
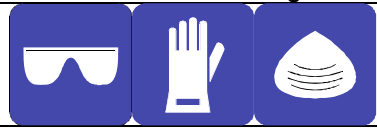




NFPA 	HCS Risk Phrases HCS CLASS:	Protective Clothing 
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Section I. Chemical Product and Company Identification				
Common Name/ Trade Name	MAGNESIUM SULFATE		Revision Date: 7-7-05	
Supplier	FRITZ INDUSTRIES, INC. 500 SAM HOUSTON ROAD MESQUITE, TX 75149 (972) 285-5471 (800) 955-1323		In Case of Emergency. (800) 424-9300 Week Days: (972) 285-5471 (800) 955-1323	
Chemical Family				
Material Uses				
Section II. Composition and Information on Ingredients				
Name	CAS #	% by Weight	OSHA PEL	LC ₅₀ /LD ₅₀
Magnesium sulfate, heptahydrate; Epsom Salts	7487-88-9	100	Not Established	Not Established
Section III. Hazards Identification				
Emergency overview	White or transparent crystalline odorless powder. Noncombustible. At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated.			
Eye contact	No known adverse effects expected, but dust may cause mechanical irritation.			
Skin	No known adverse effects expected, but may cause minor skin irritation.			
Inhalation	Causes nausea, vomiting, abdominal cramps, and diarrhea.			
Ingestion	Causes nausea, vomiting, abdominal cramps, and diarrhea.			
Chronic exposure	No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.			
Section IV. First Aid Measures				
Eye Contact	Wash thoroughly with running water. Get medical advice if irritation develops.			
Skin Contact	Remove any contaminated clothing. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.			
Inhalation	Remove to fresh air. Get medical attention for any breathing difficulty.			
Ingestion	If large quantities of this material are swallowed, call a physician immediately. Do NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.			
Section V. Fire and Explosion Data				
Flammability of the Product	This material is noncombustible.			
Explosion Hazards in Presence of Various Substances	Not considered to be an explosion hazard.			
Fire Fighting Media and Instructions	Use any means suitable for extinguishing surrounding fire. Use protective clothing and breathing equipment appropriate for the surrounding fire.			
Section VI. Accidental Release Measures				
Leak/Spill	Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.			
Disposal	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with			

federal, state and local requirements.	
Section VII. Handling and Storage	
Handling	
Storage	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Section VIII. Exposure Controls/Personal Protection	
Engineering Controls	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.
Personal Protection	Skin: Wear protective gloves and clean body-covering clothing. Eye: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area. For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Personal Protection in Case of a Large Spill	
Section IX. Physical and Chemical Properties	
Physical state and Appearance	Solid odor: Odorless color: Transparent crystals or white powder
Specific Gravity	2.65 g/ml @ 4°C
pH	Aqueous solution is neutral or slightly acid.
Solubility	Very soluble in water.
Section X. Stability and Reactivity Data	
Stability	Stable under ordinary conditions of use and storage.
Incompatibility with various substances	Ethoxy ethyl alcohols, arsenates, phosphates, tartrates, lead, barium, strontium, and calcium
Special Remarks for Reactivity	Hazardous decomposition products- oxides of sulfur and the contained metal. Hazardous polymerization will not occur. Avoid heat, moisture, incompatibles.
Section XI. Toxicological Information	
Primary Routes of Exposure	
Toxic Effects on Humans	
Special Remarks on other Toxic Effects on Humans	
Section XIV. Transport Information	
DOT Classification	Not regulated.
Section XV. Other Regulatory Information and Pictograms	
Other Classifications	TSCA Yes

CITRIC ACID

	EC Japan Australia
Canada	Korea DSL NDSL Philippines
Federa, State & International	SARA 302

HMIS (U.S.A.)		National Fire Protection Association (U.S.A.)	Health		Fire Hazard
					Reactivity
					Specific Hazard

Section XVI. Other Information

Notice to Reader
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