

Calcium chloride

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### SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Calcium chloride**

Product Code(s) : Not available.

Recommended use of the chemical and restrictions on use

: Deicer. Dust control. Drilling mud additive. Freeze - proofing of ores and aggregates.  
Thawing agent. Concrete conditioner.  
Restriction on use: None known

Chemical family : Inorganic calcium salt.

Name, address, and telephone number  
of the supplier:

**Comet Chemical Company Ltd.**

3463 Thomas Street  
Innisfill, ON, Canada  
L9S 3W4

Supplier's Telephone # : 705-436-5580

**24 Hr. Emergency Tel #** : TERRRAPURE ENVIRONMENTAL : 800-567-7455

Name, address, and telephone number of  
the manufacturer:

Refer to supplier

### SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

White flakes Odorless.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Acute toxicity, oral - Category 4  
Serious eye damage/eye irritation - Category 1  
Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)



Signal Word

**DANGER!**

Hazard statement(s)

Harmful if swallowed.  
Causes serious eye damage.  
May cause respiratory irritation.

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### Precautionary statement(s)

Wash thoroughly after handling.  
Avoid breathing dust.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear eye/face protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a POISON CENTRE or doctor/physician.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other hazards

Other hazards which do not result in classification:

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Material is hygroscopic and may absorb moisture from air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Calcium chloride	Anhydrous calcium chloride; Calcium chloride dihydrate	10035-04-8	77.00

## SECTION 4. FIRST-AID MEASURES

### Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms persist.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Obtain medical attention if symptoms develop and persist.
- Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. Remove and wash contaminated clothing before re-use. If irritation or symptoms develop, seek medical attention.
- Eye contact* : Do not rub eyes. Immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention/advice.

### Most important symptoms and effects, both acute and delayed

- : Harmful if swallowed. Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness. May cause respiratory irritation. Symptoms may include coughing, choking and wheezing. Direct skin contact may cause temporary redness. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### Indication of any immediate medical attention and special treatment needed

- : Immediate medical attention is required. Treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### *Suitable extinguishing media*

- : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.



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### *Unsuitable extinguishing media*

: Do not use a solid water stream as it may scatter and spread fire.

### **Special hazards arising from the substance or mixture / Conditions of flammability**

: Burning may produce irritating, toxic and obnoxious fumes.

### **Flammability classification (OSHA 29 CFR 1910.106)**

: Non-flammable.

### **Hazardous combustion products**

: Hydrogen chloride gas; Chlorine; Calcium oxides.

### **Special protective equipment and precautions for firefighters**

#### *Protective equipment for fire-fighters*

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

#### *Special fire-fighting procedures*

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear suitable protective equipment. Refer to protective measures listed in sections 7 and 8. Restrict access to area until completion of clean-up.

**Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

### **Methods and material for containment and cleaning up**

: Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see Section 13 of the SDS.

### **Special spill response procedures**

: In case of transportation accident, contact TERRAPURE ENVIRONMENTAL at 1-800-567-7455.  
US CERCLA Reportable quantity (RQ): None.

## SECTION 7. HANDLING AND STORAGE

### **Precautions for safe handling**

: Use only in well-ventilated areas. Wear eye/face protection. Avoid breathing dust and fume. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. Keep away from extreme heat and flame. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling.

**Conditions for safe storage** : Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

**Incompatible materials** : Oxidizing agents; Reactive metals ;Hot water



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### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Calcium chloride	N/Av	N/Av	N/Av	N/Av

#### Exposure controls

##### Ventilation and engineering measures

: Use in a well-ventilated area. Local exhaust ventilation is preferred to prevent contaminant dispersion into work area.

##### Respiratory protection

: Where occupational exposure limits are exceeded, wear a suitable, NIOSH-approved particulate respirators (N95 or better). Advice should be sought from respiratory protection specialists.

##### Skin protection

: Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.

