

# MATERIAL SAFETY DATA SHEET

COMMON NAME: Alumina, Aluminum Oxide, High Purity Alumina

Distributor: Meller Optics, Inc.  
120 Corliss Street  
Providence, RI 02904

EMERGENCY PHONE NUMBER: 401-331-3717  
Information Phone Number: 401-331-3717

Revised Date: 08/14/07

## SECTION I: MATERIAL DESCRIPTION

Chemical Name: Aluminum Oxide  
Chemical Formula:  $Al_2O_3$   
Other Designation: Microlux High Purity Aluminum Oxide, Alumina, Alumina Polishing Powder, Ceramic Alumina Powder (All CR, GE, A, AL, B, and SM grades)  
Composition: >99.9% by weight aluminum oxide  
Chemical Family: Metal Oxide  
CAS No. 1344-28-1 TSCA Identity No. 4171240

## SECTION II: OCCUPATIONAL EXPOSURE LIMITS

<u>Component</u>	<u>C.A.S. No.</u>	<u>Wt. %</u>	(TWA in $mg/m^3$ )		ACGIH TLV	
			<u>total</u>	<u>respirable</u>	<u>total</u>	<u>respirable</u>
Alumina	1344-28-1	>99.9%	10	5	10	5

## SECTION III: PHYSICAL AND CHEMICAL DATA

Physical Form: Powder, White, Odorless	Evaporation Rate: N/A
Boiling Point: 2977°C	Chemical Reactivity: N/A
Melting Point: >2050°C	Water Solubility: Insoluble
Vapor Pressure: 1 mm at 2158°C	Specific Gravity: 3.98 ( $H_2O=1$ )

## SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A	Extinguishing Media: N/A
Auto-ignition Temperature: N/A	Flammable Limits: Lower, Upper: N/A
Explosive Potential: N/A	

Special Fire Fighting Procedures: Wear protective equipment to avoid contact with body or inhalation of mist or dust. Use self-container breathing apparatus to avoid dust or fumes generated during fire fighting.

## SECTION V: REACTIVITY DATA

Not reactive with Air, Water, Heat, and Oxidizers.  
Non-corrosive

N/A = Not Applicable

---

**SECTION VI: HEALTH HAZARD AND FIRST AID**  
**SEE SECTION II FOR EXPOSURE LIMITS**

This material is believed to be a low health risk. Treat as nuisance dust as specified by the American Conference of Governmental Industrial Hygienists (ACGIH)

**Inhalation:** Excessive exposure may cause cough, mucus production, shortness of breath. Remove victim to fresh air immediately. Obtain medical attention if breathing difficulty persists beyond 15 minutes.

**Ingestion:** This material is not expected to be an ingestion hazard; no known human or animal health effects. If swallowed, obtain medical attention.

**Eye Contact:** Safety goggles recommended. May cause eye irritation. Rinse eyes with water for 20-30 minutes, retracting eyelids often. Obtain medical attention if pain or redness persist.

**Skin Contact:** Rubber gloves recommended. May cause drying of skin. Otherwise, this material is not expected to be a skin irritant; no known human or animal health effects data.

---

**SECTION VII: SPILL, LEAK AND DISPOSAL PROCEDURES**

**Product Clean-Up:** Scoop up or absorb material.

**Disposal:** Disposal should be in accordance with all applicable local, state and federal laws and regulations. Disposal by ordinary solid waste methods is recommended, if permissible. Consult your attorney or appropriate regulatory officials for information regarding disposal requirements.

---

**SECTION VIII: SPECIAL PROTECTION AND PRECAUTIONS**

Use with adequate ventilation to meet exposure limits as listed in Section II. Where the exposure limit is or may be exceeded, use NIOSH approved respiratory protection. Selection of appropriate respirator (dust respirator) should be based on the actual or potential airborne contaminants and their concentrations present.

Use of protective gloves and eye wear is recommended to avoid irritation to the skin and eyes.

---

**SECTION IX: REGULATORY INFORMATION**

Chemical substance components have been reported to the EPA Office of Toxic Substances in accordance with the requirements of the Toxic Substance Control Act (Title 40 CFR Part 710).

For purposes of SARA III reporting, this substance contains no ingredients listed on the CERCLA, Extremely Hazardous, or Section 313 lists.

Aluminum Oxide is regulated by SARA Sections 311, 312 solely because it is regulated by OSHA Hazard Communication Standard (29CFR 1910.1200). However, none of the five Hazard categories (SARA 311, 312) is appropriate for this product.

D.O.T. Shipping Name, Hazard Class, I.D. No. (if applicable): Not Regulated  
Canadian TDG Hazard Class & PIN: Not Regulated

---

Information herein is given in good faith as authoritative and valid; however, no warranty, express or implied, can be made.