


**FLAKE CALCIUM CHLORIDE****Material Safety Data Sheet****A. PRODUCT INFORMATION**

TRADE NAME (PRODUCT IDENTIFIER): Flake Calcium Chloride Powdered Calcium Chloride		CLASSIFICATION & SYMBOL:  Class D2B	
CHEMICAL NAME AND/OR SYNONYM: Calcium Chloride, Dihydrate		FORMULA: 30-35% CaCl ₂ 2 H ₂ O	CAS NO: 10035-04-8
PRODUCT USE: Deicer, dust control, mud drilling lubricant, freeze-proofing of ores and aggregates, thawing agent, concrete conditioner.			
MANUFACTURER/IMPORTER: General Chemical Canada Ltd. 201 City Centre Drive Mississauga, Ontario L5B 3A3		SUPPLIER/DISTRIBUTOR: General Chemical Canada Ltd. 201 City Centre Drive Mississauga, Ontario L5B 3A3	
EMERGENCY TELEPHONE NO: 866-543-3896			

B. PREPARATION INFORMATION

PREPARED BY: General Chemical Corp. Manager, Product Safety Telephone: (973) 515-1840	PREVIOUS ISSUE DATE: 11/98
	CURRENT ISSUE DATE: 4/01

C. TOXICOLOGICAL PROPERTIES

INHALATION: Dust or mist inhalation may irritate nose, throat and lungs.	
INGESTION: Low in toxicity. May irritate gastrointestinal tract and cause nausea and vomiting.	
SKIN: May cause skin irritation. Prolonged contact when moisture is present may result in superficial burns. Contact with abraded skin or cuts can cause severe necrosis.	
EYES: May irritate or burn eyes.	
ACUTE TOXICITY: Moderate toxic LD ₅₀ (oral-rat) 1000 mg/kg LD ₅₀ (oral-mouse) 1940 mg/kg	EXPOSURE LIMITS: Ontario Ministry of Labour Time-Weighted Average Exposure Value (TWAEV) for Nuisance Particulate 10 mg/m ³
CHRONIC TOXICITY: Not applicable	
OTHER:	BIOLOGICAL EXPOSURE INDICES (BEI): Not applicable

D. PHYSICAL DATA

MATERIAL IS AT NORMAL CONDITIONS: LIQUID <input type="checkbox"/> SOLID <input checked="" type="checkbox"/> GAS <input type="checkbox"/> <input type="checkbox"/>	APPEARANCE AND COLOR: Small White Flakes Very hygroscopic	ODOR THRESHOLD: Odorless
BOILING POINT: Not available FREEZING POINT: °C (MELTING POINT) 176 °C	SPECIFIC GRAVITY: g/cc (H₂O = 1) Not Available	VAPOR DENSITY: (AIR =1) Not applicable
SOLUBILITY IN WATER: 97.7 g/100ml @ 0°C 326 g/100ml @ 60°C	PH Neutral to slightly Alkaline	VAPOR PRESSURE: (mm Hg @ 20°C) Not Applicable (PSIG)
EVAPORATION RATE: (Ether = 1.0) Not applicable Slow <0.3 Fast >3.0 Medium 0.3 – 3.0	% VOLATILES BY VOLUME: (AT 20°C) Not applicable	MOLECULAR WEIGHT: 147.02 COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

E. REACTIVITY DATA

STABILITY: UNSTABLE <input type="checkbox"/> STABLE <input checked="" type="checkbox"/>	CONDITIONS TO AVOID: Not applicable
INCOMPATIBILITY (MATERIALS TO AVOID): Reacts violently with bromine trifluoride (BrF ₃), or a mixture of boron trioxide and calcium oxide (B ₂ O ₃ + CaO). Sulfuric acid: yields hydrogen chloride gas, which is corrosive, irritating, and reactive. Water-reactive materials, such as sodium: causes an exothermic reaction. Methyl vinyl ether: starts runaway polymerization reaction. Zinc as in galvanized iron: yields hydrogen gas with solutions, which may explode under these conditions.	
HAZARDOUS DECOMPOSITION PRODUCTS: Fumes of Chlorides (Cl ⁻) are given off at temperature above 1600°C.	
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR <input checked="" type="checkbox"/> MAY OCCUR <input type="checkbox"/>	OTHER PRECAUTIONS: Will undergo violent polymerization with methyl vinyl ether. The anhydrous, monohydrate, dihydrate and tetrahydrate forms of calcium chloride, when dissolved in water, produce considerable amounts of heat.

F. FIRE OR EXPLOSION HAZARD

CONDITIONS OF FLAMMABILITY: Not applicable	FLASH POINT: METHOD <u>Not Applicable</u>
HAZARDOUS COMBUSTION PRODUCTS: None	
% BY VOL. IN AIR UPPER FLAMMABLE LIMIT: NA LOWER FLAMMABLE LIMIT: NA AUTOIGNITION TEMPERATURE: °C	EXPLOSION HAZARDS: See Section E Incompatibility
SENSITIVITY TO MECHANICAL IMPACT: Not applicable	
SENSITIVITY TO STATIC DISCHARGE: Not applicable	
FIRE EXTINGUISHING PROCEDURES: Use extinguisher media appropriate for surrounding fire. For fire fighting wear NIOSH-approved self-contained breathing apparatus.	

G. HAZARDOUS INGREDIENTS (MIXTURES ONLY)

MATERIAL OR COMPONENT/C.A.S. #	CONCENTRATION	HAZARD DATA
Not Applicable		

H. PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION:

For dusty or misty conditions, wear NIOSH-approved dust or mist respirator.

EYES AND FACE:

For dusty or misty conditions, or when handling solutions where there is reasonable probability of eye contact, wear chemical safety goggles and hard hat. Under these conditions, do not wear contact lenses.

HANDS, ARMS, AND BODY:

As a minimum, wear long-sleeve shirt, trousers, rubber boots and gloves for routine product use. Cotton gloves permitted for dry product, impervious gloves when using solutions.

STORAGE:

Cool, dry area. Prolonged storage may cause product to cake and become wet from atmospheric moisture.

NORMAL HANDLING:

Avoid contact with eyes, skin or clothing. Avoid breathing dust. Use good personal hygiene and housekeeping.

ENGINEERING CONTROLS:

Ventilation: Provide general and/or local exhaust ventilation to maintain dust or fume levels below exposure limits.

Eye wash facility should be provided in storage and general work area.

ENVIRONMENTAL:

DEGRADABILITY: Not applicable

AQUATIC TOXICITY:

Harmful to aquatic life at concentrations greater than 500 ppm. CaCl₂ does not bioaccumulate. TL_{m,96}>1000 mg/l

SPILL OR LEAK (ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT):

Shovel up dry chemical and place in metal drum with cover. Cautiously spray residue with plenty of water. Keep contaminated water from entering sewers and water courses.

WASTE DISPOSAL:

Consistent with the requirements of local waste disposal authorities.

CANADIAN SHIPPING INFORMATION:

TDGA CLASS: Not applicable	PIN: Not applicable	LABEL: Not applicable
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I. FIRST AID MEASURES

INHALATION:

Promptly remove to fresh air. Get medical attention.

INGESTION:

If conscious, immediately give 2 to 4 glasses of water, and induce vomiting under medical supervision.

SKIN:

Remove contaminated clothing. Wash with plenty of soap and running water. Get medical attention if irritation persists.

EYES:

Flush eyes promptly with plenty of running water, continuing for at least 15 minutes. Get medical attention.

J.

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