Material Safety Data Sheet

Alumina Trihydrate **MSDS No. 9605.26**

Date of Preparation: 12/10/96 Revision: 6/4/03

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Alumina Trihydrate

Synonyms: Alumina Hydrate, ATH, Aluminum Hydroxide, Trihydrate D'aluminae, Hydrate d'aluminae, Gibbsite, Hydroxide d'aluminum, Alumine hydrate, hydrated alumina, Trioxyde d'aluminum, Aluminum Trihydroxide, $Al_2O_3.3H_2O$

General Use: refractory material, abrasive, fire retardant and smoke suppressant for plastics, ceramic material.

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
Date Revised: 6/4/03
Preparer: Stephanie Nichols

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Alumina Trihydrate	21645-51-2

Trace Impurities:

	OSHA PEL		ACGIH TLV	
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**
Alumina Trihydrate	none estab.	none estab.	none estab.	none estab.

Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

HMIS	
H	1
F	0
R	0
PPE†	E
†Sec. 8	

Potential Health Effects

Primary Entry Routes: Inhalation, Eye, and Ingestion.

Acute Effects

Inhalation: Inhalation of high concentrations of this inert nuisance particulate can result in mild irritation of the respiratory tract.

Eye: May cause irritation through mechanical abrasion.

Skin: May cause irritation through mechanical abrasion.

Ingestion: Unlikely.

Carcinogenicity: IARC, NTP, and OSHA do not list alumina trihydrate as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure: n/a

Chronic Effects: n/a

Section 4 - First Aid Measures

Inhalation: If overcome by high dust concentrations, remove to a ventilated area.

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: If swallowed, dilute with large amounts of water. Do not induce vomiting. Consult a physician immediately.

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: None known.

Flash Point Method: n/a

Burning Rate: Not determined.

Auto-ignition Temperature: Not determined.

Flammability Classification: n/a

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

Unusual Fire or Explosion Hazards: None known.

Hazardous Combustion Products: None.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated in pressure-demand or positive-pressure mode.

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. 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: 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: 8-80lb/ft^3
Specific Gravity (H_2O=1, at 4 °C): 2.4
pH: 8.5-10.2 (20% solution)
Water Solubility: Insoluble
Other Solubilities: Soluble in concentrated acids and alkalies.
Boiling Point: n/a
Freezing/Melting Point: 2038C
Viscosity: n/a
Refractive Index: n/a
Surface Tension: n/a
% Volatile: n/a
Evaporation Rate: n/a

Section 10 - Stability and Reactivity

Stability: Alumina trihydrate is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities: Strong acids and bases. Alumina trihydrate reacts vigorously with strong acids and will dissolve in caustic solutions.
Reactivity with Heat: When exposed to fire or heat, hydrated alumina loses its water of crystallization beginning at 200C.
Hazardous Decomposition Products: n/a

Section 11- Toxicological Information

Toxicity Data:*

Eye Effects: Nuisance dust. May cause irritation through mechanical abrasion. Flush with water for at least 15 minutes. Consult physician if irritation is persistent.

Skin Effects: Nuisance dust. May cause irritation through mechanical abrasion. Wash skin thoroughly with soap and water.

Acute Inhalation Effects: Nuisance dust. Overexposure to dust may cause irritation to the respiratory tract. Should this occur, remove affected individual to fresh air. If symptoms persist, consult a physician.

Acute Oral Effects: None known.
Chronic Effects: None known.
Carcinogenicity: Neither this product nor any of its components are considered carcinogenic by OSHA, IARC, NTP, or ACGIH.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Disposal: Recycle if possible or landfill. 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.

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
OSHA Specifically Regulated Substance (29CFR 1910.????)

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
Canadian Domestic Substances List: This substance or all of its components are listed on the Canadian DSL.
European Community: This substance or all of its components are listed on ECOIN, the European Core Inventory (EC) market. EINECS, the European Inventory of Existing Chemical Substances: 244-492-7.
Japanese Gazette: This substance or all of its components are listed on ENCS, contained with class inorganic compounds. The ENCS number is: 1-17.
Australian Inventory of Chemical Substances: This substance or all of its components are listed on the AICS.
Korean Existing Chemicals List: This substance or all of its components are listed on the ECL. The ECL serial number is: KE-00980.
Swiss: This substance or all of its components are listed on the Giftliste 1 (List of Toxic Substances). The SWISS number is: G-4621.
Philippines Inventory of Chemicals and Chemical Substances: This substance or all of its components are listed on the PICCS.

Section 16 - Other Information

Prepared By: Stephanie Nichols
Revision Notes: updated product list, OSHA, ACGIH values

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

DF40	A102	A202	AH170	AH170A	H30	H120A	OFI	DGXW1
DF45	A104	A204	AH190	AH270A	H30PN	H126A	OFIII	DGXW2
DF74	A105	A205	AH270	AH280A	H120	H216A	OFV	EM107
DF80	A106	A206	AH280	AH281A	H126	H218A	OFVS	EXT DF 168
DF80S	A108	A208	AH290	AH290A	H136	H314A	OFVI	ATH-A
DF85	A110	A210	AH290S	AH298A	H216	H470A	OF7	ATH-B
DF111	A112	A210SP	AH298	AH330A	H218	H490A	OR150	DT1080
DF119	A130	A212	AH330	AH331A	H312	H550A	OR250	KX-1
DF121	A145	A245	AH331	AH430A	H314	H636A	RC822	DT1186
DF132		A236HL	AH430	AH170C	H470	H826A	A4555	STM1410
DF161		A200SB1	AH610	AH270C	H490	RC802A	8515	AC470AN
DF225		RC802	AH690	AH280C	H550	H120C	HF136	AC480AN
DF270			AH171	AH290C	H550PN	H126C		
DF320A			AH271	AH298C	H636	H216C		
DFG			AH281	AH330C	H705	H218C		
			AH291	AH430C	H710	H314C		
			AH331	AH170V	H710B	H120V		
			AH431	AH270V	H826	H126V		
			AH691	AH280V	H910	H216V		
			AF330	AH290V		H218V		
				AH330V		H314V		
				AH430V				

Note: This includes all EXP ATH blends.

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