

# Safety Data Sheet

Alumina Trihydrate

MSDS No. 9605.46

Date of Preparation: 12/10/96

Revision: 2/7/14

## 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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**Emergency Phone:** (800) 424-9300

**Date Revised:** 2/7/14

**Preparer:** Stephanie Nichols

## Section 2 - Hazards Identification

**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.

**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

**Flammability Classification:** Non-combustible

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

**Unusual Fire or Explosion Hazards:** None known.

**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.

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

**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.

**S-phrases:** S8, S36/37/39

## 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 <sup>3</sup> total, 5 mg/m <sup>3</sup> 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

**Vapor Pressure:** n/e

**Vapor Density (Air=1):** n/a

**Formula Weight:** n/a

**Density:** 8-80lb/ft<sup>3</sup>

**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 2.42

**pH:** 8.5-10.2 (20% solution)

**Flash Point:** Not applicable.

**Flash Point Method:** Not flammable.

**Burning Rate:** Does not burn.

**Auto-ignition Temperature:** Does not ignite.

**Explosive properties:** Non-explosive.

**Water Solubility:** Insoluble

**Other Solubilities:** Soluble in alkaline aqueous solutions or in HCL, H<sub>2</sub>SO<sub>4</sub>, and other strong acids in the presence of some water.

**Boiling Point:** n/a

**Freezing/Melting Point:** 3700°F (2038°C)

**Viscosity:** n/a

**Refractive Index:** n/a

**Surface Tension:** n/a

**% Volatile:** n/a

**Evaporation Rate:** n/a

**Thermal Decomposition:** >200C

**Octanol-Water coefficient:** None

## 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:\***

**Primary Entry Routes:** Inhalation

**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.

**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

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.

**Bioaccumulative potential:** Not applicable

**Mobility in soil:** Not applicable.

## 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.????)

**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  
 Restirctions 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: Restirction of Hazardous Substances

## Section 16 - Other Information

**Prepared By:** Stephanie Nichols

**Revision Notes:** Updated to GHS

**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		
DF2040	MX200			
DFG				

Note: This includes all EXP ATH blends.

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