

MATERIAL SAFETY DATA SHEET

Revision #: 02

Section 1 - Product Identification & Use

Product Name: **Calcium Chloride**
Product Use: Deicer, dust control, mud drilling lubricant, thawing agent, concrete conditioner.
WHMIS Classification: Class D, Div. 2, B Eye and skin sensitizer
TDG Classification: Not regulated.
Supplier: Advance Chemicals Ltd.
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Section 2 - Hazardous Ingredients

Hazardous Components	%(w/w)	C.A.S. No.	LD ₅₀ & LC ₅₀
Calcium Chloride	77	10035-04-8	1000mg/kg

There is no OSHA PEL or ACGIH TLV for CaCl₂ flake, or solutions. The Ontario Ministry of Labour Time weighted Average exposure value for nuisance particulate is 10 mg/m³.

Section 3 - Physical Properties

Physical State: solid
Boiling point: no data
Vapour pressure: N/A
pH: neutral to alkaline
Appearance: Odourless. Small white flakes. Very hygroscopic.
Specific Gravity: no data
Freezing point: no data
Water solubility: 97.7g/100 mL

Section 4 - Fire or Explosion Hazard

Flammability: Not considered flammable.
Extinguishing media: Use an extinguishing media for surrounding the fire, or all purpose foam by manufacturer's recommended techniques for large fires. May also use dry chemical, carbon dioxide gas or water spray.
Hazardous Combustion Products: Above 1600°C fumes of chlorides (Cl⁻) may be given off. The dissolved solids may undergo a violent polymerization with methyl vinyl ether.

Section 5 - Reactivity Data

Stability: Stable under normal ambient conditions. The dissolved solids may undergo violent polymerization with methyl vinyl ether. There is an explosion risk when exposed to Furan-2-peroxy-carboxylic acid.
Incompatible substances: Zinc as in galvanized iron will produce hydrogen gas in solution, leading to explosive mixtures in air under certain conditions. The dissolved solids react violently with Bromine trifluoride (BrF₃) or a mixture of Boron trifluoride and calcium oxide. Mixture with sulphuric acid may yield hydrogen chloride gas which is corrosive, reactive and irritating.
Polymerization: Violent polymerization may occur when exposed to methyl vinyl ether.
Hazardous Reactions/Decomposition: See above descriptions of stability, incompatible substances and polymerization.

Section 6 - Toxicological Properties

Skin contact: A single prolonged exposure is not likely to cause significant skin irritation. Prolonged and repeated exposure may cause irritation and a burn. May cause more severe burns if the skin is wet or abraded.
Eye contact: Direct contact with eyes may cause severe irritation, or burns with corneal injury. Effects may be slow to heal.
Inhalation: The dried residue and dust may cause irritation to the upper respiratory tract.
Ingestion: Single dose oral toxicity is low. The dissolved solids have an oral LD₅₀ for rats of 1100-1600mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Larger amounts may cause gastrointestinal irritation or ulceration.
Carcinogenicity: no data found
Mutagenicity: no data found

Section 7 - Preventative Measures

Personal Protective Equipment: Avoid contact with skin and eyes. Wear chemical protective gloves, goggles and face shield, rubber apron and boots. Eye wash fountains and safety shower facilities should be provided nearby for emergency use.

Respiratory protection: Use an NIOSH respirator approved for dusts and mists. Do not exceed the limits of the respirator. Dow

Chemical Canada reports an IHG of 10mg/m³ for calcium chloride.
Ventilation Requirements: Use local exhaust ventilation or other means to control airborne dust.

Special Handling Procedures: Wash thoroughly after handling product.

Storage Requirements: Store product in a cool, dry location, away from food and drink. Personnel should wear approved dust mask or respirator. Avoid breathing dusts. Wear chemical protective clothing as necessary, eye protective goggles, rubber or neoprene gloves.

Action to take for spills & leaks: Wear chemical protective clothing, rubber gloves and suitable respiratory protection. Small spills should be wiped up and disposed of in government approved waste containers. Flush spill area with large volumes of water. Run-off should be collected and properly disposed of. Keep product out of sewers, storm drains, surface run-off water and soil. Restrict access to non-protected personnel. Comply with all government regulations on spill reporting, handling and disposal of waste.

Disposal methods: Dispose of contaminated product and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, provincial and local regulatory agencies to ascertain proper disposal procedures.

Note: empty containers can have residues, gasses and mists, and are subject to proper waste disposal as mentioned above.

Repair and Maintenance Precautions: Do not cut, grind, weld or drill in, on or near this container.

Section 8 - First Aid Measures

If inhaled: Remove victim to fresh air. Give artificial respiration if not breathing. Get immediate emergency medical attention.

In case of eye contact: Immediately flush eyes with clean water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Get immediate emergency medical attention.

In case of skin contact: Immediately flush skin with plenty of clean running water and soap for at least fifteen (15) minutes. Remove contaminated clothing and shoes. If irritation persists after washing, get immediate medical attention. Wash and launder clothes before re-use.

In case of ingestion or swallowing: If victim is conscious and medical attention is not immediately available, dilute stomach contents by giving several glasses of water, then INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS VICTIM. If vomiting occurs, clear and rinse patient's mouth with water and have the patient drink more water. GET IMMEDIATE EMERGENCY MEDICAL ATTENTION.

Section 9 - Preparation Information

Advance Chemicals Limited expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided. The information contained herein is offered only as a guide to the handling of this specific product, and has been prepared in good faith by technically knowledgeable personnel. This M.S.D.S. is not intended to be all-inclusive, and the manner and conditions of use may involve other and additional considerations.

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