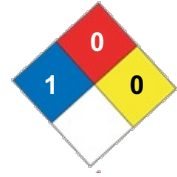


Organic Bonded Grinding Wheels



SECTION 1 : Chemical Product and Company Identification

MSDS Name: Organic Bonded Grinding Wheels

Manufacturer Name:Metabo Corporation

Address:

1231 Wilson Drive
West Chester, PA 19380

Emergency Telephone #: (800) 638-2264

Product Description:

TYPE: Any Grade

Manufacturer MSDS Revision Date:

11/11/03

Trade Names:

Organic Bonded Grinding Wheels

Chemical Family: Any Grade

NFPA

Health: 1

Flammability: 0

Reactivity: 0

Other:

Contact: Richard E. Lawson

Common Name or Specification: Organic Bonded Grinding Wheels

HAZARD RATING:

Please rate consistent with NFPA Code

Product Codes:



SECTION 2 : Hazardous Ingredients/Identity Information

Chemical Name	CAS#	Percent	
Alpha-Alumina	1344-28-1	MAX: 90%	

OSHA PEL TWA: 10 mg/m3 (Total Dust)

ACGIH TLV TWA: 10 mg/m3 (Total Dust)

Carcinogen: No

COMMON NAME: Aluminum Oxide

REG*: Yes

Chemical Name	CAS#	Percent	
Silicon Carbide	409-21-2	MAX: 90%	

OSHA PEL TWA: 10 mg/m3 (Total Dust)

ACGIH TLV TWA: 10 mg/m3 (Total Dust)

Carcinogen: No

COMMON NAME: Silicon Carbide

REG*: Yes

Chemical Name	CAS#	Percent	
Zirconia Alumina	70692-95-4	MAX: 90%	

OSHA PEL TWA: 5 mg/m3 (as Zirconium)

ACGIH TLV TWA: 5 mg/m3 (as Zirconium)

Carcinogen: No

COMMON NAME: Zirconia Alumina

REG*: Yes

Chemical Name	CAS#	Percent	
Fluorides (as F)	15096-52-3	MAX: 3%	

OSHA PEL TWA: 2.5 mg/m3

ACGIH TLV TWA: 2.5 mg/m3

Carcinogen: No

COMMON NAME: Cryolite

REG*: Yes

Chemical Name	CAS#	Percent	
Pyrite FeS2	1309-36-0	MAX: 2%	

OSHA PEL TWA: No Applicable Information Found

ACGIH TLV TWA: 2.0 mg/m3

Carcinogen: No

COMMON NAME: Pyrite

REG*: Yes

Chemical Name	CAS#	Percent	
Glass, Fibrous or Dust	65997-17-3	MAX: 10%	

OSHA PEL TWA: 15 mg/m3-Total Dust

ACGIH TLV TWA: 10 mg/m3-Total Dust

Carcinogen: No

COMMON NAME: Fiberglass

REG*: Yes

Comments:

COMPOSITION PER 29CFR 1910.1200 (G) (4).

The grinding wheel may be comprised of 1 or more of the following abrasives:

Chemical Name: Alpha-Alumina

Chemical Name: Silicon Carbide

Chemical Name: Zirconia Alumina

The chemicals listed below may be a part of the bond system:

Chemical Name: Fluorides (as F)

Chemical Name: Pyrite FeS2

Chemical Name: Glass, Fibrous or Dust



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SECTION 3 : Physical And Chemical Characteristics

Physical State/Appearance:

Solid Product

Odor:

May give off odor in use.

Vapor Pressure:

No Applicable Information Found

Vapor Density:

No Applicable Information Found

Boiling Point:

No Applicable Information Found

Melting Point:

No Applicable Information Found

Solubility:

IN WATER: Slight

IN ALCOHOL: No Applicable Information Found

IN OTHER SOLVENT: No Applicable Information Found

Specific Gravity:

2-4

Evaporation Point:

No Applicable Information Found

Percent Volatile:

BY VOL: No Applicable Information Found

FlashPoint:

No Applicable Information Found

Upper Flammable Explosive Limit:

Not Applicable

Lower Flammable Explosive Limit:

Not Applicable



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SECTION 4 : Fire And Explosion Hazards

Explosion:

