

Material Safety Data Sheet

Calcined Alumina

MSDS No. 9601.10

Date of Preparation: 7/16/96

Revision: 7/11/12

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Calcined Alumina

Synonyms: Buffing Alumina, Alundum, Alumina gamma, Lundum, Alumina beta, Corundum

General Use: Manufacture of abrasives, refractory material, aluminum production, ceramic materials.

Manufacturer: The R. J. Marshall Company

26776 W. 12 Mile Road

Southfield, MI 48034-7807

Phone: (248) 353-4100, Fax: (248) 948-6460

Emergency Phone: (800) 424-9300

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Prepared By: Stephanie Nichols

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

HMIS

H 0

F 0

R 0

PPE† E

†Sec. 8

Potential Health Effects



Warning: Irritant, R37

Dust may irritate eyes, skin, and lungs.

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its aerosol.

INHALATION RISK: Evaporation at 20°C is negligible.

EFFECTS OF SHORT-TERM EXPOSURE: Inhalation of high concentrations of dusts of this substance may cause eyes and upper respiratory tract irritation.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: The substance may have effects on the central nervous system.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Alumina Oxide	1344-28-1

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Alumina Oxide	15 mg/m ³ total dust	none estab.	none estab.	none estab.
	5 mg/m ³ respirable fraction			

Section 4 - First Aid Measures

Inhalation: If overcome by high dust concentrations, remove to a ventilated area. Seek medical attention for any symptoms that may develop.

Eye Contact: Flush eyes thoroughly for 15 minutes taking care to rinse under eyelids. Do not scrub. Abrasion may cause irritation. If discomfort continues, continue to wash with water. If irritation persists, consult a physician.

Skin Contact: Wash skin thoroughly with soap and water for at least 15 minutes. Consult a physician if irritation persists.

Ingestion: Not applicable.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: n/a

Special Precautions/Procedures: n/a

Section 5 - Fire-Fighting Measures

Flash Point: n/a

Flash Point Method: n/a

Burning Rate: Not determined.

Auto-ignition Temperature: Not determined.

Flammability Classification: Non-flammable.

Extinguishing Media: Water spray, carbon dioxide, or other dry chemical.

Unusual Fire or Explosion Hazards: None known.

Hazardous Combustion Products: None.

Section 6 - Accidental Release Measures

Spill /Leak Procedures: Collect solids. Recycle if possible.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid generating dust during handling.

Storage Requirements: Keep material dry.

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.

Protective Clothing/Equipment: Wear eye and respiratory protection if necessary.

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: white powder

Appearance and Odor: white odorless powder

Odor Threshold: n/e

Vapor Pressure: n/e

Vapor Density (Air=1): n/a

Formula Weight: n/a

Density: Loose Bulk 48-63lb/ft³

Specific Gravity (H₂O=1, at 4 °C): 3.6-3.9

pH: 7-10

Water Solubility: Insoluble

Other Solubilities: Very slightly soluble in acids and alkalis.

Boiling Point: 5432°F (3000°C)

Freezing/Melting Point: 3729°F (2054°C)

Viscosity: n/a

Refractive Index: n/a

Surface Tension: n/a

% Volatile: n/a

Evaporation Rate: n/a

Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: None known.

Conditions to Avoid: None known.

Hazardous Decomposition Products: None known.

Section 11- Toxicological Information

OCCUPATIONAL EXPOSURE LIMITS:

MAK: 1.5 mg/m³ (Respirable fraction) 4 mg/m³ (Inhalable fraction)

Pregnancy risk group: D

(DFG 2006).

Section 12 - Ecological Information

Ecotoxicity: Aluminum oxide and its various chemical forms, such as alpha, beta, gamma, alumina hydrate, and aluminum hydroxide do not present any hazard for the environment.

Mobility: No data available.

Persistence/biodegradability: No data available.

Bioaccumulation: No data available.

Section 13 - Disposal Considerations

Disposal: Recycle or landfill if possible. This substance is inert and does not require special disposal methods. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101): This product is not classified as dangerous under the transport regulations for road, rail, sea, or air transport.

Canada TDGR: Not regulated **European ADR:** Not regulated **IMO:** Not regulated **ICAO:** Not regulated

IATA: Not regulated

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

CERCLA Hazardous Substance (40 CFR 302.4) Not listed

SARA Toxic Chemical (40 CFR 372.65): Not listed

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

TSCA

This substance or all of its components are on the Chemical Substances Inventory of the Toxic Substance Control Act (TSCA Inventory [USA]). Please note that this product is not subject to any legal reporting requirements under these acts.

INTERNATIONAL REGULATIONS

Australia AICS: Listed

Canada DSL: Listed

Canada WHMIS: Not controlled.

Canada NPRI: Not subject to reporting.

China IECSC: Listed

Europe EINECS: Listed (#215-691-6).

Japan ENCS: Listed: 1-23

Korea KECI: Listed KE-01012

New Zealand NZIoC: Listed

Philippines PICCS: Listed

Taiwan NECI: Listed

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: 7/11/12

Product Grades Available from the R. J. Marshall Company (this list may be incomplete):

B25	B200	B550	1285	GB400
B50	B400	B600	1290	GB600
B65	B500	B700	GB50	
B75	B501	B800	GB75	

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