

Common Name: **MAGNESIUM NITRATE**

Synonyms: Magnesium Dinitrate; Nitromagnesite

CAS No: 10377-60-3

Molecular Formula:  $MgN_2O_6$

RTK Substance No: 1143

Description: Odorless, colorless or white, crystalline solid

### HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p><b>2 - Health</b></p> <p><b>0 - Fire</b></p> <p><b>1 - Reactivity</b></p> <p><b>DOT#:</b> UN 1474</p> <p><b>ERG Guide #:</b> 140</p> <p><b>Hazard Class:</b> 5.1 (Oxidizer)</p>	<p><b>Magnesium Nitrate</b> is not combustible, but it is a <b>STRONG OXIDIZER</b> that enhances the combustion of other substances.</p> <p>Flood with water.</p> <p><b>POISONOUS GASES ARE PRODUCED IN FIRE</b>, including <i>Nitrogen Oxides</i> and <i>Magnesium Oxides</i>.</p> <p>Use water spray to keep fire-exposed containers cool.</p> <p><b>Magnesium Nitrate</b> may ignite combustibles (wood, paper and oil).</p> <p>May be sensitive to impact when contaminated with <i>Organic Material</i>.</p>	<p><b>Magnesium Nitrate</b> may react violently with <b>COMBUSTIBLES</b>; <b>ORGANIC MATERIALS</b>; <b>OXIDIZING AGENTS</b> (such as <b>PERCHLORATES</b>, <b>PEROXIDES</b>, <b>PERMANGANATES</b>, <b>CHLORATES</b>, <b>NITRATES</b>, <b>CHLORINE</b>, <b>BROMINE</b> and <b>FLUORINE</b>); <b>REDUCING AGENTS</b> (such as <b>LITHIUM</b>, <b>SODIUM</b>, <b>ALUMINUM</b> and their <b>HYDRIDES</b>); and <b>DIMETHYLFORMAMIDE</b>, causing fires and explosions.</p> <p><b>Magnesium Nitrate</b> is not compatible with <b>STRONG ACIDS</b> (such as <b>HYDROCHLORIC</b>, <b>SULFURIC</b> and <b>NITRIC</b>); <b>METAL POWDERS</b>; <b>CYANIDES</b>; <b>TIN CHLORIDE</b>; <b>NITRILES</b>; and <b>PHOSPHORUS COMPOUNDS</b>.</p> <p>Protect from <b>HEAT</b>, <b>SPARKS</b>, <b>SHOCK</b> and <b>FRICTION</b>.</p>

### SPILL/LEAKS

**Isolation Distance:**

Spill: 25 meters (75 feet)

Fire: 800 meters (1/2 mile)

Moisten spilled material first or use a HEPA-filter vacuum for clean-up and place into sealed containers for disposal.

### PHYSICAL PROPERTIES

<b>Odor Threshold:</b>	Odorless
<b>Flash Point:</b>	Noncombustible
<b>Vapor Pressure:</b>	0.5 mm Hg at 77°F (25°C)
<b>Specific Gravity:</b>	1.46 (water = 1)
<b>Water Solubility:</b>	Soluble
<b>Boiling Point:</b>	626°F (330°C) (Decomposes)
<b>Melting Point:</b>	192°F (89°C)
<b>Molecular Weight:</b>	148.3

### EXPOSURE LIMITS

No occupational exposure limits have been established for **Magnesium Nitrate**.

The Protective Action Criteria values are:

PAC-1 = 30 mg/m<sup>3</sup>

PAC-2 = 50 mg/m<sup>3</sup>

PAC-3 = 250 mg/m<sup>3</sup>

### PROTECTIVE EQUIPMENT

<b>Gloves:</b>	Nitrile and Natural Rubber
<b>Coveralls:</b>	Tyvek®
<b>Respirator:</b>	Full facepiece APR with <i>P100 filters</i> >30 mg/m <sup>3</sup> - SCBA

### HEALTH EFFECTS

<b>Eyes:</b>	Irritation and burns
<b>Skin:</b>	Irritation and burns
<b>Inhalation:</b>	Nose and throat irritation with coughing and wheezing.
	Headache, fatigue and blue color to the skin and lips (methemoglobinemia)

### FIRST AID AND DECONTAMINATION

**Remove** the person from exposure.

**Flush** eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.

**Quickly** remove contaminated clothing and wash contaminated skin with large amounts of water.

**Begin** artificial respiration if breathing has stopped and CPR if necessary.

**Transfer** promptly to a medical facility.