

MAGNESIUM

MGX

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Magnesium perchlorate		Solid	Silvery	Odorless
		Sinks in water.		
<p>Keep people away. Shut off ignition sources and call fire department. Notify local health and pollution control agencies.</p>				
Fire	<p>FLAMMABLE. Extinguish with dry graphite, soda ash, or other inert powder. DO NOT USE WATER, FOAM, CARBON DIOXIDE, DRY CHEMICALS, OR VAPORIZING LIQUID ON FIRE.</p>			
Exposure	<p>Call for medical aid. SOLID Irritating to eyes. Harmful if swallowed. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.</p>			
Water Pollution	<p>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.</p>			

<p>1. CORRECTIVE RESPONSE ACTIONS Stop discharge Collection Systems: Dredge</p>	<p>2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: Mg 2.3 IMO/UN Designation: Pellets, turnings, or ribbon: 4.1/1869; powder, non-pyroric: 4.3/1418 2.4 DOT ID No.: 1418 (powder), 1869 (pellets) 2.5 CAS Registry No.: 7439-95-4 2.6 NAERG Guide No.: 138 2.7 Standard Industrial Trade Classification: 52229</p>
<p>3. HEALTH HAZARDS 3.1 Personal Protective Equipment: Eye protection 3.2 Symptoms Following Exposure: Dust irritates eyes in same way as any foreign material. Penetration of skin by fragments of metal is likely to produce local irritation, blisters, and ulcers which may become infected. 3.3 Treatment of Exposure: EYES: flush with water to remove dust. SKIN: treat as any puncture. 3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Oral LD₅₀ (lowest lethal dose) = 230 mg/kg (dog) 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: Currently not available 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</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not pertinent (solid). Flammable when in the form of turnings or powder.
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Inert dry powders (e.g., graphite, limestone, salt)
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Water, foam, halogenated agents, carbon dioxide.
- 4.5 **Special Hazards of Combustion**
Products: Not pertinent
- 4.6 **Behavior in Fire:** Forms dense white smoke. Flame is very bright.
- 4.7 **Auto Ignition Temperature:** 883°F
- 4.8 **Electrical Hazards:** Class I, Group E
- 4.9 **Burning Rate:** Not pertinent
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 4.8 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 1.0 (calc.)
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Pigs, ingots, turnings, sticks: all high purity.
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open (flame arrester)
- 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:** Dangerous When Wet
- 8.2 **49 CFR Class:** 4.3
- 8.3 **49 CFR Package Group:** Currently not available.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**
- | | |
|----------------------|----------------|
| Category | Classification |
| Health Hazard (Blue) | 0 |
| Flammability (Red) | 1 |
| Instability (Yellow) | 2 |
- 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

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** In finely divided form, reacts with water and acids to release flammable hydrogen gas.
- 5.2 **Reactivity with Common Materials:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 24.3
- 9.3 **Boiling Point at 1 atm:** 2,012°F = 1,100°C = 1,373°K
- 9.4 **Freezing Point:** 1,202°F = 650°C = 923°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.74 at 20°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** -11,950 Btu/lb = -6,650 cal/g = -278 X 10³ J/kg
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** 88.9 cal/g
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** None
- 6.2 **Waterfowl Toxicity:** None
- 6.3 **Biological Oxygen Demand (BOD):** None
- 6.4 **Food Chain Concentration Potential:** None
- 6.5 **GESAMP Hazard Profile:** Not listed

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
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

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
	I N S O L U B L E		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T