

MARTIN MARIETTA MAGNESIA SPECIALTIES 8140 Corporate Drive, Suite 220 BALTIMORE, MD 21236 (410) 780-5500		MSDS CODE: 92-0026 MAN DATE: 01/04/2003
EMERGENCY PHONE: (800)424-9300 CHEMTREC		
CHEMICAL DESCRIPTION: Calcium Chloride and Magnesium Chloride Solution		
PRODUCT USE:		
PRODUCT NAME(S): Brine (Raw/Effluent)		

SECTION II: HAZARDOUS COMPONENTS

HAZARDOUS COMPONENT	CAS NUMBER	APPROX WT %	LD50 or LC50 (species/route)
Calcium Chloride	10043-52-4	10-30	LD50 1000 mg/kg (rat/oral)
Magnesium Chloride	07786-30-3	0-10	LD50 2800 mg/kg (rat/oral)
Sodium Chloride	07647-14-5	1-5	LD50 3000 mg/kg (rat/oral)

SECTION III: PHYSICAL DATA

BOILING POINT (F): 102 to 107 C	FREEZE POINT (F): -11 to -30 C
pH: 5 to 10	VAP PRESS (mm Hg): Not determined
% VOLATILE (by VOL): ~ 99.9 %	SPECIFIC GRAVITY: 1.23 - 1.26
VAPOR DENSITY: Not determined	EVAPORATION RATE: Not determined
SOLUBILITY IN WATER: Complete	ODOR THRESH (ppm): Not determined
PHYSICAL STATE: Liquid	OIL/WATER COEFFIC: Not applicable
APPEARANCE AND ODOR: Clear to tannish colored liquid, mild odor.	

SECTION IV: FIRE & EXPLOSION DATA (con't on page 2)

FLASH POINT (METHOD): Product is not flammable or combustible.		
AUTO-IGNITION TEMP: Not applic	LEL: Not app	UEL: Not app
SENSITIVE TO MECHANICAL IMPACT? No	SENSITIVE TO STATIC DISCHARGE? No	

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SECTION IV: FIRE & EXPLOSION DATA (con't from page 1)

FLAMMABILITY CLASS: Not Flammable	CONDITIONS OF FLAMMABILITY: Not Flammable
<p>EXTINGUISHING MEDIA: Product is not flammable. Use media appropriate to primary source of fire. Otherwise, use dry chemical, water spray, water fog, carbon dioxide, foam or sand/earth.</p>	
<p>SPECIAL FIREFIGHTING PROCEDURES: Product may generate fumes of chlorine when exposed to a fire. Do not enter enclosed or confined spaces without appropriate NIOSH approved respirator or self-contained breathing apparatus for protection against hazardous decomposition products or oxygen deficiencies. Use adequate personal protection when handling product as contact with eyes and skin may lead to painful irritation of exposed areas.</p>	
<p>UNUSUAL FIRE & EXPLOSION HAZARDS: Fumes of chlorine may collect in confined spaces to present an inhalation hazard if entered into without adequate respiratory protection.</p>	
<p>HAZARDOUS COMBUSTION PRODUCTS: None known.</p>	

SECTION V: REACTIVITY DATA

STABLE - YES: XX	NO:
<p>CONDITIONS OF REACTIVITY: Will react with incompatibles (see Section V below)</p>	
<p>CONDITIONS OF CHEMICAL INSTABILITY: Stable under ambient temperatures and pressures.</p>	
<p>INCOMPATIBILITY (MATERIALS TO AVOID): BROMINE TRIFLUORIDE rapidly attacks calcium chloride and sodium chloride; FURAN-2-PEROXYCARBOXYLIC ACID explodes upon addition of calcium chloride or magnesium chloride.</p> <p>magnesium chloride.</p>	
<p>HAZARDOUS DECOMPOSITION PRODUCTS: Steam when heated; fumes of chlorine if heated to decomposition.</p>	
IS THIS PRODUCT SUBJECT TO POLYMERIZATION?	NO: XX YES:
<p>CONDITIONS UNDER WHICH PRODUCT WILL POLYMERIZE: None known.</p>	

