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**MATERIAL SAFETY DATA SHEET
FOR CALCIUM CHLORIDE 74 - 77% FLAKE**

April, 2007

A. GENERAL INFORMATION

Trade Name (Common Name or Synonym) - Calcium Chloride 74 - 77% (Flake)
Chemical Name & Synonyms: Calcium Chloride
Formula $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$
Uses Refrigerant, Deicer, Dust suppressant, road stabilizer, freeze-proofing and thawing coal, coke, stone, sand, ore, concrete conditioner, tire weighting.
Manufacturer Product made by East China Calcium Co. Ltd for **Keg River Chemical Corp.**
10350 – 21st Street, Edmonton,
Alberta T6P 1W4

B. COMPOSITION INFORMATION ON INGREDIENTS

	<u>CAS. Reg. No.</u>	<u>Approx %</u>
Calcium Chloride	010043 - 52 – 4	74-80 %
Sodium Chloride	007647-14-5	1-5%
Other Chlorides		2-3%
Water		13-20%

C. HAZARDS IDENTIFICATION

APPEARANCE AND ODOUR: Free flowing odorless white granules.

EYE: Granules may cause slight eye irritation. Dusts may cause severe irritation with corneal injury. Effects may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.

SKIN: Brief contact is essentially nonirritating to skin. Prolonged or repeated exposure may cause skin irritation, even a burn. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Not classified as corrosive to the skin according to DOT guidelines. May cause more severe response if skin is damp. May cause more severe response if confined to skin or skin is abraded (scratched or cut). When dissolving, the heat produced may cause more intense effects as well as thermal burns.

INGESTION: Single dose oral toxicity is believed to be low. Small amounts swallowed incidental to normal handling procedures are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

INHALATION: Vapors are unlikely due to physical properties. Dusts may cause irritation to upper respiratory tract.

SYSTEMATIC (OTHER TARGET ORGAN) EFFECTS: No relevant information found.

D. FIRST AID

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Contact medical personnel (if required).

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting unless directed to do so by medical personnel. Give large amounts of water or milk if available and transport to medical facility.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

E. FIRE FIGHTING MEASURES:

FLAMMABLE PROPERTIES : Not Applicable.

FLAMMABILITY LIMITS: LFL: Not Applicable UFL: Not Applicable.

HAZARDOUS COMPOSITION PRODUCTS: Not Applicable.

EXTINGUISHING MEDIA: This material does not burn. If exposed fire from another source, use suitable extinguishing agent for that fire.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny any unnecessary entry.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive pressure self contained breathing apparatus (SCBA) and full protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves).

F. ACCIDENTAL RELEASE MEASURES

PROTECT PEOPLE: Isolate area. Avoid contact with eye and skin. May be a slipping hazard. Stop leak if it can be done safely. Wash exposed body areas thoroughly after handling. Use appropriate safety equipment.

PROTECT THE ENVIRONMENT: For **small spills** losses incidental to correct applications of this product in it's intended uses are not expected to be harmful to the environment.
For **large spills:** avoid contamination of drinking water, natural water, ground water, or any waterway. Losses incidental to correct applications of this product in it's intended uses are not expected to be harmful to the environment.

CLEANUP: For **small spills** contain spill if possible. Collect material in suitable and properly labeled containers. Flush residue with plenty of water.
For **large spills:** dike and transfer to suitable and properly labeled containers. Flush residue with plenty of water.

G. HANDLING AND STORAGE

HANDLING: Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80F, 27C). Use gloves with insulation for thermal protection, when needed.

STORAGE: Keep containers tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

EXPOSURE GUIDELINES: Calcium Chloride 10 mg/m³
Sodium Chloride 10 mg/m³
Potassium Chloride 10 mg/m³

H. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: White to off-white solid granules.
ODOR: None
VAPOR PRESS: 1.0 mmHg @ 25C, 77F
VAPOR DENSITY: Same as water.
BOILING POINT: 175 °C.
SOLUBILITY IN WATER: Very soluble
SPECIFIC GRAVITY: 1.85

I. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable. Hygroscopic.

CONDITIONS TO AVOID: None

MATERIALS TO AVOID: Attack aluminum / yellow brass; react with sulfuric acid and zinc. Heat is generated when mixed with water

HAZARDOUS DECOMPOSITION PRODUCTS: Does not decompose.

HAZARDOUS POLYMERIZATION: Will not occur.

J. TOXICOLOGICAL INFORMATION

ACUTE:	Skin: The LD50 for skin absorption in rabbits is >5000 mg/kg for CaCl ₂ .
INGESTION (100%) :	The oral LD50 for rats is in the range of 900 – 2100 mg/kg for CaCl ₂ .
MUTAGENICITY:	For CaCl ₂ , in vitro mutagenicity studies were negative.

K. ECOLOGICAL INFORMATION

ECOTOXICOLOGY:	Based largely or completely on data for major component(s), material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species).
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L. DISPOSAL CONSIDERATIONS

DISPOSAL:	Do not dump into any sewers, on the ground, or into any body of water. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Keg River Chemical encourages that disposal methods be utilized in accordance with the above noted. For unused or contaminated product, the preferred options include sending the material to a licensed, permitted, reclaimer or wastewater treatment system.
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M. TRANSPORTATION REQUIREMENTS**US and Canadian Shipments:**

Proper Shipping Name:	Calcium Chloride Granules
Hazard Classification:	Not regulated when shipped domestically by land.
TRANSPORTATION EMERGENCIES:	Call collect CANUTEC 613-996-6666 (24 hrs.)

N. REGULATORY INFORMATION

WHMIS:	The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is: D2B – eye and skin irritant.
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Notice: The data and information presented herein are based upon tests, research and reports that are considered by us to be reliable and believed to be accurate. The data and information are presented without warranty, guarantee or liability on our part, and are presented to the customer for his own consideration, investigation and verification.