

MATERIAL SAFETY DATA SHEET

<input checked="" type="checkbox"/> for superior quality and service

PART#

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MSDS NO. RESIN000

OUTBOUND

Resin Bonded Abrasive Products

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME

Resin Bonded Abrasive Products

TRADE NAME

MANUFACTURER(4)

Norton Company, 1 New Bond St.

Worcester, MA, 01615

(508) 795-5000

REVISION DATE

2/08/2000

MSDS PRINT FORMAT

NUSA

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#
Aluminum Oxide, Non-fibrous	40.000- 90.000	1344-28-1
Calcium Oxide	1.000- 5.000	1305-78-8
Carbon Black	0.100- 1.000	1333-86-4
Cured PhenolFormaldehyde Resin	3.000- 12.000	9003-35-4
Fiberglass	0.003- 10.000	65997-17-3
Inorganic Fluorides **	2.000- 10.000	NA
Manganese Compounds(*) **	1.000- 5.000	NA
@Crystalline Silica, Quartz	0.001- 1.000	14808-60-7
Silicon Carbide	80.000- 90.000	409-21-2
Sodium Silicate	5.000- 15.000	1344-09-8
Sulfates & Sulfides **	1.000- 10.000	NA
Zinc Compound(*) **	1.000- 5.000	NA
Zirconium Oxide	30.000- 50.000	1314-23-4

** SUBSTANCE IS A COMPOUND AND/OR MIXTURE

OTHER

(@) 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. (*) 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 in section 15 is for respirable dust and assumed to be worst case exposure to 100% crystalline silica; 10 mg/m3/(%silica+2)

SECTION 3. HAZARDS IDENTIFICATION

INHALATION ACUTE EXPOSURE EFFECTS

Dust may be slightly irritating to eyes and respiratory tract at high concentrations.

INHALATION CHRONIC EXPOSURE EFFECTS

Chronic: May affect breathing capacity.
For products containing phneol/formaldehyde resin, dust generated from intended use may contain trace amounts of phenol and formaldehyde which under excessive exposure may cause skin sensitization and airway obstruction.
For products containing inorganic fluorides, excessive exposure to inorganic fluorides have been shown to increase bone density.

EYE CONTACT ACUTE EXPOSURE EFFECTS

Dust may irritate eyes.

SKIN CONTACT ACUTE EXPOSURE EFFECTS

Some may experience skin irritation from dust.

INGESTION ACUTE EXPOSURE EFFECTS

No known adverse effects, but ingestion not recommended.

SECTION 4. FIRST AID MEASURES

INHALATION

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.

SKIN CONTACT

Wash affected areas with soap and water. Obtain medical assistance.

EYE CONTACT

Wash with large amounts of water. Obtain first aid and medical assistance, if needed.

INGESTION

Call poison control center, hospital emergency room or physician immediately.

SECTION 5. FIRE FIGHTING MEASURES

FIRE FIGHTING PROCEDURES

Not Applicable

HAZARDOUS PRODUCTS/COMBUSTION

None.

HAZARD RATING SOURCE

NFPA

HEALTH

1

FLAMMABILITY

0

REACTIVITY

0

OTHER

SECTION 6. ACCIDENTAL RELEASE MEASURES

CLEAN-UP

Follow normal clean up procedures.

SECTION 7. HANDLING AND STORAGE

HANDLING

Always HANDLE AND STORE wheels in a CAREFUL manner.

Always VISUALLY INSPECT all wheels before mounting.

Always CHECK MACHINE SPEED against the established maximum safe operating speed MARKED ON THE WHEEL.

Always CHECK MOUNTING FLANGES for equal and correct diameter.

Always USE MOUNTING BLOTTERS.

Always be sure WORK REST is properly adjusted.

Always USE A SAFETY GUARD covering at least one-half of the grinding wheel.

Always allow NEWLY MOUNTED WHEELS to run at operating speed, with guard in place, for at least one minute before grinding.

Always TURN OFF COOLANT before stopping wheel to avoid creating an out-of-balance wheel.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION PROTECTION

Handle with adequate ventilation. See OSHA 29 CFR 1910.94 (ventilation) and 29 CFR 1910.1000 (Air contaminants).

RESPIRATORY PROTECTION

Respirators are required when airborne contaminant levels exceed the TLV(s).

EYE PROTECTION

Always WEAR SAFETY GLASSES or some type of eye protection when grinding.

OTHER PROTECTION

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).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE & ODOR

Solid article. Odorless.

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES

Avoid acids of all types with a pH < 4.0.

DECOMPOSITION

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.

SECTION 11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY

Fiberglass contained in wheels have fiber diameters greater than 10 um, therefore considered non-respirable.

Crystalline Silica, Quartz - IARC-1, NIOSH-X, NTP-R.

LD50/LC50

Values are not appropriate or available.

SECTION 12. ECOLOGICAL INFORMATION

CHEMICAL FATE

Resin bonded materials demonstrate similar degradation rates as Phenolic plastics.

Vitrified products do not appreciably decay.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Use standard landfill methods consistent with applicable Federal,

State, Provincial and local laws.
 Products with listed flourides may have slightly soluble flouride swarf.

RECYCLING PROGRAM - the Company has developed a grinding wheel recycling program. If you are interested in returning your stubs, information can be obtained by dialing Customer Service.

SECTION 14. TRANSPORT INFORMATION

HAZARD CLASS

This product is not hazardous as defined by the Department of Transportation.(USA)
 This product is "Not Regulated" under the Transportation of Dangerous Goods Act. (CAN)

SECTION 15. REGULATORY INFORMATION

SUBSTANCE DESCRIPTION	EXPOSURE LIMITS/REGULATORY INFORMATION			
	UNITS	OSHA	ACGIH	MOL
Aluminum Oxide, Non-fibrous	MG/M3	15.0000	10.0000	10.0000
Calcium Oxide	MG/M3	5.0000	2.0000	0.0000
Carbon Black	MG/M3	3.5000	3.5000	0.0000
Cured PhenolFormaldehyde Resin	PPM	0.0000	0.0000	0.0000
Fiberglass	FBR/CC	1.0000	0.0000	0.0000
Inorganic Fluorides	MG/M3	2.5000	2.5000	2.5000
Manganese Compounds(*)		0.0000	0.0000	0.0000
@Crystalline Silica, Quartz	MG/M3	0.1000	0.1000	0.0000
Silicon Carbide	MG/M3	10.0000	10.0000	10.0000
Sodium Silicate	MG/M3	15.0000	0.0000	0.0000
Sulfates & Sulfides	MG/M3	0.0000	0.0000	0.0000
Zinc Compound(*)		0.0000	0.0000	0.0000
Zirconium Oxide	MG/M3	5.0000	5.0000	5.0000

LEGEND:

EXPOSURE LIMIT DESCRIPTIONS

CA PROP 65

This product contains chemicals, Crystalline Silica, known to the State of California, to cause cancer.

TSCA

Section 8(b) - Inventory Status

All components of this product are registered under the regulations of the Toxic Substance Control Act.

DOMESTIC SUBSTANCE LIST

All components of this product are found on the Domestic Substance

List.

SECTION 16. OTHER INFORMATION

KEY TO ABBREVIATIONS:

EQ=Equal

LT=Less Than

GT=Greater Than

AP=Approximately

TR=Trace

ND=No Data available

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DISCLAIMER

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