##### Eye / face protection

: Wear eye/face protection. Chemical goggles and face shield are recommended.

##### Other protective equipment

: Wear sufficient clothing to prevent skin contact. An eyewash station and safety shower should be made available in the immediate working area.

##### General hygiene considerations

: Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: White flakes
Odour	: Odorless.
Odour threshold	: N/Av
pH	: 8-9
Melting/Freezing point	: 176°C (But loses water of hydration at 200°C).
Initial boiling point and boiling range	: 1670°C
Flash point	: N/Av
Flashpoint (Method)	: N/Av
Evaporation rate (BuAe = 1)	: N/Av
Flammability (solid, gas)	: Not applicable.
Lower flammable limit (% by vol.)	: N/Av
Upper flammable limit (% by vol.)	: N/Av
Oxidizing properties	: None known.
Explosive properties	: Not explosive
Vapour pressure	: N/Av
Vapour density	: Water vapour forms at 200°C



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### Relative density / Specific gravity

: 1.85

**Solubility in water** : Soluble (980 g/L)

**Other solubility(ies)** : Soluble in most organic solvents.

### Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

**Auto-ignition temperature** : N/Av

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

**Volatiles (% by weight)** : Not available.

### Volatile organic Compounds (VOC's)

: N/Av

### Absolute pressure of container

: N/Av

**Flame projection length** : N/Av

### Other physical/chemical comments

: None known or reported by the manufacturer.

## SECTION 10. STABILITY AND REACTIVITY

**Reactivity** : Not normally reactive.

**Chemical stability** : Stable under normal conditions. Material is hygroscopic and may absorb moisture from air.

### Possibility of hazardous reactions

: No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

**Conditions to avoid** : Avoid excessive heat, sparks and open flame. Avoid wet or humid conditions. Do not use in areas without adequate ventilation. Avoid dust formation.

**Incompatible materials** : See Section 7 (Handling and Storage) for further details.

### Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

**Routes of entry inhalation** : YES

**Routes of entry skin & eye** : YES

**Routes of entry Ingestion** : YES

**Routes of exposure skin absorption**

: NO

### Potential Health Effects:

#### Signs and symptoms of short-term (acute) exposure

##### *Sign and symptoms Inhalation*

: Dusts may cause irritation of the mucous membranes and respiratory tract. Symptoms may include coughing and sneezing.

##### *Sign and symptoms ingestion*

: Ingestion may irritate digestive tract and cause nausea, vomiting and diarrhea.

##### *Sign and symptoms skin*

: Direct skin contact may result in little or no irritation. Prolonged contact, such as when trapped against the skin under clothing or jewelry, may be more irritating.

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*Sign and symptoms eyes* : Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Could result in permanent damage and blindness.

**Potential Chronic Health Effects**

: Prolonged skin contact may cause skin irritation.

**Mutagenicity**

: Not expected to be mutagenic in humans.

**Carcinogenicity**

: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects & Teratogenicity**

: Not expected to cause reproductive effects.

**Sensitization to material**

: Not expected to be a skin or respiratory sensitizer.

**Specific target organ effects**

: Eyes, skin, respiratory system and digestive system.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory) May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Medical conditions aggravated by overexposure**

: None known.

**Synergistic materials**

: Not available.

**Toxicological data**

 : The calculated ATE values for this mixture are:  
 ATE oral = 1298.70 mg/kg

<u>Chemical name</u>	<u>LC<sub>50</sub>(4hr)</u> <u>inh, rat</u>	<u>LD<sub>50</sub></u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Calcium chloride	N/Av	1000mg/kg	N/Av

**Other important toxicological hazards**

: None known.

### SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters. Calcium chloride is not known to be acutely toxic in the environment.

**Ecotoxicity data:**

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Fish</u>		
		<u>LC50 / 96h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Calcium chloride	10035-04-8	10650 mg/L (Lepomis macrochirus)	N/Av	None.

