MAGNESIUM NITRATE

MGN

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid crystals	White	Odorless
Magnesium nitrate hexahydrate			
Nitromagnesite			

Wear protective gloves and clean body-covering clothing.
Notify local health and pollution control agencies.

Fire
Not flammable.
Strong oxidizer which may cause extremely violent combustion of oxidizable materials.
Wear full protective clothing and self-contained breathing apparatus.
Extinguish with materials appropriate for surrounding fire.

Exposure
CALL FOR MEDICAL AID.
DUST
Move victim to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Remove contaminated clothing and shoes.
Wash skin with soap and water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and induce vomiting.

Water Pollution
Effect of low concentrations on aquatic life is unknown.
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS
Stop discharge

2. CHEMICAL DESIGNATIONS
- **2.1 CG Compatibility Group:** Not listed.
- **2.2 Formula:** $Mg(NO_3)_2 \cdot 6H_2O$
- **2.3 IMO/UN Designation:** Currently not available
- **2.4 DOT ID No.:** 1474
- **2.5 CAS Registry No.:** 13446-18-9
- **2.6 NAERG Guide No.:** 140
- **2.7 Standard Industrial Trade Classification:** 52359

3. HEALTH HAZARDS
- **3.1 Personal Protective Equipment:** Wear protective gloves and clean body-covering clothing. If dust is encountered, use approved respirator.
- **3.2 Symptoms Following Exposure:** Exposure can cause mild irritation to the mucous membranes. Symptoms may include coughing and shortness of breath. Ingestion of large doses may cause dizziness, abdominal pain, vomiting, bloody diarrhea, weakness, convulsions, and collapse. Contact with skin may cause irritation, redness, and pain.
- **3.3 Treatment of Exposure:** Get medical attention. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES: Flush with water for at least 15 min., lifting lids occasionally. Contact lenses should not be worn when working with this chemical. SKIN: Remove contaminated clothing and shoes. Wash with soap and water. INGESTION: Induce vomiting immediately by giving two glasses of water or milk and sticking finger down throat.
- **3.4 TLV-TWA:** Not listed.
- **3.5 TLV-STEL:** Not listed.
- **3.6 TLV-Ceiling:** Not listed.
- **3.7 Toxicity by Ingestion:** Currently not available
- **3.8 Toxicity by Inhalation:** Currently not available.
- **3.9 Chronic Toxicity:** Currently not available
- **3.10 Vapor (Gas) Irritant Characteristics:** Not pertinent.
- **3.11 Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.
- **3.12 Odor Threshold:** Odorless
- **3.13 IDLH Value:** Not listed.
- **3.14 OSHA PEL-TWA:** Not listed.
- **3.15 OSHA PEL-STEL:** Not listed.
- **3.16 OSHA PEL-Ceiling:** Not listed.
- **3.17 EPA AEGL:** Not listed

4. FIRE HAZARDS
- **4.1 Flash Point:** Not flammable.
- **4.2 Flammable Limits in Air:** Not pertinent.
- **4.3 Fire Extinguishing Agents:** Use materials appropriate for the surrounding fire.
- **4.4 Fire Extinguishing Agents Not to Be Used:** Not pertinent.
- **4.5 Special Hazards of Combustion Products:** Toxic fumes of nitrogen oxides are produced when heated to decomposition.
- **4.6 Behavior in Fire:** Contact with oxidizable substances may cause extremely violent combustion.
- **4.7 Auto Ignition Temperature:** Not pertinent.
- **4.8 Electrical Hazards:** Not pertinent.
- **4.9 Burning Rate:** Not pertinent.
- **4.10 Adiabatic Flame Temperature:** Not pertinent.
- **4.11 Stoichometric Air to Fuel Ratio:** Not pertinent.
- **4.12 Flame Temperature:** Not pertinent.
- **4.13 Combustion Molar Ratio (Reactant to Product):** Not pertinent.
- **4.14 Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY
- **5.1 Reactivity with Water:** No reaction.
- **5.2 Reactivity with Common Materials:** Contact with dimethyl formamide, combustible, organic, and oxidizable materials can generate heat, perhaps causing ignition and violent combustion.
- **5.3 Stability During Transport:** Stable.
- **5.4 Neutralizing Agents for Acids and Caustics:** Not pertinent.
- **5.5 Polymerization:** Will not polymerize.
- **5.6 Inhibitor of Polymerization:** Not pertinent.

6. WATER POLLUTION
- **6.1 Aquatic Toxicity:** Currently not available
- **6.2 Waterfowl Toxicity:** Currently not available
- **6.3 Biological Oxygen Demand (BOD):** Currently not available
- **6.4 Food Chain Concentration Potential:** Currently not available
- **6.5 GESAMP Hazard Profile:**
  - **Bioaccumulation:** 0
  - **Damage to living resources:** 0
  - **Human Oral hazard:** 0
  - **Human Contact hazard:** I
  - **Reduction of amenities:** X

7. SHIPPING INFORMATION
- **7.1 Grades of Purity:** Technical; 98%.
- **7.2 Storage Temperature:** Ambient.
- **7.3 Inert Atmosphere:** None required.
- **7.4 Venting:** Not listed.
- **7.5 IMO Pollution Category:** Currently not available
- **7.6 Ship Type:** Currently not available
- **7.7 Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS
- **8.1 49 CFR Category:** Oxidizer
- **8.2 49 CFR Class:** 5.1
- **8.3 49 CFR Package Group:** III
- **8.4 Marine Pollutant:** No
- **8.5 NFPA Hazard Classification:** Not listed
- **8.6 EPA Reportable Quantity:** Not listed.
- **8.7 EPA Pollution Category:** Not listed.
- **8.8 RCRA Waste Number:** Not listed
- **8.9 EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES
- **9.1 Physical State at 15° C and 1 atm:** Solid
- **9.2 Molecular Weight:** 256.41
- **9.3 Boiling Point at 1 atm:** Decomposes at 626°F = 330°C = 603°K
- **9.4 Freezing Point:** 192°F = 89°C = 362°K
- **9.5 Critical Temperature:** Currently not available
- **9.6 Critical Pressure:** Currently not available
- **9.7 Specific Gravity:** 1.46
- **9.8 Liquid Surface Tension:** Currently not available
- **9.9 Liquid Water Interfacial Tension:** Currently not available
- **9.10 Vapor (Gas) Specific Gravity:** Currently not available
- **9.11 Ratio of Specific Heats of Vapor (Gas):** Currently not available
- **9.12 Latent Heat of Vaporization:** Currently not available
- **9.13 Heat of Combustion:** Currently not available
- **9.14 Heat of Decomposition:** Currently not available
- **9.15 Heat of Solution:** Currently not available
- **9.16 Heat of Polymerization:** Not pertinent.
- **9.17 Heat of Fusion:** Currently not available
- **9.18 Limiting Value:** Currently not available
- **9.19 Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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