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SECTION VI: TOXICOLOGICAL/HEALTH HAZARD DATA

ROUTES OF ENTRY - SKIN CONTACT: Yes OF ENTRY INHALATION: No	SKIN ABSORPTION: No INGESTION: Yes	EYE CONTACT: Yes
EXPOSURE LIMITS	ACGIH	OSHA
No ACGIH or OSHA exposure levels available for Calcium Chloride, Magnesium Chloride or Sodium Chloride in solution.		
EFFECTS OF ACUTE EXPOSURE: Product in contact with eyes may cause painful burning. Contact with skin may result in irritation and redness to exposed areas.		
EFFECTS OF CHRONIC EXPOSURE: No known effects of chronic exposure.		
SIGNS & SYMPTOMS OF EXPOSURE: SKIN CONTACT: Irritation followed by redness and itching. EYE CONTACT: Severe irritation with painful burning.		
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: As with exposure to any environment without adequate personal protection, prolonged or frequent contact may aggravate pre-existing skin conditions.		
NAME OF TOXICOLOGICALLY SYNERGISTIC PRODUCTS: None known.	IRRITANCY OF PRODUCT: No data available.	
REPRODUCTIVE TOXIN? NO	TERATOGEN? NO	MUTAGEN? NO
		SENSITIZER? NO
CONSIDERED CARCINOGENIC BY - NTP? NO	IARC? NO	OSHA? NO

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SECTION VII: PREVENTATIVE MEASURES

GLOVES (SPECIFY):

Water impervious gloves during manual handling of product.

EYES (SPECIFY):

Safety goggle or chemical splash goggle, especially if splashing expected.

FOOTWEAR (SPECIFY):

Steel reinforced shoes when handling pallets of product.

CLOTHING (SPECIFY):

Long sleeves, buttoned collar, long pants extended over shoes or coveralls.

RESPIRATORY PROTECTION (SPECIFY):

AMBIENT CONDITIONS: Mist or spray

Up to 100 mg/m³: Any dust, mist or fume respirator; any supplied air respirator; or, self-contained breathing apparatus.

Up to 250 mg/m³: Any supplied air respirator operated in a continuous flow mode or any powered air purifying respirator with a dust/mist/fume filter.

Up to 500 mg/m³: High efficiency particulate filter with full facepiece; or any powered air supplied respirator with a tight fitting facepiece and high efficiency particulate filter; or, any self-contained breathing apparatus with a full facepiece; or, any supplied air respirator with a full facepiece.

Up to 7500 mg/m³: Any air supplied respirator with a full facepiece and operated in a pressure demand or other positive pressure mode.

EMERGENCY or Entry in Unknown Concentrations: Self-contained breathing apparatus with a full facepiece and operated in a pressure demand mode or an air supplied respirator with a full facepiece operated in a pressure demand mode or other positive pressure mode in combination with auxiliary self-contained breathing apparatus operated in a pressure demand or positive pressure mode.

SPECIFIC ENGINEERING CONTROLS TO BE USED WITH THIS PRODUCT:

If sprayed in a fine mist, local and general mechanical collection and ventilation in accordance with good engineering practices should be provided.

PROCEDURES TO FOLLOW IN CASE OF SPILL OR LEAK:

Use adequate personal protection when handling this product, especially at extremely high temperatures or if involved in a fire. Reclaim product for re-use, if possible, or collect and seal in DOT approved containers for disposal in an appropriate manner.

DISPOSAL PROCEDURE: Dispose in accordance with local, state and federal regs.

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SECTION VII: PREVENTATIVE MEASURES (con't From page 4)

HANDLING PROCEDURES AND EQUIPMENT:

Keep container closed when not in use. If sprayed, use with adequate ventilation. Consumption of food and beverages should be avoided in work area where product is being used. After handling product, always wash hands and face thoroughly with soap and water before eating and drinking.

STORAGE REQUIREMENTS:

Suitable for any general chemical storage area.

DOT SHIPPING INFO:

Non-regulated

Non-regulated

No special precautions.

SECTION VIII: FIRST AID PROCEDURES

INHALATION:

Remove to fresh air immediately. Do not permit exposed person to remain in misty or vaporous environment without adequate respiratory protection.

EYE CONTACT:

Do not rub eyes. Wash eyes under slowly running water for at least fifteen minutes, making sure eyes are held wide open and moved slowly in every direction. Ensure no residue remains in creases of eyelids. If so, continue to wash. If irritation persists, consult an ophthalmologist.

SKIN CONTACT:

Remove from source of irritation. Remove contaminated clothing and wash affected area thoroughly with a mild soap and water. Wash contaminated clothing before reusing.

INGESTION:

If large amounts are swallowed and person is conscious, induce vomiting to prevent further absorption. Administer copious amounts of water or milk. Never give anything by mouth to an unconscious person.

SECTION IX: PREPARATION INFORMATION

PREPARED BY:Linda Aydlett

PHONE:(410) 780-5548

DATE PREPARED:01/04/2003

SOURCES USED:

ACGIH 2002; RTECS June '98; Sax - 8th Ed.; Ind. Exposure & Control Techn.