

MATERIAL SAFETY DATA SHEET

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PART#

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MSDS NO. SAWHEEL000

OUTBOUND

Diamond or Cubic Boron Nitride Grinding Wheel

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME

Diamond or Cubic Boron Nitride Grinding Wheel

TRADE NAME

MANUFACTURER(4)

Norton Company, 1 New Bond St.

Worcester, MA, 01615

(508) 795-5000

REVISION DATE

4/03/2001

MSDS PRINT FORMAT

NUSA

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE DESCRIPTION	PERCENT	CAS#
Aluminum Oxide, Non-fibrous	5.000- 10.000	1344-28-1
Aluminum	60.000- 90.000	7429-90-5
Cubic Boron Nitride	1.000- 5.000	10043-11-5
Cobalt(*)	1.000- 5.000	7440-48-4
Copper(*)	1.000- 10.000	7440-50-8
Cured PhenolFormaldehyde Resin	1.000- 5.000	9003-35-4
Diamond	1.000- 5.000	7782-40-3
Graphite Powder	15.000- 20.000	7782-42-5
Iron	70.000- 80.000	7439-89-6
Manganese(*)	3.000	7439-96-5
Molybdenum	1.000	7439-98-7
Nickel(*)	1.000- 10.000	7440-02-0
Phosphorus - yellow (*)	1.000	7723-14-0
Amorphous Silica, Fused	1.000- 5.000	60676-86-0
@Crystalline Silica, Quartz	1.000	14808-60-7
Silicon	5.000	7440-21-3
Silicon Carbide	1.000- 10.000	409-21-2
Silver(*)	1.000- 5.000	7440-22-4
Tin	1.000- 5.000	7440-31-5
Tungsten Carbide	1.000- 5.000	12070-12-1

OTHER

(@)Tests with products known to contain Crystalline Silica did not produce any detectable amount of respirable free Crystalline Silica. The product 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

Obtain medical assistance.

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.

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

Not Applicable

DECOMPOSITION

In use, dusts and decomposing odors may be 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.

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

Nickel - EPA-A, IARC-2B, NTP-R, NIOSH-X, MAK-1; Cobalt - IARC-2B, MAK-2; Crystalline Silica(Quartz) - IARC-2A, NIOSH-X, NTP-R; Silver - EPA-D; Phosphorous Yellow - EPA-D; Copper - EPA-D; Manganese - EPA-D.

LD50/LC50

Values are not appropriate or available.

SECTION 12. ECOLOGICAL INFORMATION

CHEMICAL FATE

Vitrified products do not appreciably decay.

Resin bonded materials demonstrate similar degradation rates as Phenolic plastics.

Metal bonded products do not appreciably decay.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Use standard landfill methods consistent with applicable Federal, State, Provincial and local laws.

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
Aluminum	MG/M3	15.0000	0.0000	0.0000
Cubic Boron Nitride	MG/M3	10.0000	10.0000	10.0000
Cobalt(*)	MG/M3	0.0500	0.0200	0.1000
Copper(*)	MG/M3	0.1000	0.2000	0.2000
Cured PhenolFormaldehyde Resin	PPM	0.0000	0.0000	0.0000
Diamond	PPM	0.0000	0.0000	0.0000
Graphite Powder	MG/M3	10.0000	2.0000	0.0000
Iron	MG/M3	1.0000	1.0000	1.0000
Manganese(*)	MG/M3	1.0000	1.0000	1.0000
Molybdenum	MG/M3	10.0000	10.0000	10.0000
Nickel(*)	MG/M3	1.0000	1.0000	1.0000
Phosphorus - yellow (*)	MG/M3	0.1000	0.1000	0.1000
Amorphous Silica, Fused	MG/M3	0.1000	0.1000	0.0000
@Crystalline Silica, Quartz	MG/M3	0.1000	0.1000	0.0000
Silicon	MG/M3	10.0000	10.0000	0.0000
Silicon Carbide	MG/M3	10.0000	10.0000	10.0000
Silver(*)	MG/M3	0.0100	0.1000	0.1000
Tin	MG/M3	2.0000	2.0000	2.0000
Tungsten Carbide	MG/M3	0.0000	0.0000	0.0000

LEGEND:

EXPOSURE LIMIT DESCRIPTIONS

CA PROP 65

This product is considered an accessory to power tools by the State

of California and therefore does not require labeling under Proposition 65.

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.