



Date of Preparation: 20 JAN 2003

Review Date: 16 JAN 2004

Conforms to: O.S.H.A HCS - W.H.M.I.S - 91/155/ECC

MSDS No. 101

1. Product and Company Identification

Manufacturer/Supplier:

AluChem, Inc.
1 Landy Lane
Reading, OH 45215 USA

Telephone: 513-733-8519
Fax: 513-733-3123
Emergency: 800-336-8519

AluChem of Jackson, Inc.
14782 Beaver Pike
Jackson, OH 45640 USA

Telephone: 614-286-2455
Fax: 614-286-2004
Emergency: 800-336-8519

Product Name: CALCINED ALUMINA

Other Designations:

AC1, AC1-OS AC2, AC2-325, AC2-325 OS, AC2-325SG, AC3, AC3-325, AC5, AC13, AC13C,
AC13-325, AC15AM, AC15RG, AC16AM, AC16RG, AC17AM, AC17RG, AC66, AC662-325, AC300,
AC300-325, AC300-325 IS, AC300-325SG, AC303, AO104

Uses: Refractory material, Ceramic material, Abrasive material

2. Composition / Information on Ingredients

CAS No.	Chemical or Component	% by weight
1344-28-1	Aluminum Oxide (Non-Fibrous)	>98.5

Hazard Symbols: None listed. **Risk Phrases:** None listed.

3. Hazards Identification

Emergency Overview:

White powder with no odor. Inhalation of high concentrations of dusts of this substance may cause eye and upper respiratory tract irritation. This material is not flammable and does not support combustion. Primary routes of entry are inhalation, skin contact and eye contact.

Ingestion: May cause mild irritation.

Inhalation: May cause upper respiratory tract irritation.

Eye Contact: May cause mild irritation.

Skin Contact: May cause mild irritation.

Hazard Description

Medical conditions generally aggravated by exposure :

Asthma, chronic lung conditions or diseases and skin rashes.

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Toxicological Data: See item 11.

Carcinogenicity: This product is not listed by NTP, IARC, or regulated as a carcinogen by OSHA.

4. First Aid Measures

Ingestion:

Do not induce vomiting. If swallowed, dilute by drinking large amounts of water. Consult a physician or other qualified medical personnel.

Inhalation:

Remove to fresh air. Check for clear airway, breathing and presence of pulse. Provide cardiopulmonary resuscitation for persons without pulse or respirations. Consult a physician or other qualified medical personnel.

Eye Contact:

Flush eyes with ample amounts of water for at least 15 minutes. Consult a physician or other qualified medical personnel.

Skin Contact:

Wash with soap and water for at least 15 minutes. Consult a physician or qualified medical personnel if the condition persists.

5. Fire Fighting Measures

Fire / Explosion Hazards:

This product does not present fire or explosion hazards as supplied.

Extinguishing Media:

As deemed suitable by the environment.

Fire Fighting Equipment:

Respiratory and eye protection required for fire fighting personnel. Full protective equipment (Bunker Gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

6. Accidental Release Measures

Person-related Safety Precautions:

Avoid contact with skin and eyes.

Cleaning and Collecting Spills:

Vacuum or sweep material and place in a disposal container. Avoid dusting. Ensure adequate ventilation.

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7. Handling and Storage**Handling:**

Ensure good ventilation in all work areas.
Minimize dusting and dust accumulation.

Storage:

No special requirements.

8. Exposure Controls and Personal Information**Exposure Guidelines:**

1344-28-1 Aluminum Oxide (non-fibrous)

ACGIH TLV	10mg/m ³	
OSHA PEL	15mg/m ³ (total dust)	5 mg/m ³ (respirable fraction)

Respiratory Protection:

Use NIOSH approved respiratory protection in case of insufficient ventilation and where exposure guidelines may be exceeded.

Skin Protection:

Wear suitable gloves and long sleeve shirts to avoid skin irritation or injury.

Eye Protection:

Use of safety glasses with full side shields is always recommended. Where air turbulence may be present, goggles are also recommended.

9. Physical and Chemical Properties**Appearance:**

White, crystalline powder

Molecular Formula:

Al₂O₃

Molecular Weight:

101.9612

Physical State:

Solid

Odor:

None

Melting Point:

2050°C (3722°F)

Boiling Point:

Not Determined.

Flash Point:

Not Applicable.

Solubility in Water:

Negligible (less than 0.1%)

Density:

3.6 – 3.9 g/cm³ (0.13 – 0.14 lb/in³)

Bulk Density:

770 – 1000 kg/m³ (48 – 62.4 lb/ft³)

pH - 20°C:

~9.5 (10g/100ml)

Autoignition:

Product is not self igniting.

Danger of Explosion:

None present.

Vapor Pressure: Not applicable.

Vapor Density: Not applicable.

Evaporation Rate: Not applicable.

Oxidizing Properties: Not applicable.

Lower Flammable Limit: None.

Upper Flammable Limit: None.

Odor Threshold: Not determined.

Partition Coefficient: Not applicable.

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10. Stability and Reactivity

Stability: Product is stable when used in accordance with specifications.

Conditions to Avoid: Incompatible materials.

