



## MATERIAL SAFETY DATA SHEET

### MAGNESIUM OXIDE SINGLE CRYSTAL

Advanced Composite Materials, LLC  
1446 S. Buncombe Road  
Greer, South Carolina 29651

**Telephone Numbers:**

Technical: 864-877-0123

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Emergency: 1-800-457-4280 (Infotrac)

#### I. GENERAL

**Trade Names:** Magnesium Oxide Single Crystal: All Designations

**Other Name:** MgO Single Crystal, Magnesia

**Generic Name:** Magnesium Oxide

**Chemical Family:** Metal Carbide/Metal Oxide

**CAS No.:** See Section II

**DOT Hazardous Material Proper Shipping Name:** Not regulated

**DOT Hazard Class:** Not regulated

**NFPA Rating:** Health 0 Flammability 0 Reactivity 0

**UN/NA ID NO.:** N/AP

#### II. HAZARDOUS INGREDIENTS

<u>NAME</u>	<u>CAS #</u>	<u>%</u>	<u>CARCINOGEN<sup>a</sup></u>	<u>EXPOSURE LIMIT</u>
Magnesium Oxide	1309-48-4	100%	N/P	OSHA PEL : 10 mg/m <sup>3</sup> TWA (as fume) respirable: 5 mg/m <sup>3</sup> TWA (as dust) ACGIH <sup>®</sup> TLV <sup>®</sup> : 10 mg/m <sup>3</sup> TWA (as fume)

- a. Listing Agencies: 1 = NTP, National Toxicology Program  
2 = IARC, International Agency for Research on Cancer  
3 = ACGIH<sup>®</sup>, American Conference of Governmental Industrial Hygienists  
4 = OSHA, Occupational Safety and Health Administration  
5 = Other

#### III. PHYSICAL/CHEMICAL CHARACTERISTICS

**Boiling Point:** N/AP

**Specific Gravity (Water = 1):** 3.65

**Vapor Pressure (mm Hg):** N/AP

**Melting Point:** 2800°C

**Vapor Density (Air = 1):** N/AP

**pH:** N/AP

**Solubility in Water:** Insoluble

**Evaporation Rate (Butyl Acetate = 1):** N/AP

**Appearance and Odor:** Translucent to white crystal as thin wafers or rectangular shapes, with no odor.

#### IV. FIRE AND EXPLOSION HAZARD DATA

**Flash Point (Method):** Non-flammable by conventional test methods.

**Auto Ignition Temp. (Method):** N/AP

**Flammable Limits:** Non-flammable

**Lower (LEL):** N/AP

**Upper (UEL):** N/AP

**Fire and Explosion Hazards:** None. Inorganic, non-explosive.

**Extinguishing Media:** Use extinguishing media appropriate for surrounding materials.

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**V. REACTIVITY DATA**


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**Stability:** Stable.

**Conditions to Avoid:** None.

**Incompatibility (Materials to Avoid):** None (Long term contact with moisture will cause surface to become cloudy, a non-hazardous condition).

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** N/AP

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**VI. HEALTH HAZARDS**


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**Physical Hazards:** None

**Acute or Chronic Effects:** None

**Effects of Overexposure:** No harm via inhalation, skin absorption or eye contact when handling single crystal material. During grinding and finishing, skin contact with grinding dust may cause drying and roughness or irritation to persons with sensitive skin. No effect to normal skin.

**Emergency First Aid Procedures:** First, wash the affected skin area with water. If skin irritation continues, apply an ointment or cream to the skin.

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**VII. PRECAUTIONS FOR SAFE HANDLING AND USE**


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**Steps to be Taken in Case Material is Released or Spilled:** Collect materials for re-use or disposal. To minimize dust generation, wet down spillage with low velocity fine mist water spray.

**Waste Disposal Method:** Dispose in accordance with all federal, state, county and local jurisdiction solid waste regulations.

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**VIII. CONTROL MEASURES**


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**Respiratory Protection:** None under normal conditions of use.

**Eye Protection:** Wear safety goggles during dry grinding.

**Skin Protection:** Wear rubber gloves during polishing or grinding.

**Ventilation:** Ventilate work area to remove dust produced during polishing or grinding.

**Other Hygienic and Work Practices:** Wear NIOSH/OSHA approved nuisance dust respirator when polishing or grinding produces dust.

	EQ = Equal	AP = Approximately	N/P = No Applicable Information Found
--- NOTE --- QUALIFICATIONS	LT = Less Than	UK = Unknown	N/AP = Not Applicable
	GT = Greater Than	TR = Trace	N/DA = No Data Available

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