<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Daphnia</u>		
		<u>EC50 / 48h</u>	<u>NOEC / 21 day</u>	<u>M Factor</u>
Calcium chloride	10035-04-8	75900 ug/L (Daphnia magna)	330 mg/L (Daphnia magna)	None.

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<u>Ingredients</u>	<u>CAS No</u>	<u>Toxicity to Algae</u>		
		<u>EC50 / 96h or 72h</u>	<u>NOEC / 96h or 72h</u>	<u>M Factor</u>
Calcium chloride	10035-04-8	N/Av	N/Av	None.

**Persistence and degradability**

: Biodegradation is not applicable to inorganic materials.

**Bioaccumulation potential**

: No information available.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Calcium chloride (CAS 10035-04-8)	N/Av	no bioaccumulation

**Mobility in soil** : No information available.

**Other Adverse Environmental effects**

: No information available.

### SECTION 13. DISPOSAL CONSIDERATIONS

**Handling for Disposal**

: Handle waste according to recommendations in Section 7.

**Methods of Disposal**

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

**RCRA**

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

### SECTION 14. TRANSPORTATION INFORMATION

<u>Regulatory Information</u>	<u>UN Number</u>	<u>UN proper shipping name</u>	<u>Transport hazard class(es)</u>	<u>Packing Group</u>	<u>Label</u>
49CFR/DOT	None.	Not regulated.	Not regulated	none	
<b>49CFR/DOT Additional information</b>	None.				
TDG	None.	Not regulated.	Not regulated	none	
<b>TDG Additional information</b>	None.				

**Special precautions for user** : None known or reported by the manufacturer.

**Environmental hazards**

: This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

: Not available.



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### SECTION 15 - REGULATORY INFORMATION

#### US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Calcium chloride	10035-04-8	NL	N/Av	N/Av	No	N/Av

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above de minimus concentrations.

#### US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Calcium chloride	10035-04-8	No	N/Av	No	No	No	No	No	No

#### Canadian Information:

CEPA information: 10035-04-8 does not appear on the DSL. The anhydrous form, 10043-52-4 is present on the DSL. WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

#### International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Calcium chloride	10035-04-8	N/Av	Present	Present	(1)-176	KE-04496	Present	HSR003217

### SECTION 16. OTHER INFORMATION

#### **Legend**

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EPA: Environmental Protection Agency



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HMIS: Hazardous Materials Identification System  
 HSDB: Hazardous Substances Data Bank  
 IARC: International Agency for Research on Cancer  
 Inh: Inhalation  
 LC: Lethal Concentration  
 LD: Lethal Dose  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NFPA: National Fire Protection Association  
 NIOSH: National Institute of Occupational Safety and Health  
 NTP: National Toxicology Program  
 OSHA: Occupational Safety and Health Administration  
 PEL: Permissible exposure limit  
 RCRA: Resource Conservation and Recovery Act  
 RTECS: Registry of Toxic Effects of Chemical Substances  
 SARA: Superfund Amendments and Reauthorization Act  
 STEL: Short Term Exposure Limit  
 TLV: Threshold Limit Values  
 TWA: Time Weighted Average  
 WHMIS: Workplace Hazardous Materials Identification System

**References**

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016
- 2. International Agency for Research on Cancer Monographs, searched 2016
- 3. Canadian Centre for Occupational Health and Safety, CChInfoWeb databases, 2016(Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - 2016 version.
- 6. California Proposition 65 List - 2016 version.
- 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal,2016.

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**Other special considerations for handling**

: Provide adequate information, instruction and training for operators.

<p><b>Prepared for:</b> Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON L9S 3W4 Information (M-F 8:00-5:00): 705-436-5580 www.cometchemical.com</p>	
<p><b>Prepared by:</b> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) <a href="http://www.thecompliancecenter.com">http://www.thecompliancecenter.com</a></p>	

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