



Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard 29 CFR 1910.1200.
 This standard must be consulted for specific requirements

IDENTITY (As used on label and list)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Grinding Wheels

**49-94-1220, 49-94-1405, 49-94-1410, 49-94-1415, 49-94-4500,
 49-94-4505, 49-94-5000, 49-94-5005, 49-94-6300, 49-94-6305**

Section I

Manufacturer's Name Milwaukee Electric Tool Corporation	Emergency Telephone Number 1-800-424-9300
Address (Number, Street) 13135 West Lisbon Road	Contact Telephone Number for Technical Information 262-781-3600 or 1-800-729-3878 (1-800-SAWDUST)
(City, State, and Zip Code) Brookfield, Wisconsin 53005	Date Prepared September 2004

Section II - Hazardous Ingredients/Identity Information

Hazardous Components [Specific Chemical Identity, Common name (s)]

Ingredient	% by Weight	OSHA Reg. Y/N	CAS #	OSHA PEL	ACGIH TLV	California Prop 65 Reg. Y/N	IARC/NTP Y/N
Aluminum Oxide, Non-Fibrous	40-90%	N	1344-28-1	15mg/m3	10mg/m3	N	N
Calcium Oxide	1-5%	N	1305-78-8	5mg/m3	2mg/m3	N	N
Carbon Black	0.1-1%	N	1333-86-4	3.5mg/m3	3.5mg/m3	N	N
Cured Phenol Formaldehyde Resin	3-12%	N	9003-35-4	0ppm	0ppm	N	N
Fiberglass	0.003-10%	N	65997-17-3	1fbr/cc	0fbr/cc	N	N
Inorganic Fluorides **	2-10%	N	NA	2.5mg/m3	2.5mg/m3	N	N
Manganese Compounds (*) **	1-5%	N	NA	NA	NA	N	N
@Crystalline Silica, Quartz	0.001-1%	N	14808-60-7	.1mg/m3	.1mg/m3	Y	N
Silicon Carbide	80-90%	N	409-21-2	10mg/m3	10mg/m3	N	N
Sodium Silicate	5-15%	N	1344-09-8	15mg/m3	0mg/m3	N	N
Sulfates & Sulfides **	1-10%	N	NA	0mg/m3	0mg/m3	N	N
Zinc Compound (*) **	1-5%	N	NA	NA	NA	N	N
Zirconium Oxide	30-50%	N	1314-23-4	5mg/m3	5mg/m3	N	N

(*) This substance is regulated under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and the Canadian National Pollution Reduction Initiative (NPRI). The OSHA exposure limit represented above is for respirable dust and assumed to be worst case exposure to 100% crystalline silica; 10mg/m3/(%silica+2).

** Substance is a compound and/or mixture.

@ Actual grinding tests with wheels known to contain Crystalline Silica did not produce any detectable amount of respirable free Crystalline silica. The grinding wheel may be comprised of only some of the above.

DOT Hazard Classification: Non-hazardous

SARA Title III Section 313: This product does not contain regulated levels of any toxic chemical subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372.

HMIS® Rating Numbers	Health	Flammability	Reactivity	Personal Protection
	1	0	0	A
Hazard Ratings:	0 = Minimum hazard	1 = Slight hazard	2 = Moderate hazard	3 = Serious hazard
	A = Goggles	B = Goggles + Gloves	C = Face Shield, Gloves + Apron	4 = Severe hazard
			X = Special, See sections VII & VIII of this sheet	

Section III - Physical/Chemical Characteristics

Boiling Point N/A	Specific Gravity (H ₂ O=1) N/A
Vapor Pressure (mm/Hg.) N/A	Melting Point N/A
Vapor Density (Air=1) N/A	Evaporation Rate N/A
Solubility in Water Non-soluble	

Appearance and Odor
 Solid article. Odorless.

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A
Extinguishing Media N/A			
Special Fire Fighting Procedures N/A			
Unusual Fire and Explosion Hazards None			

Section V - Reactivity Data

Stability	Unstable		Conditions to avoid:
	Stable	X	N/A

Incompatibility (Material to avoid):

Avoid acids of all types with a pH < 4.0

Hazardous Decomposition or Byproducts

In use, dust and decomposing odors may be generated. In most cases, the material removed from the workplace will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products. For products containing phenol and formaldehyde resin, thermal decomposition may produce trace amounts of phenol and formaldehyde. For products containing inorganic fluorides, thermal decomposition may produce trace amounts of fluorides.

Hazardous	May Occur		Conditions to avoid:
Polymerization	Stable	X	N/A

Section VI - Health Hazard Data

Route(s) of Entry: During normal use	Inhalation? Affects breathing, irritation	Skin? Irritation	Ingestion? None
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Health Hazards (Acute and Chronic)

ACUTE: Dust may be slightly irritating to eyes and respiratory tract at high concentrations. **CHRONIC:** May affect breathing capacity. For products containing phenol/formaldehyde resin dust generated from intended use may contain trace amounts of phenol and formaldehyde which may cause skin sensitization and airway obstruction. For products containing inorganic fluorides, excessive exposure to inorganic fluorides has been shown to increase bone density.

Signs and Symptoms of Exposure:

INHALATION: May cause airway obstruction, difficulty breathing. **EYES:** May irritate eyes. **SKIN:** May experience skin irritation from dust. **INGESTION:** No known adverse affects, but ingestion is not recommended.

Medical Conditions Generally Aggravated by Exposure:

N/A

Emergency and First Aid Procedures

INHALATION: Remove to fresh air. If breathing stops, get medical attention immediately and give artificial respiration. **EYES:** Wash with large amounts of water and obtain medical attention if needed. **SKIN:** Wash affected areas with soap and water and obtain medical attention if needed. **INGESTION:** Call poison control center, hospital emergency room, or physician immediately.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released if Spilled

Follow normal clean up procedures.

Waste Disposal Method

Use standard landfill methods consistent with applicable Federal, State, Provincial, and local laws. Products with listed fluorides may have slightly soluble fluoride swarf.

Precautions to Be Taken in Handling and Storing

Always handle and store wheels in a careful manner

Other Precautions

ALWAYS visually inspect wheels before mounting, check machine speed against the established maximum safe operating speed marked on the wheel, check mounting flanges for equal and correct diameter, use mounting blotters, be sure work rest is properly adjusted, use a safety guard covering at least one-half of the grinding wheel, allow newly mounted wheels to run at operating speed with guard in place for at least one minute before grinding, and turn off coolant before stopping wheel to avoid an out-of-balance wheel.

Legend:

Y - Yes

N - No

N/A - Not Applicable

Section VIII - Control Measures

Respiratory Protection (*Specify Type*)

Respirators required when airborne contaminant levels exceed the TLV's.

Ventilation	Local Exhaust Use adequate ventilation.	Special N/A
	Mechanical N/A	Other See OSHA 29 CFR 1910.94 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants)
Protective Gloves N/A	Eye Protection Always wear safety glasses or some type of eye protection.	

Other Protective Clothing or Equipment:

Use of this product may create elevated sound levels. Hearing protection should be worn where required (see OSHA 29 CFR 1910.134 and other applicable regulations).

Work/Hygienic Practices

N/A

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. MILWAUKEE ELECTRIC TOOL CORPORATION makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof.