 Conditions to be Avoided: No applicable information found.

Control Measures

Ventilation: Good local exhaust ventilation is essential for dry grinding operations as per ANSI Z88.2, OSHA 29 CFR 1910.94 (Ventilation).
 Respiratory Protection: Use an approved respirator when airborne contaminant levels exceed TLVs and PELs as per OSHA 29 CFR 1910.134 or 139 (Respirators), and OSHA 29 CFR 1910.1000 (Air Contaminants).
 Eye Protection: Wear eye protection as per ANSI Z87.1 and OSHA 29 CFR 1910.133.
 Hand Protection: Use Gloves as required. (arm sleeves or barrier creams may be useful in the prevention of dermatitis).
 Other Protection: Exercise good personal hygiene. Hearing protection may be required as per OSHA 29 CFR 1910.95 (Hearing Protection) during normal use.

Precautions for Safe Handling and Use

Spills or leaks: Collect and pick up materials following normal precautions for inert nuisance dusts.
 Disposal: Standard Landfill methods consistent with applicable federal, state and local laws.
 Storage: Store in a cool, dry place and as per ANSI B7.1.
 Normal Usage: Observe recommended running speeds. Provide adequate ventilation for nuisance dusts. Also see ANSI B7.1.

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