

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Trade Name:** Aluminum Oxide

**Chemical Formula:** Al<sub>2</sub>O<sub>3</sub>

**Manufacturer Item Number:** AL-0096

**Manufacturer:** Lorad Chemical Corporation  
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Saint Petersburg, Florida, 33713  
United States of America

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**2. HAZARD IDENTIFICATION**

**Signal Word:** Not a hazardous substance or mixture.

**Pictograms:** N/A

**Hazard Statements:** N/A

**Precautionary Statements:** N/A

**HMIS Ratings (0-4)**

- Health: 1
- Flammability: 0
- Physical: 0

**3. COMPOSITION**

**Additional Names:** Alumina; Aluminum(III) Oxide; Dialuminum Trioxide

**Percentage:** 100 wt%

**CAS #:** 1344-28-1

**EC #:** 215-691-6

**4. FIRST AID PROCEDURES**

**General Treatment** Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

**Special Treatment:** No Data Available.

**Important Symptoms:** No Data Available.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Skin:** Wash off with soap and plenty of water. Consult a physician.

**Eyes:** Flush eyes with water as a precaution.

## 5. FIREFIGHTING MEASURES

**Flammability:** Not Flammable.

**Special Hazards from Substance:** Aluminum Oxides

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

**If Material is Released / Spilled:** Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Isolate spill area and provide ventilation. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**Environmental Precautions:** No additional environmental precautions required.

## 7. HANDLING AND STORAGE

**Handling Conditions:** Use appropriate personal protective equipment. Ensure adequate ventilation. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust should be taken into consideration before additional processing occurs.

**Storage Conditions:** Keep container tightly closed in a dry and well-ventilated place. Strongly hygroscopic.

**Work / Hygienic Maintenance:** Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

**Ventilation:** Provide appropriate exhaust ventilation at places where dust is formed.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:	Authority	Basis	Limit	Remarks
	OSHA	PEL	15.0 mg/m <sup>3</sup>	Aluminum Oxide (total dust) USA Occupational Exposure Limit (Table Z-1)*
	OSHA	PEL	5.0 mg/m <sup>3</sup>	Aluminum Oxide (respirable dust) USA Occupational Exposure Limit (Table Z-1)*
	California	PEL	10.0 mg/m <sup>3</sup>	Aluminum metal and oxide (total dust) California permissible exposure limit for chemical contaminants (Title 8, Article 107)*
	California	PEL	5.0 mg/m <sup>3</sup>	Aluminum metal and oxide (respirable dust) California permissible exposure limit for chemical contaminants (Title 8, Article 107)*

\*Note: limits refer to alpha-Alumina

Threshold Limit Value:	Authority	Basis	Limit	Remarks
	ACGIH	TLV	1.0 mg/m <sup>3</sup>	Aluminum Oxide (respirable dust averaged over 8 hour work shift)

**Special Equipment:** No Data Available.

<b>Respiratory Protection:</b>	Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
<b>Protective Gloves:</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Eye Protection:</b>	Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
<b>Body Protection:</b>	Wear appropriate protective clothing.

## 9. PHYSICAL AND CHEMICAL CHARACTERISTICS

<b>Color:</b>	White	<b>Molecular Weight:</b>	101.96 g/mol
<b>Forms:</b>	Powder, Granules, 2-5mm Crystal, Tablets (fused)	<b>Density:</b>	3.95 g/cm <sup>3</sup>
<b>Odor:</b>	Odorless	<b>pH:</b>	No Data Available.
<b>Water Solubility:</b>	Insoluble	<b>Auto-Ignition Temperature:</b>	No Data Available.
<b>Boiling Point:</b>	> 2,977°C (> 5,391°F)	<b>Evaporation Rate:</b>	No Data Available.
<b>Melting Point / Freezing Point:</b>	> 2,072°C (> 3,762°F)	<b>Flammability or Explosive Limits:</b>	Not Flammable.
<b>Vapor Pressure:</b>	1 hPa at 2,158°C (3,916°F)	<b>Partition Coefficient: n-octanol/ water</b>	No Data Available.
<b>Vapor Density:</b>	No Data Available.	<b>Decomposition Temperature:</b>	No Data Available.
<b>Flash Point:</b>	No Data Available.	<b>Viscosity:</b>	No Data Available.

## 10. REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Reacts with:</b>	Strong acids, strong bases, Chlorine Trifluoride, Ethylene Oxide, Halogenated Hydrocarbon, Oxygen Difluoride, Sodium Nitrate, Vinyl compounds, Oxygen, Nitrates, Halogens
<b>Incompatible Conditions:</b>	Moisture.
<b>Hazardous Decomposition Products:</b>	Under fire conditions may form Aluminum oxide fumes.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity</b>	Eyes:	No Data Available.
	Skin:	No Data Available.
	Ingestion:	May result in gastrointestinal disturbances.
	Inhalation:	May result in cough, chest pain, or difficulty in breathing.
<b>Chronic Toxicity</b>	Skin Corrosion / Irritation:	No Data Available.
	Serious Eye Damage / Irritation:	No Data Available.

Respiratory / Skin Sensitization: No Data Available.

Mutagenic Effects: No Data Available.

Reproductive / Teratogenic Effects: No Data Available.

Specific Target Organ Toxicity: No Data Available.  
(single exposure)

Specific Target Organ Toxicity: Lower respiratory tract irritation, Pneumoconiosis  
(repeated exposure)

Aspiration Hazard: No Data Available.

Other Adverse Effects: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

## 12. ECOLOGICAL INFORMATION

**Aquatic Toxicity:** No Data Available.

**Persistence and degradability:** No Data Available.

**Bioaccumulative potential:** No Data Available.

**Notes:** No ecological problems are to be expected when the product is handled and used with due care and attention.

## 13. DISPOSAL CONSIDERATIONS

**Disposal:** Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of in accordance with local, state, or national regulations.

## 14. TRANSPORTATION DATA

**Hazardous:** **DoT:** Not Dangerous Goods  
**IMDG:** Not Dangerous Goods  
**IATA:** Not Dangerous Goods

**Pictogram:** N/A

**Hazard Class:** N/A

**Packing Group:** N/A

**UN Number:** N/A

**US DoT** **Proper Name:** N/A

Marine Pollutant:

IMDG **Proper Name:** N/A

EMS-No:

IATA **Proper Name:** N/A**15. REGULATORY INFORMATION**

<b>SARA 302 Components</b>	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components</b>	The following components are subject to reporting levels established by SARA Title III, Section 313:  Aluminum Oxide (CAS No. 1344-28-1)
<b>SARA 311/312 Hazards</b>	Chronic Health Hazard.
<b>Massachusetts Right to Know Components</b>	No components are subject to the Ma. Right to Know Act.
<b>Pennsylvania Right to Know Components</b>	This product is known to the State of Pennsylvania as an environmental hazard.  Aluminum Oxide (CAS No. 1344-28-1)
<b>New Jersey Right to Know Components</b>	Aluminum Oxide (CAS No. 1344-28-1)
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION**

Copyright 2019 Lorad Chemical Corporation. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. The information in this sheet does not represent a guarantee of the properties of the product. Lorad Chemical Corporation and its Affiliates make no warranty with respect to the accuracy of the information or the suitability of this product for any particular application, and shall not be held liable for any damage resulting from handling or from contact with the above product.

Revision Date: 5/28/2019