



# SAFETY DATA SHEET

US OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR)

Issuing Date 01-Jun-2015

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Revision Number 7

## 1. Identification

### Product identifier

**Product Name** CALCINED ALUMINA (GROUND AND UNGROUND)

### Other means of identification

**Synonyms** All AC-\*\*\* Calcined Aluminas, AO-104

**Registration Number(s)** REACH Registration No. Registered – Registration number may be requested

**Other information** Technical Name: Aluminum Oxide, Alumina.

### Recommended use of the chemical and restrictions on use

**Recommended use** Ceramics  
Refractory  
Fillers  
Polishing agent

**Restrictions on use** Avoid use with ethylene oxide or chlorine trifluoride

### Details of the supplier of the safety data sheet

#### Supplier Address

AluChem, Inc.  
1 Landy Lane  
Reading, OH 45215  
USA  
+1 513 733 8519

AluChem of Jackson, Inc.  
14782 Beaver Pike  
Jackson, OH 45640  
USA  
+1 740 286 2455

AluChem of Little Rock, LLC  
Arch Street Pike  
Little Rock, AR 72206  
USA  
+1 501 486 9106

**E-mail** aluchem@aluchem.com

### Emergency telephone number

**Emergency telephone** +1 513-733-8519 (Monday-Friday; 8AM-5PM EST)

## 2. Hazard(s) identification

### Classification

This product is not considered hazardous by either the US 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) or

the Canadian Workplace Hazardous Material Information System (WHMIS 2015).

### Label elements

#### **Hazard statements**

Not classified.

#### Other information

No information available.

## **3. Composition/information on ingredients**

### Substance

#### **Synonyms**

All AC-\*\*\* Calcined Aluminas, AO-104

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Aluminum oxide	1344-28-1	>99	-	-

## **4. First-aid measures**

### Description of first aid measures

<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth.

### Most important symptoms and effects, both acute and delayed

**Symptoms** No information available.

**Effects of Exposure** No information available.

### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## **5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the** No information available.

chemical

Explosion data

Sensitivity to mechanical impact None.  
Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures**

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Vacuum or sweep material and place in a disposal container.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

**7. Handling and storage**

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid dust formation.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

**8. Exposure controls/personal protection**

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	
Aluminum oxide 1344-28-1	TWA: 1 mg/m <sup>3</sup> respirable particulate matter	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	-	
Chemical name	Alberta	British Columbia	Ontario	Quebec
Aluminum oxide 1344-28-1	TWA: 10 mg/m <sup>3</sup>	TWA: 1.0 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>

Chemical name	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Aluminum oxide	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 30 mppcf TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering controls**                      Showers  
    Eyewash stations  
    Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**                      No special protective equipment required.

**Hand protection**                            No special protective equipment required.

**Skin and body protection**                No special protective equipment required.

**Respiratory protection**                    Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

**General hygiene considerations**        Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

**Information on basic physical and chemical properties**

**Appearance**                                    Granular powder  
**Physical state**                                 Solid  
**Color**    White  
**Odor**    No information available  
**Odor threshold**                                No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8 - 10	
Melting point / freezing point	2050 °C / 3722.0 °F	
Initial boiling point and boiling range	2980 °C / 5396.0 °F	
Flash point		No data available
Evaporation rate		No data available
Flammability		Not flammable
Flammability Limit in Air		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
Vapor pressure		No data available
Relative vapor density		No data available
Relative density	3.4 - 3.9	
Water solubility	0.00002 g/L	@ 20 °C
Solubility(ies)		No data available
Partition coefficient		No data available
Autoignition temperature		Does not ignite
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available
 <b>Other information</b>		
Explosive properties	None.	
Oxidizing properties	No information available.	
Softening point	No information available	
Molecular weight	No information available	
VOC content	No information available	
Liquid Density	No information available	

Bulk density 600-1250 kg/m<sup>3</sup>

## 10. Stability and reactivity

**Reactivity** None under normal use conditions.

**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** None known based on information supplied.

**Incompatible materials** Ethylene oxide, Chlorine trifluoride.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

### Acute toxicity

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### **Numerical measures of toxicity**

No information available

The following values are calculated based on chapter 3.1 of the GHS document:

**ATEmix (dermal)** 5,051.50 mg/kg

**ATEmix (inhalation-dust/mist)** >5.0 mg/l

### **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum oxide	> 5000 mg/kg ( Rat )	-	7.6 mg/l

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## 12. Ecological information

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Aluminum oxide 1344-28-1	EC50 = >100 mg/l (Senastrum Capricornutum, type: acute)	LC50 = >100 mg/l (Salmo trutta, type: acute)	-	EC50 = >100 mg/l (Daphnia Magna, type: acute)

**Persistence and degradability** No information available.

**Bioaccumulation** No information available.

**Other adverse effects** No information available.

## 13. Disposal considerations

### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations, Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

## 15. Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**TSCA**

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Aluminum oxide	1344-28-1	Present	Active

**DSL/NDSL**

Listed on DSL.

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Aluminum oxide 1344-28-1	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

**NFPA**    Health hazards 0                      Flammability 0                      Instability 0                      Special hazards -  
**HMIS**    Health hazards 0                      Flammability 0                      Physical hazards 0                      Personal protection X

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
 STOT: Specific Target Organ Toxicity  
 ATE: Acute Toxicity Estimate  
 LC50: 50% Lethal Concentration  
 LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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**Revision Note** Updated format.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**