

MATERIAL SAFETY DATA SHEET (MSDS)

Please retain for your records.

NOV 14 1994

5A921-5A929
5A863-5A879
6A076-6A081
6A095-6A088
6A074
5A930-5A941
HAZARD RATING
MATERIAL SAFETY DATA SHEET
NFPA Code

NORTON Health Rating 1 0
Flammability Rating 0
Reactivity Rating 0

Please rate consistent with

SECTION I NAME AND PRODUCT = 2SF16 =

MANUFACTURER'S NAME
NORTON COMPANY

ADDRESS STREET, CITY, STATE AND ZIP CODE
1 NEW BOND STREET, WORCESTER, MA 01615-0008
TRADE NAME, COMMON NAME OR SPECIFICATION
RESINOID BONDED GRINDING WHEELS
DATE 4/30/90
CHEMICAL FAMILY OR PRODUCT TYPE
ANY GRADE

CONTACT
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508-795-2690
APPROVED BY

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

OSHA CHEMICAL NAME %	CARCINI MAX (Y/N)	COMMON NAME	REG*
Alpha-Alumina	90	Alundum, Seeded Gel	Y
Silicon Carbide	90	Crystolon	Y
Zirconia Alumina	90	NZ, ZF, ZS	Y
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	***N/A	Y
Calcium Oxide	3	Lime	Y
Glass, Fibrous or Dust	10	Fiberglass	Y
Silicon Dioxide	1	Crystalline Silica	Y

*Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Know Regulations.

CAS #	PERMISSIVE EXPOSURE LIMIT	ACGIH TLV	OSHA (Y/N)
Alpha-Alumina (Total Dust)	1344-28-1 (Total Dust)	10mg/m3	10mg/m3 N
Silicon Carbide (Total Dust)	409-21-2 (Total Dust)	10mg/m3	10mg/m3 N
Zirconia Alumina (as Zirconium)	**NAIF (as Zirconium)	5mg/m3	5mg/m3 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)	***N/A	2.5mg/m3	2.5mg/m3 N
Calcium Oxide	1305-78-8	5mg/m3	2mg/m3 N
Glass, Fibrous or Dust	**NAIF	**NAIF	10mg/m3 N
Silicon Dioxide	148908-70-7	0.1mg/m3	0.1mg/m3 Y

*Materials are regulated by OSHA 29 CFR 1910.1200, Hazard Communication Standard, and/or the Massachusetts General Law Chapter 111F, Right To Know Regulations.

Actual grinding tests with wheels known to contain Crystalline Silica did not produce any detectable amount of respirable free Silica.

SECTION III PHYSICAL AND CHEMICAL DATA

BOILING POINT **NAIF MELTING POINT **NAIF
VAPOR PRESSURE **NAIF PERCENT VOLATILE BY VOL **NAIF
EVAPORATION RATE **NAIF SOLUBILITY IN WATER Slight
SOLUBILITY IN OTHER SOLVENT **NAIF
SPECIFIC GRAVITY 2.4
VAPOR DENSITY **NAIF
SOLUBILITY IN ALCOHOL **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 UNSTABLE X STABLE: POLYMERIZATION MAY OCCUR X
WILL NOT OCCUR

INCOMPATIBILITY (MATERIALS TO AVOID)
Avoid acids of all types with a Ph = 4.0

DECOMPOSITION PRODUCTS

In use, dust and decomposing odors are generated. In most cases, the airborne 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

**NAIF = NO APPLICABLE INFORMATION FOUND

***N/A = NOT APPLICABLE

SECTION VI HEALTH, FIRST AID AND MEDICAL DATA

PRIMARY ROUTE(S) OF ENTRY ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE
INHALATION (During Grinding) ACUTE: COUGHING, SHORTNESS OF BREATH. CHRONIC: MAY AFFECT BREATHING CAPACITY.
INGESTION (During Grinding) NO KNOWN ADVERSE EFFECTS, BUT INGESTION NOT RECOMMENDED.
SKIN (During Grinding) CONTACT & ABSORPTION SOME MAY EXPERIENCE SKIN IRRITATION FROM DUST.
EYE (During Grinding) DUSTS MAY IRRITATE EYES.
OTHER POTENTIAL HEALTH RISKS (During Grinding) GRINDING MAY CREATE ELEVATED SOUND LEVELS WHICH MAY AFFECT HEARING AND MAY AGGRAVATE PREEXISTING RESPIRATORY CONDITIONS.
PRIMARY ROUTE(S) OF ENTRY FIRST AID AND MEDICAL INFORMATION
INHALATION (During Grinding) REMOVE TO FRESH AIR. OBTAIN MEDICAL ASSISTANCE. ARTIFICIAL RESPIRATION AS NEEDED.
INGESTION (During Grinding) OBTAIN MEDICAL ASSISTANCE.
SKIN (During Grinding) CONTACT & ABSORPTION WASH AFFECTED AREAS WITH SOAP AND WATER, OBTAIN MEDICAL ASSISTANCE.
EYE (During Grinding) WASH WITH LARGE AMOUNTS OF WATER. OBTAIN FIRST AID AND MEDICAL ASSISTANCE, IF NEEDED.
OTHER POTENTIAL HEALTH RISKS (During Grinding) OBTAIN MEDICAL ASSISTANCE. THERE IS LIMITED INFORMATION THAT CRYSTALLINE SILICA IS A CARCINOGEN.

SECTION VII STORAGE, HANDLING AND USE PROCEDURES

NORMAL STORAGE AND HANDLING SEE ANSI STANDARD B7.1
NORMAL USE HANDLE WITH ADEQUATE VENTILATION. SEE OSHA 29CFR 1910.94 (VENTILATION) and 29 CFR 1910.1000 (AIR CONTAMINANTS)
STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS. NORMAL CLEANUP PROCEDURES.
WASTE DISPOSAL METHOD STANDARD LANDFILL METHODS CONSISTENT WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS. PRODUCTS WITH LISTED FLOURIDES MAY HAVE SLIGHTLY SOLUBLE FLOURIDE SMARF.

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 AS DESIRED BY USER
EYE PROTECTION RECOMMENDED SEE OSHA 29CFR 1910.133
OTHER EQUIPMENT 29CFR 1910.95 (HEARING PROTECTION) AS NEEDED HEARING PROTECTION SEE OSHA

MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL.

SEE SECTION VII & VIII

SECTION IX FIRE AND EXPLOSION HAZARD DATA

FLASH POINT **NAIF METHOD USED *** NAIF
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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