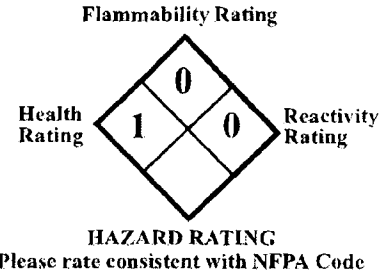


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Metabo

MATERIAL SAFETY DATA SHEET



SECTION I NAME AND PRODUCT

MANUFACTURER'S NAME: METABO CORPORATION	CONTACT: RICHARD E. LAWSON
ADDRESS (STREET, CITY, STATE AND ZIP CODE): 1231 WILSON DRIVE, WEST CHESTER, PA 19380	EMERGENCY TELEPHONE #: (800) 638-2264
TRADE NAME, COMMON NAME OR SPECIFICATION: ORGANIC BONDED GRINDING WHEELS	APPROVED BY:
CHEMICAL FAMILY OR PRODUCT TYPE: ANY GRADE	DATE: 11/17/98

SECTION II COMPOSITION PER 29CFR 1910.1200 (G) (4)

CHEMICAL NAME	MAX %	COMMON NAME	REG* (Y/N)	CAS #	OSHA PERMISSIVE EXPOSURE LIMIT	ACGIH TLV	CARCINOGEN (Y/N)
Alpha-Alumina	90	Aluminum Oxide	Y	1344-28-1	10mg/m ³ (Total Dust)	10mg/m ³ (Total Dust)	N
Silicon Carbide	90	Silicon Carbide	Y	409-21-2	10mg/m ³ (Total Dust)	10mg/m ³ (Total Dust)	N
Zirconia Alumina	90	Zirconia Alumina	Y	70692-95-4	5mg/m ³ (as Zirconium)	5mg/m ³ (as Zirconium)	N

The grinding wheel may be comprised of 1 or more of the above abrasives. The chemicals listed below may be a part of the bond system.

Fluorides (as F)	3	Cryolite	Y	15096-52-3	2.5mg/m ³	2.5mg/m ³	N
Pyrite FeS ₂	2	Pyrite	Y	1309-36-0	**NAIF	2.0mg/m ³	N
Glass, Fibrous or Dust	10	Fiberglass	Y	65997-17-3	15mg/m ³ -- Total Dust	10mg/m ³ -- Total Dust	N

SECTION III PHYSICAL AND CHEMICAL DATA

BOILING POINT **NAIF	MELTING POINT *NAIF	SPECIFIC GRAVITY 2-4
VAPOR PRESSURE **NAIF	PERCENT VOLATILE BY VOL **NAIF	VAPOR DENSITY **NAIF
EVAPORATION RATE **NAIF	SOLUBILITY IN WATER Slight	SOLUBILITY IN ALCOHOL **NAIF
SOLUBILITY IN OTHER SOLVENT **NAIF	APPEARANCE AND ODOR SOLID PRODUCT: MAY GIVE OFF ODOR IN USE.	

SECTION IV SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE - NONE
OTHER PRECAUTIONS: **NAIF

SECTION V CORROSIVITY AND REACTIVITY DATA

STABILITY: <input type="checkbox"/> UNSTABLE <input checked="" type="checkbox"/> STABLE	POLMERIZATION: <input type="checkbox"/> MAY OCCUR <input checked="" type="checkbox"/> WILL NOT OCCUR
INCOMPATABILITY (MATERIALS TO AVOID). **NAIF	
DECOMPOSITION 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.	
CONDITIONS TO BE AVOIDED. **NAIF	

* MATERIALS ARE REGULATED BY OSHA 29 CFR 1910.1200, HAZARD COMMUNICATION STANDARD
NAIF = NO APPLICABLE INFORMATION FOUND *N/A = NOT APPLICABLE

SECTION VI HEALTH, FIRST AID AND MEDICAL DATA

<i>PRIMARY ROUTE(S) OF ENTRY</i>	<i>ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE</i>	<i>FIRST AID AND MEDICAL INFORMATION</i>
INHALATION (During Grinding)	ACUTE: POSSIBLE COUGH CHRONIC: MAY AFFECT BREATHING CAPACITY.	REMOVE TO FRESH AIR. ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN MEDICAL ASSISTANCE, IF NEEDED.
INGESTION (During Grinding)	NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.	OBTAIN MEDICAL ASSISTANCE, IF NEEDED.
SKIN (During Grinding)	SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.	WASH AFFECTED AREAS WITH SOAP AND WATER. OBTAIN MEDICAL ASSISTANCE, IF NEEDED.
EYE (During Grinding)	DUST MAY IRRITATE EYES.	WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
OTHER POTENTIAL HEALTH RISKS (During Grinding)	GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING AND DUST WHICH MAY AGGRAVATE PREEXISTING RESPIRATORY CONDITIONS.	OBTAIN MEDICAL ASSISTANCE, IF NEEDED. REMOVE TO FRESH AIR.

SECTION VII STORAGE, HANDLING AND USE PROCEDURES

NORMAL STORAGE AND HANDLING SEE ANSI STANDARD B7.1.
NORMAL USE HANDLING WITH ADEQUATE VENTILATION. SEE OSHA 29CFR 1910.94 (VENTILATION) and 29CFR1910.1000 (AIR CONTAMINANTS)
STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS. NORMAL CLEANUP PROCEDURES. EVALUATE ALL PRODUCT IN ACCORDANCE WITH ANSI B7.1.
WASTE DISPOSAL METHOD STANDARD LANDFILL METHODS CONSISTENT WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS. PRODUCTS CONTAINING FLOURIDES MAY LEACH A VERY SLIGHT AMOUNT IN LANDFILLS.

SECTION VIII PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE) AS NEEDED. FOR APPROVED DUST RESPIRATORS SEE OSHA 29CFR 1910.134	
VENTILATION	LOCAL RECOMMENDED
	MECHANICAL (GENERAL) RECOMMENDED
	OTHER **NAIF
PROTECTIVE GLOVES	RECOMMENDED
EYE PROTECTION	RECOMMENDED
OTHER EQUIPMENT	AS NEEDED HEARING PROTECTION SEE OSHA 29CFR 1910.95 (HEARING PROTECTION)
MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CON- TACT WITH THIS MATERIAL.	
SEE SECTION VII & VIII	

SECTION IX FIRE AND EXPLOSION HAZARD DATA

FLASH POINT **NAIF	METHOD USED **N/A	FLAMMABLE LIMITS	LEL N/A	UEL ***N/A
EXTINGUISHING MEDIA	USE WATER			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
EXPLOSION POTENTIAL	**NAIF			

FOR COMPANY USE

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