



# Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300  
Poison Center: (800) 562-8236  
Revision Date: January 8<sup>th</sup>, 2019

## SAFETY DATA SHEET

Identity: Magnesium Aluminate

Formula: MgAl<sub>2</sub>O<sub>4</sub>

### SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

### SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular Weight: 142.26

CAS #	OSHA PEL	ACGIH TLV	%
12068-51-8	10mg/m <sup>3</sup>	10mg/m <sup>3</sup>	0.0-100.0%

### SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Vapor Pressure (vs. air or mmHg): N/A

Melting Point: 2135.00°C

Specific Gravity: 3.6 gm/cc

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

*Appearance and odor:* Off-white to grey powder and pieces, no odor

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Method Used:* Non-Flammable

*Explosive Limits:* LEL: N/A

UE: N/A

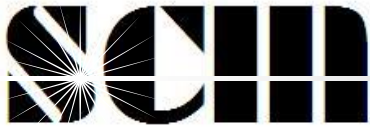
*Extinguishing Media:* Extinguishing agent for surrounding material and type of fire.

#### *Special Fire Fighting Procedures:*

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

#### *Unusual Fire and Explosion Hazards:*

When heated to decomposition, magnesium aluminate may emit magnesium oxide.



SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (instability):* None

*Incompatibility:* None Recorded

*Hazardous Decomposition or Byproducts:* Aluminum, magnesium and their oxides.

*Hazardous Polymerization:* Will not occur

*Conditions to avoid (hazardous polymerization):* None

SECTION VI - HEALTH HAZARD DATA

*Route of Entry:* Inhalation? Yes      Ingestion? Yes      Skin? Yes      Eyes? Yes      Other? No

To the best of our knowledge the chemical, physical and toxicological properties of magnesium aluminate oxide have not been thoroughly investigated and recorded.

Magnesium compounds have variable toxicity. The inhalation of fumes of freshly sublimed magnesium oxide may cause metal fume fever. There is no evidence that magnesium produces true systemic poisoning. Protection necessary for personnel handling and processing magnesium is usually no difference from that which is necessary for other metals. The toxicity of magnesium compounds is usually that of an anion. (Sax, Dangerous Properties of Industrial Materials, eight edition).

Aluminum compounds have many commercial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties. Inhalation of fine aluminate oxides particles is associated with shaver's disease. (Sax, Dangerous Properties of Industrial Materials, eight edition).

*Signs and Symptoms of Overexposure:*

*Inhalation:* May cause cough, mucous production, shortness of breath, nausea, muscular weakness, paralysis, general depression, ataxia, lethargy, hypotension, increased sensitivity of carotid sinus and cardiac arrest.

*Ingestion:* May cause gastrointestinal disturbances, skin lesions, nervous afflictions, growth retardation, per hepatic granulomas and fibrous peritonitis.

*Skin:* May cause redness and itching.

*Eye:* Itching, redness, burning and watering.

*Health Hazards (Acute and Chronic):*

*Inhalation:*

Acute: Toxic by inhalation of dust. Magnesium toxicity may depress the central nervous system.

Chronic: Inhalation of finely divided dust may cause lung damage, pulmonary fibrosis, terminal bronchia pneumonia and paralysis of the respiratory, cardiovascular and central nervous system.

*Ingestion:*

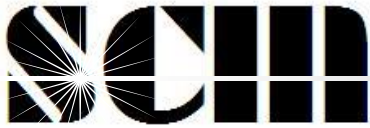
Acute: May cause acute aluminum toxicity.

Chronic: No chronic health effects recorded

*Skin:*

Acute: May cause mild irritation.

Chronic: No chronic health effects recorded



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*Eye:*

Acute: Dusts will irritate eyes

Chronic: No chronic health effects recorded

*Target Organ:* Respiratory system, central nervous system and cardiovascular system.

*Carcinogenicity:* NTP? No IARC Monographs? No OSHA Regulated? No

*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory disorders.

*Emergency and First Aid Procedures:*

*Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

*Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

*Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention immediately.

*Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention immediately.

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII-Control Measures. Isolate spill area, provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

*Waste disposal method:*

Dispose of in accordance with state, local, and federal regulations.

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

## SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

*Ventilation:*

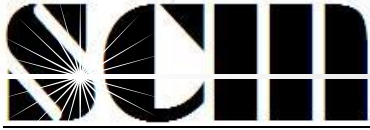
Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): Recommended.

*Work/Hygienic/Maintenance Practices:*

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established



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