

Material Safety Data Sheet

Alumina Trihydrate

MSDS No. 9605.37

Date of Preparation: 12/10/96

Revision: 3/12/10

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, $Al_2O_3 \cdot 3H_2O$

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

Manufacturer: The R. J. Marshall Company

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Date Revised: 3/12/10

Preparer: Stephanie Nichols

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
Alumina Trihydrate	21645-51-2

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV	
	TWA	STEL	TWA	STEL
Alumina Trihydrate	none estab.	none estab.	none estab.	none estab.
Nuisance Dust	15 mg/m ³ total, 5 mg/m ³ respirable	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: Does not burn.

Auto-ignition Temperature: Does not ignite.

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:

Protective Clothing/Equipment: Wear tightly fitting safety goggles or safety glasses with side shields.

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/ft³

Specific Gravity (H₂O=1, at 4 °C): 2.4

pH: 8.5-10.2 (20% solution)

Water Solubility: Insoluble

Other Solubilities: Soluble in alkaline aqueous solutions or in HCL, H₂SO₄, and other strong acids in the presence of some water.

Boiling Point: n/a

Melting Point: 3700F (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 392F (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.

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.

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

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 ECHOIN, 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: 3/12/10 added new DF & OF codes

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

DF40	OFI	A202 (A,W)	AH170(A,C,V)	DGXW1
DF45	OFIII	A203H	AH190	DGXW2
DF74	OFV	A204(A,W)	AH255(A,W)	EM107
DF80	OFVS	A205(A)	AH270(A,C,V,W)	EXT DF 168
DF80S	OFVI	A206(A,H,W)	AH280(A,C,V,W)	ATH-A
DF85	OF7	A208(A)	AH285W	ATH-B
DF111	OF136	A210(A)	AH290(A,C,V,W)	DT1080
DF119	OF250	A210SP	AH290S	KX-1
DF121	OF255A	A212(A)	AH298(A,C)	DT1186
DF132	OF300	A245(W)	AH330(A,C,V,W)	STM1410
DF161	OF500	A236HL	AH331(A)	AC470AN
DF174	OF600	A200SB1	AH430(A,C,H,V,W)	AC480AN
DF211(A)		RC802(A)	AH610	
DF221	OR150		AH690	
DF225	OR250	A102	AH171(A)	
DF230	OR255A	A104	AH271(A)	
DF240	RC822	A105	AH281(A)	
DF270	A4555	A106	AH291(A)	
DF315	8515	A108	AH331(A)	
DF320A	HF136	A110	AH431(A)	
DF325(C,W)		A112	AH691	
DF420	MX100	A130	AF330(A)	
DF1045	MX200	A145		
DF1051		A104A		
DF2040				
DFG				

Note: This includes all EXP ATH blends.

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