

Safety Data Sheet

Alumina Trihydrate

MSDS No. 9605.48

Date of Preparation: 12/10/96

Revision: 4/28/15

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, Al₂O₃·3H₂O

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

Manufacturer: The R. J. Marshall Company

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Section 2 - Hazards Identification

Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008 (CLP): Not classified

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not classified

Hazard Pictogram: None

Hazard Statements: None

Precautionary Statements:

P261: Avoid breathing dust.

P280: Wear eye protection.

P285: In case of inadequate ventilation wear respiratory protection.

P301+313+330: IF SWALLOWED: Rinse mouth, get medical advice.

P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing.

P302+352: IF ON SKIN: Wash with soap and water.

P402: Store in a dry place.

Other hazards: Prolonged or excessive contact may cause irritation of the respiratory tract.

HMIS

H 1

F 0

R 0

PPE † E

†Sec. 8

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Weight
Alumina Trihydrate	21645-51-2	100%

Section 4 - First Aid Measures

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

Eye Contact: Flush eyes thoroughly for several 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. Consult a physician if irritation persists.

Ingestion: If swallowed, dilute with large amounts of water. Seek medical advice.

Most important symptoms and effects, both acute and delayed: None

Indication of any immediate medical attention and special treatment needed: None

Section 5 - Fire-Fighting Measures

Suitable Extinguishing Media: Use extinguishing measures appropriate to the surrounding fire.

Unsuitable Extinguishing Media: None

Special hazards arising from the chemical: None.

Hazardous Combustion Products: None.

Fire-Fighting Instructions: None

Section 6 - Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Avoid dust formation. In case of inadequate ventilation wear respiratory protection.

Environmental precautions: None.

Methods and materials for containment and cleaning up: Sweep up and dispose in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for safe handling: Avoid generating dust during handling.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in dry place.

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.

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.

Section 9 - Physical and Chemical Properties

Physical State: white powder

Appearance and Odor: white odorless powder

Odor Threshold: n/e

pH: 8-9 (20% solution)

Freezing/Melting Point: Decomposes before melting.

Boiling Point: n/a

Flash Point: Not applicable.

Flash Point Method: Not flammable.

Evaporation Rate: n/a

Flammability: Not flammable.

Upper/lower flammability or explosive limits: n/a

Vapor Pressure: n/e

Vapor Density (Air=1): n/a

Relative Density: 2.42

Water Solubility: Insoluble

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

Partition coefficient: n-octanol/water; not applicable

Auto-ignition Temperature: Does not ignite.

Decomposition temperature: >200C

Viscosity: n/a

Section 10 - Stability and Reactivity

Reactivity: None known.

Chemical stability: Alumina trihydrate is stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reactions: No hazardous reactions known.

Conditions to avoid: Temperature >392°F (200°C).

Incompatible materials: Strong acids and bases. Alumina trihydrate reacts vigorously with strong acids and will dissolve in caustic solutions.

Hazardous decomposition products: n/a

Section 11- Toxicological Information

Toxicity Data:*

Information on toxicological effects:
Acute:

	Value	Species	Type	Test Substance
Oral	>2000 mg/kg bw	Rat	Acute	Aluminum hydroxide
Dermal	Not applicable			
Inhalation	LC ₅₀ : 7.6 mg/l	Rat	Acute	Analogue
Skin Corrosion	Not corrosive	Rabbit	Acute	Analogue
Skin Irritation	Not irritating	Rabbit	Acute	Analogue
Eye Irritation	Not irritating	Rabbit	Acute	Analogue
Sensitization	Non-sensitizing			

Repeated dose toxicity:

	Value	Species	Type	Test Substance
Oral	NOAEL: 30 mg/kg bw/day	Rat	Chronic	Analogue
Inhalation	NOAEL: 70 mg/m ³	Rat	Sub-chronic	Analogue

Carcinogenicity: No evidence of carcinogenic effects.

Mutagenicity: No evidence of any mutagenic effects.

Reproductive toxicity: No evidence of any reproductive toxicity effects.

Section 12 - Ecological Information

Eco-toxicity:

Fish toxicity: LC₅₀>100 mg/l in Salmo trutta.

Invertebrate toxicity: EC₅₀>100 mg/l in Daphnia Magna

Algae toxicity: EC₅₀ >100 mg/l in Selenastrum capricornutum

Persistence and degradability: Not applicable for inorganic substances.

Bio-accumulative potential: Not applicable

Mobility in soil: Not applicable.

Results of PBT and vPvB assessment: This product does not meet the classification as PBT/vPvB.

Other adverse effects: None known.

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.

UN Number: not classified as dangerous goods

UN proper shipping name: not classified as dangerous goods

Transport hazard classes: None

Packaging group: None

Environmental hazards: None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: No hazardous goods.

Special precautions for user: None

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.????)

Inventory Lists: This product is listed on the following inventory lists:

TSCA	Australia AICS	Canada DSL	China IECSC	Europe EINECS	Japan ENCS	Korea ECL
Listed	Listed	Listed	Listed	244-492-7	1-17	KE-00980

New Zealand NZIoC	Swiss Giftliste	Philippines PICCS	Taiwan NECI
Listed	G-4621	Listed	Listed

International Regulations:

Regulation (EC) No 2037/2000 (Ozone Depleting Substances): Not applicable
 Regulation (EC) No 850/2004 (Persistent Organic Pollutants): Not applicable
 Regulation (EC) No 689/2008 (Export and Import of Dangerous Substances): Not applicable
 Directive 2002/95/EC (RoHS): Not applicable
 Directive 2002/96/EC (WEEE): Not applicable
 Directive 1999/13/EC (VOC): Not applicable
 Restrictions according to TITLE VIII of the Regulation (EC) No 1907/2006 (REACH): None

S-phrases:

S8: Keep container dry.
 S36/37/39: Wear suitable protective clothing, gloves, and eye protection.

WEEE: Waste Electrical and Electronic Equipment

VOC: Volatile Organic Compounds

RoHS: Restriction of Hazardous Substances

Section 16 - Other Information

Prepared By: Stephanie Nichols

Revision Notes: Added MaxTool products

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	OF505	A200SB1	AH430(A,C,H,V,W)	AC480AN
DF211(A)	OF600	RC802(A)	AH610	
DF221			AH690	
DF225	OR150	A102	AH171(A)	
DF230	OR250	A104	AH271(A)	
DF240	OR255A	A105	AH281(A)	
DF270	RC822	A106	AH291(A)	
DF315	A4555	A108	AH331(A)	
DF320A	8515	A110	AH431(A)	
DF325(C,W)	HF136	A112	AH691	
DF420		A130	AF330(A)	
DF1045	MX100	A145		
DF1051	MX104	A104A	MAXTOOL710	
DF2040	MX200		MAXTOOL815	
DFG				

Note: This includes all EXP ATH blends.

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