

# TETRA Technologies, Inc.

## MATERIAL SAFETY DATA SHEET



# CALCIUM CHLORIDE SOLID

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### 1. PRODUCT AND COMPANY IDENTIFICATION

TETRA Chemicals Europe AB P.O. Box 901 SE-251 09 Helsingborg Sweden	Emergency Response:	+46-8-33 70 43 (ERC)
	Non-emergency Customer Service:	+46-42-453 27 00
	Fax:	+46-42-453 27 80
Substance:	Calcium Chloride Solid	
Synonyms:	Calcium Chloride 75-95%, Express®, CC Road, CC Tech, CC Food, Calcium Chloride, Dihydrate; Calcium (II) Chloride; Calcium Chloride; Calcium Dichloride	
Application:	Dust control, oil exploration, dehumidifying, and other areas of application	
Chemical Family/Formula	CaCl <sub>2</sub>	
MSDS Creation Date:	1994-11-24	
Last Revision Date:	2004-12-10	

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	Wt %	CAS Number	EC Number	Index Number	Classification
Calcium Chloride	74-100%	10043-52-4	233-140-8	017-013-00-2	Xi*
Probable Contaminants: Calcium Carbonate, Calcium Hydroxide, Calcium Oxide, Alkali Metal Chlorides, Alkaline Earth Metal Chlorides					
* Classification Legend: T+=Very toxic, T=Toxic, C=Corrosive, Xn=Harmful, Xi=Irritant, E=Explosive, O=Oxidizing, F+=Extremely flammable, F=Highly flammable, N=Dangerous for the environment					

### 3. HAZARDS IDENTIFICATION

Emergency Overview:	Odorless, white flakes, granules, or powder. Causes eye irritation. Avoid breathing dust. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Wash thoroughly after handling. Reacts with water to liberate heat. Spillage of product creates slippery surfaces.
Potential Health Effects:	
Inhalation:	Dust may cause irritation to mucous membranes and respiratory system.
Skin Contact:	May cause irritation. Prolonged contact with skin may cause red spots, burning pain or wounds.
Eye Contact:	May irritate or burn eyes.
Ingestion:	Ingestion may cause nausea and irritation to mouth, throat and digestive system.
Carcinogen Status:	OSHA – No    NTP – No    IARC – No
Environment:	This product increases the hardness of water.

### 4. FIRST AID MEASURES

Eye Contact:	Flush eyes thoroughly with large amounts of 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 area to fresh air.
Ingestion:	Get medical attention.
Notes to Physician:	Treat symptomatically and supportively.

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### 5. FIRE FIGHTING MEASURES

Extinguishing Media:	This product does not burn. Use extinguishing media appropriate for surrounding fire.
Fire Fighting:	Move container(s) from fire area if you can do so without risk. Do not use water directly on material. Avoid breathing corrosive vapors; keep upwind. Dike area to prevent runoff and contamination of water sources.
Fire and Explosion Hazard:	Negligible fire hazard when exposed to heat or flame.
Protective Equipment for Fire Fighters:	Fire fighting tunic and face mask.

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear appropriate protective gear for the situation. See personal protection information in Section 8.
Containment of Spill:	Prevent release to ground, air or to water or drain by use of a retaining dike or by covering the spillage with inorganic (inert) material, e.g., sand, gravel or equivalent. If possible, stop leakage. If the product contaminates sea, lakes or drains, inform appropriate authorities in accordance with local regulations.
Cleanup and Disposal:	Major spillage should be carefully collected mechanically and put in clean, dry container for later disposal. Minor spill and small residuals can be flushed down the drain with plenty of water.
Other Information:	Spillage of product creates slippery surfaces.

### 7. HANDLING AND STORAGE

Handling:	Avoid skin and eye contact and breathing dusts. Wash thoroughly after handling. Launder contaminated clothing before re-use.
Storage:	Store in properly sealed, original packaging away from moisture and incompatible materials.
Other Information:	This product is hygroscopic and emits heat when dissolved in water.