EXPLOSION POTENTIAL: No Applicable Information Found

Flash Point:

No Applicable Information Found

Flash Point Method:

Not Applicable

Upper Flammable or Explosive Limit: Not Applicable

Lower Flammable or Explosive Limit: Not Applicable

Extinguishing Media:

Use Water

Fire Fighting Instructions:

None



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SECTION 5 : Health Hazards

Applies to All Ingredients:

Route of Exposure:

INHALATION (During Grinding)

INGESTION (During Grinding)

SKIN (During Grinding)

EYE (During Grinding)

Potential Health Effects:

Eye Contact:

(During Grinding): Acute: Dust may irritate eyes.

Skin Contact:

(During Grinding): Acute: Some may experience skin irritation from dust.

Inhalation:

(During Grinding): Acute: Possible cough

Ingestion:

(During Grinding): Acute: No known adverse effects, but ingestion not recommended.

Chronic Eye Contact:

(During Grinding): Dust may irritate eyes.

Chronic Skin Contact:

(During Grinding): Some may experience skin irritation from dust.

Chronic Inhalation:

(During Grinding): May affect breathing capacity.

Chronic Ingestion:

(During Grinding): No known adverse effects, but ingestion not recommended.

Other Potential Health Effects:

Risks (During Grinding): Grinding may create elevated sound levels which may affect hearing and dust which may aggravate preexisting respiratory conditions.



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SECTION 6 : Emergency And First Aid Procedures

Eye Contact:

(During Grinding): Wash with large amounts of water. Obtain first aid and medical assistance, if needed.

Skin Contact:

(During Grinding): Wash affected areas with soap and water. Obtain medical assistance, if needed.

Inhalation:

(During Grinding): Remove to fresh air. Artificial respiration as needed. Obtain medical assistance, if needed.

Ingestion:

(During Grinding): Obtain medical assistance, if needed.

Other First Aid:

(During Grinding): Obtain medical assistance, if needed. Remove to fresh air.



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SECTION 7 : Reactivity Data

Chemical Stability:

Stable

Conditions to Avoid:

No Applicable Information Found

Incompatibilities with Other Materials:

(Materials to Avoid): No Applicable Information Found

Hazardous Polymerization:

Will Not Occur

Hazardous Decomposition Products:

In use, dust and decomposing odors are generated. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants may produce other decomposition products.



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SECTION 8 : Precautions For Safe Handling

Spill Cleanup Measures:

Normal cleanup procedures. Evaluate all product in accordance with ANSI B7.1.

Other Precautions:

No Applicable Information Found

Handling:

None

Normal Use:

Handling with adequate ventilation. See OSHA 29 CFR 1910.94 (ventilation) and 29 CFR 1910.1000 (air contaminants)

Storage:

None

Normal Storage and Handling:

See ANSI Standard B7.1.

Waste Disposal:

Standard landfill methods consistent with applicable federal, state, and local laws. Products containing flourides may leach a very slight amount in landfills.



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SECTION 9 : Control Measures

Engineering Controls:

Measures to be taken during repair and maintenance of contaminated equipment that has been in contact with this material.

Ventilation System:

Mechanical (General): Recommended

Local Exhaust:

Recommended

Other Exhaust Information:

No Applicable Information Found

Hand Protection Description:

PROTECTIVE GLOVES: Recommended

Eye/Face Protection:

Recommended

Respiratory Protection:

(Specify Type): As needed. For approved dust respirators see OSHA 29CFR 1910.134

Other Protective:

As needed hearing protection see OSHA 29CFR 1910.95 (Hearing Protection)

Comments:

See Section 8 & 9



SECTION 10 : Other Information

Applies to all ingredients:

OSHA 29 CFR 1200:

* Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard

NFPA:

Fire Hazard: 0

Health: 1

Reactivity: 0

MSDS Revision Date:

11/11/03

MSDS Author:

Contact: Richard E. Lawson

Disclaimer:

FOR COMPANY USE:

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Metabo Corporation makes no warranty with respect to the information or the suitability of the recommendations, and assumes no liability to any user thereof.

HAZARD RATING:

Please rate consistent with NFPA Code

Abbreviations:

NAIF - No Applicable Information Found

N/A - Not Applicable