

TETRA Technologies, Inc.
MATERIAL SAFETY DATA SHEET



CALCIUM CHLORIDE SOLUTION

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1. PRODUCT AND COMPANY IDENTIFICATION

TETRA Technologies, Inc. 25025 I-45 North The Woodlands, TX 77380	CHEMTREC (24-Hr Emergency Response):	(800) 424-9300
	Poison Control:	(800) 222-1222
	Nonemergency Customer Service:	(281) 367-1983
Substance:	Calcium Chloride Solution	
Synonyms:	Liquid Calcium Chloride, Road Master™, Superset™, Food Grade Liquid Calcium Chloride	
Chemical Family	Inorganic Salt	
MSDS Creation Date:	01 Mar 94	
MSDS Revision Date:	14 Oct 04	

2. COMPOSITION, INFORMATION ON INGREDIENTS

CAS Number	Wt %	Component Name	RTECS Number
10043-52-4	20 – 45%	Calcium Chloride	EV9800000
	55 – 80%	Water	

Probable Contaminants: Calcium Carbonate, Calcium Hydroxide, Calcium Oxide, Alkali Metal Chlorides, Alkaline Earth Metal Chlorides

3. HAZARDS IDENTIFICATION

NFPA Ratings (Scale 0-4):	Health – 1 Fire – 0 Reactivity – 0
Emergency Overview:	Odorless, clear to amber liquid. May cause skin, respiratory tract, and eye irritation.
Potential Health Effects:	
Inhalation:	Mist inhalation may cause minor irritation.
Skin Contact:	May cause minor irritation.
Eye Contact:	May irritate or burn eyes.
Ingestion:	May irritate gastrointestinal tract and cause nausea and vomiting.
Carcinogen Status:	OSHA – No NTP – No IARC – No

4. FIRST AID MEASURES

Eye Contact:	Flush eyes thoroughly with water. If irritation or adverse symptoms develop, seek medical attention.
Skin Contact:	Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent.
Inhalation:	Remove from exposure. If breathing is difficult or irritation develops, seek medical attention.
Ingestion:	Get medical attention.
Notes to Physician:	Treat symptomatically and supportively.

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5. FIRE FIGHTING MEASURES

Flash Point:	Not applicable
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.
Fire Fighting:	Negligible fire hazard, not applicable.
Fire and Explosion Hazard:	Negligible
Products of Combustion:	Non-combustible

6. ACCIDENTAL RELEASE MEASURES

Evacuation and Safety:	Wear appropriate protective gear for the situation. See personal protection information in Section 8.
Containment of Spill:	For small spills, take up with sand or other absorbent material and place in containers for disposal. For larger spills, dike far ahead of spill for later disposal.
Cleanup and Disposal:	For small spills, take up with sand or other absorbent material and place in containers for disposal. For larger spills, dike far ahead of spill for later disposal.

7. HANDLING AND STORAGE

Handling:	Avoid skin and eye contact and breathing vapors or mists. Wash thoroughly after handling. Launder contaminated clothing before re-use.
Storage:	Observe all federal, state, and local regulations when storing this product. Store in a tightly closed container away from incompatible materials. Do not store in metals which this solution corrodes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	Provide local exhaust ventilation system. Where there is possibility of exposure, eye wash fountain and safety shower should be provided within the immediate work area for emergency use.
Exposure Limits:	ACGIH – (TLV-TWA) guideline for nuisance particulate (liquified mist) 10mg/m ³
Eyes:	Wear safety glasses with splash shields or safety goggles/shield.
Body:	Wear appropriate normal work clothing. Leather work boots and/or leather products will dehydrate with resultant shrinkage and possible destruction.
Respiratory:	Respirator not generally required. For misty conditions, wear NIOSH approved mist respirator.
Hands and Feet:	Wear appropriate non-leather protective gloves and boots.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Description:	Clear to amber liquid.
Odor:	Odorless
Boiling Point:	118°C (244°F) for 38% solution
Melting Point:	Not available
Molecular Weight:	110.99 (for pure CaCl ₂)
Specific Gravity (H ₂ O=1):	1.376 @ 25°C (77°F) for 38% solution
pH:	3.8 – 9.0
Water Solubility:	Miscible with water in all proportions
Solvent Solubility:	Miscible in alcohol, acetic acid and acetone
Vapor Pressure:	Not available
Viscosity:	Not available

10. STABILITY AND REACTIVITY

Stability and Reactivity:	Stable under normal temperatures and pressures.
Incompatibilities:	Strong oxidizing agents.
Hazardous Decomposition:	None under normal conditions.
Polymerization:	Does not occur under normal temperatures and pressures.
Conditions to Avoid:	None.

11. TOXICOLOGICAL INFORMATION

Toxicity Data (anhydrous calcium chloride):	
TDLo:	112g/kg, oral, 20 weeks, rat
LDLo:	274 mg/kg, subcutaneous, dog
LD50:	1000 mg/kg, oral, rat
LD50:	264 mg/kg, intraperitoneal, rat
Mutagenic Data and Tumorigenic Data:	See Registry of Toxic Effects of Chemical Substances (RTECS) file.
Carcinogen Status:	None
Local Effects:	Eye, mucous membrane and skin irritant.
Health Effects:	Moderately toxic by ingestion, slightly toxic by dermal absorption.

12. ECOLOGICAL INFORMATION

Environmental Summary:	No data available.
Degradability:	Product will not biodegrade or accumulate.

13. DISPOSAL INFORMATION

Observe all federal, state and local regulations when disposing of this substance.

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14. DEPARTMENT OF TRANSPORTATION (DOT) TRANSPORT INFORMATION

Shipping Name:	Not regulated
ID Number:	Not applicable
Hazard Class or Division:	Not applicable
Packing Group:	Not applicable
Labeling Requirements:	Not applicable
Packing Authorizations:	
Exceptions:	Not applicable
Non-bulk Packing:	Not applicable
Bulk Packing:	
Quantity Limitations:	
Passenger Aircraft or Railcar:	Not applicable
Cargo Aircraft Only:	Not applicable
Vessel Stowage Requirements:	Not applicable
Emergency Guide Number:	Not applicable

15. REGULATORY INFORMATION

Workplace Classification:	
SARA Title III:	Section 311: Acute Hazard
TSCA Status:	Yes
EINECS Status:	Yes
CERCLA:	No
OSHA Process Safety:	No
California Proposition 65:	No ingredients found on the Proposition 65 list
WHMIS Classification:	Not determined

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16. OTHER INFORMATION

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the users' responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

TETRA Technologies, Inc. reserves the right to refuse shipment of this product to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging and other handling systems that come in contact with it.

Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.