ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date:

Section 1: Product & Company Information

Product Identifier: **Calcium Chloride Dowflake Xtra 83-87%**

Other Means of Identification

Product Number: 163000

Recommended Use and Restrictions on Use

Recommended Use: Concrete Acceleration, Ice Melting, Dust Control, Road Base Stabilization

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Not classified.

Health Hazard(s)

Acute Toxicity, Oral - 4
(Corrosion)Damage/Irritation, Eye – 2A

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

WARNING

Hazard Symbol(s)

Hazard Statement(s)

H302: Harmful if swallowed.
H319: Causes eye Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321: Specific treatment (see supplemental first aid instructions on this label).
P330: Rinse mouth.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.

Storage

Not applicable.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Mixture

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Calcium chloride	-	10043-52-4	> 83 - < 87	No
Water	-	7732-18-5	> 8 - < 14	No
Potassium Chloride	-	7447-40-7	> 2 - < 3	No
Sodium Chloride	-	7647-14-5	> 1 - < 2	No

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Symptoms

Inhalation (Breathing): Inhaling dust may cause irritation to upper respiratory tract (nose and throat). No reliable animal data on acute inhalation toxicity are available; however, human data suggest that calcium chloride is not acutely toxic by inhalation.
Skin: Direct contact with abraded skin may cause erythema and burns. Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.

Eye: Eye Irritation. Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctival swelling and cornea opacification from hypertonic solution and heat.

Ingestion (Swallowing): Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst. Symptoms of oral toxicity are not expected to be observed at lower levels (200–400 mg/kg). However, at the higher levels (800–1600 mg/kg), in male rat studies, there was some indication of gastric irritation, characterized by thickened and ulcerated areas within the stomach.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Due to irritant properties, resulting from heat created as solid material dissolves in water, swallowing may result in burns/ulceration of mucus membranes. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Section 5: Fire-Fighting Measures

General Fire Hazards

This material does not burn.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

Formed under fire conditions: hydrogen chloride gas, calcium oxide

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

Methods and Materials for Containment and Clean-Up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Following product recovery, flush area with water.

Small Spills: Absorb spill with vermiculite or other inert material. Clean surface thoroughly to remove residual contamination.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

Use caution when handling/transferring. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible. Observe good industrial hygiene practices.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:	
Physical State:	Solid, Flakes
Color:	White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	No data available. Not applicable.
Melting Point/Freezing Point:	772 °C (1,422 °F)
Initial Boiling Point and Boiling Range:	1935 °C (3,515 °F)
Flash Point:	Not applicable.
Evaporation Rate (butyl acetate=1)**:**	No data available.
Flammability (solid, gas):	No data available.
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	Not applicable.
Flammability Limit – Lower:	Not applicable.
Explosive Limit – Upper:	Not applicable.
Explosive Limit – Lower:	Not applicable.
Vapor Pressure:	Negligible at ambient temperature.
Vapor Density (air =1)**:**	Not applicable.
Relative Density (water=1)**:**	No data available.
Solubility(ies):	
Solubility in water:	Readily soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-Ignition Temperature:	Not applicable.

Decomposition Temperature: Not applicable.
Viscosity: No data available.

Other Information:
Molecular Weight: 111 g/mole
Formula: $CaCl_2$

Section 10: Stability and Reactivity

Reactivity
Hygroscopic. Liberates large amounts of heat when dissolving in water or aqueous acids.

Chemical Stability
Material is stable under normal conditions.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to Avoid
Avoid moisture.

Incompatible Materials
Heat is generated when mixed with water or aqueous acids. Spattering and boiling can occur. Avoid contact with: bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances. Contact with zinc forms flammable hydrogen gas, which can be explosive. Catalyzes exothermic polymerization of methyl vinyl ether. Attacks metals in the presence of moisture, and may release flammable hydrogen gas. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates

Hazardous Decomposition Products
Formed under fire conditions: hydrogen chloride gas, calcium oxide

Section 11: Toxicological Information

Information on routes of exposure
Ingestion: Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.
Inhalation: Inhaling dust may cause irritation to upper respiratory tract (nose and throat).
Skin Contact: Skin Irritation: Direct abrasion of skin from solid, erythema and burn from reaction with water. Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.
Eye Contact: Eye Irritation: Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctival swelling and cornea opacification from hypertonic solution and heat.

Information on Toxicological Effects
Acute Toxicity (List all possible routes of exposure)
Oral
Calcium Chloride: LD50 (Rat): 1,000 mg/kg
Potassium Chloride: LD50 (Rat): 2,600 mg/kg
Sodium Chloride: LD50 (Rat): 3 g/kg

Dermal
Calcium Chloride: LD50 (Rat): 2,630 mg/kg

Inhalation
Sodium Chloride: LC50 (Rat, 1 h): 42 g/m^3

Repeated Dose Toxicity
No data available.

Skin Corrosion/Irritation
May cause erythema and burns.

Serious Eye Damage/Eye Irritation
Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctival swelling and cornea opacification from hypertonic solution and heat.

Respiratory/Skin Sensitization
No data available.

Carcinogenicity
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

None known.

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Calcium Chloride: LC50 (Bluegill (Lepomis Macrochirus)): 8,350 – 10,650 mg/l
Potassium Chloride: LC50 (Rainbow Trout (Oncorhynchus Mykiss), 96 h): 4,236 mg/l
Sodium Chloride: LC50 (Fathead Minnow (Pimephales Promelas)): 10,610 mg/l

Aquatic Invertebrates

Calcium Chloride: LC50 (Water Flea (Daphnia Magna)): 759 – 3,005 mg/l
Potassium Chloride: EC50 (Water Flea (Daphnia Magna), 24 h): 590 mg/l Immobilization
Potassium Chloride: LC50 (Water Flea (Ceriodaphnia Dubia), 96 h): 3,470 mg/l
Sodium Chloride: LC50 (Water Flea (Daphnia Magna)): 4,571 mg/l

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

This material is inorganic and not subject to biodegradation.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive:	No
Acute (Immediate) Health Hazard:	Yes
Chronic (Delayed) Health Hazard:	No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 1
Personal Protection: X
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating
Health Hazard: 2
Fire Hazard: 0
Reactivity Hazard: 1
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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