Cover Sheet

micromeritics®
INSTRUMENT CORPORATION
ONE MICROMERITICS DR.
NORCROSS, GA 30093-1877 U.S.A.

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A	Revision	MD	04/04/03	JM	030206
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MSDS
Ref. Mat. Silica Alumina MIP

SIZE	NUMBER	PAGE
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Micromeritics Material Safety Data Sheet

Title : Ref. Mat. Silica Alumina MIP
Date of Preparation : 02/09/10

MSDS No. : 004/16822/00MSDS
Revision : B

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Ref. Mat. Silica Alumina MIP
Chemical Formula: Gamma Aluminum Oxide
CAS Number: 1344-28-1
Other Designations:
General Use:
Supplier: Micromeritics Instrument Corp.
1 Micromeritics Dr.
Norcross, GA 30093-1877 USA
Contact: Human Resources
Phone: (770) 662-3620
Fax: (770) 662-3696
Manufacturer: Norton Chemical Process Products Corp. PO Box 350, Akron, OH 44309
(216) 673-5860, (800) 424-9300

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% wt
Aluminum Oxide 99.7 - 99.9 (alumina)	1344-28-1	
Silicon Dioxide 0.1 -0.2 (silica)	14808-60-7	
Ferric Oxide 0.1 (iron oxide)	1309-37-1	

Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Aluminum Oxide	10 mg/m^3						
Silicon Dioxide	0.1 mg/m^3						
Ferric Oxide	10 mg/m^3						

Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

HMIS
H 1
F 0
R 0
PPE†
†Sec. 8

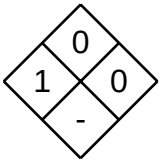
Potential Health Effects

Primary Entry Routes:
Target Organs:
Acute Effects
Inhalation: If dust is created there is the possibility of breathing in irritant powders. Prolonged (years) exposure to silica can lead to silicosis. Silica may also be carcinogen. Respiratory passage may feel dry.
Eye: Dust may cause irritation.
Skin: Dust may cause a feeling of dryness. Roughness may cause minor abrasion.
Ingestion: NAIF
Carcinogenicity: IARC, NTP, and OSHA do not list product as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure:
Chronic Effects: NAIF. The silica is essentially chemically combined as a silicate.

Section 4 - First Aid Measures

Inhalation: For acute exposure remove victim to fresh air. Call for medical assistance.
Eye Contact: Irrigate eyes with clean water for at least 15 minutes. If irritation continues, get medical assistance.
Skin Contact: Wash affected areas with clean water.
Ingestion: N/A
After first aid, get appropriate in-plant, paramedic, or community medical support.
Note to Physicians:
Special Precautions/Procedures:

NFPA



Section 5 - Fire-Fighting Measures

Flash Point: N/A
lash Point Method: N/A
Burning Rate: N/A
Autoignition Temperature: N/A
LEL: N/A
UEL: N/A
Flammability Classification: N/a
Extinguishing Media: N/A
Unusual Fire or Explosion Hazards: N/a
Hazardous Combustion Products: N/A
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:
Small Spills: Landfill in accordance with local, state and federal regulations. Be guided by presence of chemicals to which these articles may have been exposed in user's process.
Large Spills
Containment: Do not release into sewers or waterways.
Cleanup: Minimize dust, sweep, shovel or vacuum. Watch footing if particles fall onto walkways.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Minimize dust, sweep, shovel or vacuum. Watch footing if particles fall onto walkways.
Storage Requirements: Avoid rough handling.
Regulatory Requirements:

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: n/a
Appearance and Odor: White shapes - odorless.
Odor Threshold: n/a
Vapor Pressure: n/a
Vapor Density (Air=1): n/a
Formula Weight: n/a
Density: n/a
Specific Gravity (H_2O=1, at 4 °C): 1.0 - 1.2
pH:
Water Solubility: Insoluble
Other Solubilities: n/a
Boiling Point: n/a
Freezing/Melting Point: n/a
Viscosity: n/a
Refractive Index: n/a
Surface Tension: n/a
% Volatile: n/a
Evaporation Rate: n/a

Section 10 - Stability and Reactivity

Stability: Ref. Mat. APD ~.0073 UMPV~.56cc/g is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities: None
Conditions to Avoid: Place in dry, clean area. Do not overstack cartons.

Section 11 - Toxicological Information

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.
Disposal Regulatory Requirements: As sold these articles are inert and non-hazardous. If customer's processing introduces hazardous (toxic) materials to the articles be guided by their nature. Minimize dust when handling these articles.
Container Cleaning and Disposal: Not listed.

Section 12 - Ecological Information

None listed

Section 13 - Disposal Considerations

None listed

Section 14 - Transport Information

None listed.

Section 15 - Regulatory Information

EPA Regulations:
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
RCRA Hazardous Waste Classification (40 CFR 261.): Not classified
SARA Toxic Chemical (40 CFR 372.65): Not listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)
OSHA Regulations:
Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29CFR 1910.)

Section 16 - Other Information

Prepared By: M. Day
Revision Notes:
Disclaimer: *The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however the original manufacturer, Norton Company, makes no warranty with respect to accuracy of the information or the suitability of the recommendations, and assumes no liability to any user therof.*