Incompatibilities with Other Materials: Reacts with chlorine trifluoride or ethylene oxide.

Hazardous Decomposition Products: None noted.

Hazardous Polymerization: Will not occur.

11. Toxicological Information**Acute Toxicity –****Primary Irritant Effect:**

On the skin: Irritant to skin and mucous membranes.

On the eyes: Irritating effect.

Sensitization: No sensitizing effects known.

Additional Toxicological Information:

ACGIH: A4 - Not classifiable as a human carcinogen

RTECS No.: BD120000

12. Ecological Information**General Notes:**

Generally, no adverse conditions are anticipated, but may require compliance with governmental restrictions and permitting requirements prior to release.

13. Disposal Considerations**Product -**

Recommendation: Collect in containers or covered dumpsters. If reuse or recycling is not possible, material may be disposed of at an industrial landfill, subject to local regulations and restrictions.

Uncleaned packaging -

Recommendation: Disposal must be made according to official regulations.

RCRA Status:

If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic nor is it federally (USA) regulated. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24 or state equivalent in the USA).

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14. Transport Information

U.S. Department of Transportation (DOT):	Not regulated
Canadian TDGR Hazard Class and PIN:	Not regulated
Land Transport ADR/RID (cross-boarder):	Not regulated
Maritime Transport IMDG:	Not regulated
Marine Pollutant:	Not listed
Air transport ICAO-TI and IATA-DGR:	Not regulated
Placards:	Not applicable

15. Regulations**U.S. Federal Regulations:**

TSCA Chemical Inventory Status: All components of this product are listed.

CERCLA Reportable Quantity: None.

SARA Title III:

Section 302 Extremely Hazardous Substances: None.

Section 304 Emergency Release Reporting: None.

Section 311/312 Hazardous Categories: Immediate (acute).

Section 313 Toxic Categories: None.

Clean Air Act of 1990 – Title VI: This material does not contain nor was it manufactured using ozone depleting chemicals.

Canadian Regulations:

WHMIS Classification: Not a controlled product.

DSL (Domestic Substance List): All components of this product are listed on the DSL.

NPRI (National Pollutant Release Inventory): Not subject to mandatory reporting requirements.

IDL (Ingredient Disclosure List): All components of this product are listed on the IDL.

Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (Canada) and this MSDS contains all the information required by the Controlled Products Regulations (Canada).

European Union Classification: (EINECS 215-691-6)

Warning Symbol: None.

Warning Word: None.

Risk Phrases: None.

Safety Phrases: None.

This product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

USA State Regulations:

California Proposition 65: Not listed.

Idaho Air Contaminant: Listed.

Massachusetts Right to Know List: Listed.

Massachusetts Hazardous Substance Code: F9

Minnesota Hazardous Substance List: Listed. Code: A Carcinogen: No

New Jersey Right to Know List: Listed – substance No. 2891

Pennsylvania Right to Know List: Listed.

Pennsylvania Hazardous Substance List (Chapter 323 Appendix A): Listed Code: E

Rhode Island Hazardous Substance List: Listed.

Washington Air Contaminant: Listed – limit TWA 10 mg/m³

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16. Other Information**Hazard Ratings -****NFPA® Ratings:** Health: 1 Flammability: 0 Reactivity: 0 Special: -**HMIS® III Codes :** Health: 1 Flammability: 0 Physical Hazard: 0 PPE: *

*Note: PPE (Personal Protective Equipment) designation to be supplied by user depending upon use in their specific situation. HMIS guidelines do not permit this designation to be specified by the manufacturer/supplier – only by the end user.

Department Issuing MSDS:

Technical Services

AluChem, Inc.

1 Landy Lane

Reading, OH 45215 USA

Revision #1 Date: 20 JAN 2003 Supersedes 01 JAN 2002

All sections revised.

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. It is the user's responsibility to determine for themselves the suitability of any material for a specific purpose, whether alone or in combination with any other products, and to adopt such safety precautions as may be necessary. This shall in no way establish a legally valid contractual relationship.

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ABBREVIATIONS:

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstract Service
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	United States Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	United States Department of Transportation
DSL	Canadian Domestic Substances List
EINECS	European Inventory of Existing Commercial Chemical Substances
EPA	United States Environmental Protection Agency
IDL	Canadian Ingredient Disclosure List
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA-DRG	International Air Transport Association – Dangerous Goods Regulations
ICAO	International Civil Aviation Organization
ICAO-TI	International Civil Aviation Organization – Technical Instructions on the Safe Transport of Dangerous Goods by Air
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
NDSL	Canadian Non-domestic Substances List
NIOSH	National Institute for Occupational Safety and Health (USA)
NTP	National Toxicology Program (USA)
OEL	Occupational Exposure Limit
OSHA	United States Occupational Health and Safety Administration
PIN	Product Identification Number
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act (USA)
RID	European Agreement Concerning the International Carriage of Dangerous Goods by Rail
RTECS	The Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
TDGR	Transportation of Dangerous Goods Regulations
TLV	Threshold Limit Values
TSCA	Toxic Substances Control Act (USA)
TWA	Time Weighted Average

cm = centimeter, ft = feet, g = gram, in = inch, kg = kilogram, lb = pound, ml = milliliter,
 > = greater than