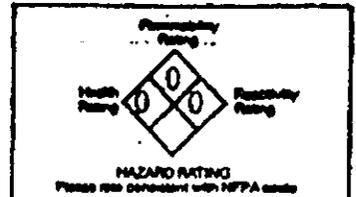


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## MATERIAL SAFETY DATA SHEET

## SECTION I NAME AND PRODUCT

MANUFACTURER'S NAME <b>NORTON COMPANY</b>	MATERIALS DIVISION	CONTACT David R. Nichols
ADDRESS (STREET, CITY, STATE AND ZIP CODE) 1 New Bond Street, Worcester, MA 01606		EMERGENCY TELEPHONE NO. (617) 795-2393
TRADE NAME, COMMON NAME OR SPECIFICATION 32 ALUNDUM		APPROVED BY <i>[Signature]</i> DATE November 1, 1985
CHEMICAL FAMILY OR PRODUCT TYPE Refractory Oxide		

## SECTION II COMPOSITION

CHEMICAL NAME	%	COMMON NAME	REG. <sup>*</sup> (Y/N)	CAS #	OSHA PERMISSIVE EXPOSURE LIMIT	ACGIH TLV	CARCINOGEN <sup>*</sup> (Y/N)
Alpha Alumina (Aluminum Oxide) (Al <sub>2</sub> O <sub>3</sub> )	99	ALUMINUM OXIDE	Y	1344-28-1	15 mg/m <sup>3</sup> (Total Dust)	10 mg/m <sup>3</sup>	N
Total Impurities	1	(SiO <sub>2</sub> + Fe <sub>2</sub> O <sub>3</sub> + TiO <sub>2</sub> + CaO + MgO + Na <sub>2</sub> O + C + S)					

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

## SECTION III PHYSICAL AND CHEMICAL DATA

BOILING POINT	NAIF	MELTING POINT	2072°C	SPECIFIC GRAVITY	3.8 - 4.0
VAPOR PRESSURE	NAIF	PERCENT VOLATILE BY VOL.	NAIF	VAPOR DENSITY	NAIF
EVAPORATION RATE	NAIF	SOLUBILITY IN WATER	INSOLUBLE	SOLUBILITY IN ALCOHOL	NAIF
SOLUBILITY IN OTHER SOLVENT	NAIF	APPEARANCE AND ODOR Granular, White to Grey to Pink Color, Sulfur Odor			

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

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

## SECTION V HEALTH, FIRST AID AND MEDICAL DATA

PRIMARY ROUTE(S) OF ENTRY	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION
INHALATION (DUST)	Acute: May Cause Coughing, Shortness of Breath Chronic: May Affect Breathing Capacity	Remove to fresh air; Apply artificial respiration as needed. Obtain first aid or medical assistance.
INGESTION	No Known Adverse Effects, But Ingestion Not Recommended	Obtain first aid or medical assistance, if needed.
SKIN CONTACT & ABSORPTION	Not Absorbed Through Skin: May Cause Abrasions	Obtain first aid or medical assistance, if needed.
EYE (DUST)	May irritate eyes.	Wash with large amounts of water; obtain first aid or medical assistance, if needed.
OTHER POTENTIAL HEALTH RISKS	None Known	

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**SECTION VI CORROSIVITY AND REACTIVITY DATA**

ABILITY UNSTABLE  STABLE  POLYMERIZATION MAY OCCUR  WILL NOT OCCUR

COMPATIBILITY (MATERIALS TO AVOID)

NAIF

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DECOMPOSITION PRODUCTS

NAIF

CONDITIONS TO BE AVOIDED

NAIF

**SECTION VII STORAGE, HANDLING AND USE PROCEDURES**

NORMAL STORAGE AND HANDLING

Handle with adequate ventilation for nuisance dust. See OSHA 29 CFR 1910.94 (Ventilation) and CFR1910.1000 (Air Contaminants)

NORMAL USE

Handle with adequate ventilation for nuisance dust. See OSHA 29CFR1910.94 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants)

STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS

Normal Cleanup Procedures. Respirators may be required.

WASTE DISPOSAL METHOD

Standard landfill methods consistent with applicable federal, state and local laws.

**SECTION VIII PERSONAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION (SPECIFY TYPE) As needed, approved dust respirator. See OSHA 29CFR1910.134

VENTILATION	LOCAL	RECOMMENDED
	MECHANICAL (GENERAL)	RECOMMENDED
	OTHER	NAIF

PROTECTIVE GLOVES AS DESIRED BY USER

EYE PROTECTION RECOMMENDED. SEE OSHA 29CFR1910.122

OTHER EQUIPMENT NAIF

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

SEE SECTION VII AND VIII

**SECTION IX SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE NONE

OTHER PRECAUTIONS NAIF

**FOR COMPANY USE**

The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Norton 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.