### 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 (Sweden):	Dust total TLV – 8 hr    Mg/m <sup>3</sup> – 10.0    Year - 1974
Eyes:	Wear safety glasses with splash shields or safety goggles/shield.
Body:	Wear appropriate protective clothing. Leather work boots and/or leather products will dehydrate with resultant shrinkage and possible destruction.
Respiratory:	A respirator is not normally required under normal operating conditions. Use a breathing apparatus (half mask) with P2 filter when working in insufficient ventilation.
Hands and Feet:	Use PVC or neoprene protective gloves. Penetration time 4-8 hours. Do not use leather or cotton gloves, or leather boots.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Description:	White flakes, granules or powder
Odor:	Odorless
Boiling Point:	> 1600°C
Melting Point:	(772°C)
Molecular Weight:	111.0
Bulk Density:	0.75–1.0 g/cm <sup>3</sup>
Water Solubility:	745 g/l (20°C) with evolution of heat
Solvent Solubility:	Soluble in alcohol, acetic acid and acetone
Vapor Pressure:	Insignificant
pH solution:	8-12 in 10% water solution

### 10. STABILITY AND REACTIVITY

Stability and Reactivity:	This product is stable with normal handling. Reacts exothermically with water.
Polymerization:	Does not occur under normal temperatures and pressures. See below.
Conditions to Avoid:	Calcium chloride reacts violently with a mixture of boron oxide (B <sub>2</sub> O <sub>3</sub> ) and calcium oxide (CaO). A violent polymerization occurs if calcium chloride is mixed with methyl vinyl ether. Calcium chloride reacts violently with bromine trifluoride (BrF <sub>3</sub> ).

### 11. TOXICOLOGICAL INFORMATION

Toxicity Data (anhydrous calcium chloride):	
Acute Oral Toxicity:	LD <sub>50</sub> = 1000 mg/kg, rat
Acute Dermal Toxicity:	LD <sub>50</sub> = 2630 mg/kg, rat
Other Toxicological Information/Local Effects: Acute oral toxicity is determined in accordance with OECD Guideline 401. Skin irritation rabbit: not irritating according to OECD Guideline 404. Eye irritation rabbit: irritating according to OECD Guideline 405. The information on oral acute toxicity and irritation refers to dry product.	
Mutagenic Data and Tumorigenic Data:	This product is not considered mutagenic. Ames's test on Salmonella typhimurium was negative.
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

Mobility:	Soluble in water and mobile.
Degradability:	Product will not biodegrade (inorganic product).
Bioaccumulation:	The product does not bioaccumulate in the aquatic environment.
Ecotoxicity:	
LC <sub>50</sub> /96h	Fathead minnow: 4630 mg/l.
LC <sub>50</sub> /48h	Daphnia: 2770 mg/l.

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LC50/120h	Nitzschia linearia: 3130 mg/l.
This product is not acutely toxic to water organisms. Information about ecotoxicity refers to dry product.	
Other Information:	This product increases the hardness of water.

**13. DISPOSAL INFORMATION**

Directions for Disposal of Material/Container:  
 This product does not constitute a hazardous waste. Contact the appropriate local authorities for information if spill or waste cannot be recycled. Properly emptied packaging can be recycled. See also Section 6 - Accidental Release Measures.  
 Relevant EWC-code depends on the use of the product.

**14. TRANSPORTATION INFORMATION**

Shipping Name:	Calcium Chloride Solid
ID Number:	Not classified as dangerous goods nor hazardous material.

**15. REGULATORY INFORMATION**

Classification:



Irritating, Xi

EC Label:	Yes
R - Phrases	
R36	Irritating to eyes.
S - Phrases	
S22	Do not breathe dust.
S24	Avoid contact with skin.
EINECS Status:	Yes

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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 Chemicals Europe AB 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.