

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Product Name:	Calcium Chloride 94% Prill - Feed Grade
Chemical Name:	Calcium Chloride.
Synonyms:	Calcium Chloride 77 % Flake; Calcium Chloride HT Gran; Calcium Chloride DG Briquette; Calcium Chloride Anhydrous Briners; Calcium Chloride 94 - 97 % Pellets; Calcium Chloride Ice Melt; Calcium Chloride USP; Calcium Chloride Xtra 83 - 87 %; Calcium Chloride Anhydrous FCC; Peladow Briquettes; Peladow Mini Pellets 94 - 97 %; Peladow Snow and Ice; Peladow Calcium Chloride; Anco Brand Inhibited; Calcium Chloride Dihydrate; Flake Calcium Chloride; Powdered Calcium Chloride; Hi Test Calcium Chloride; Peladow Mini-Pellets. Common Trade Names include: Calplus, Dowflake, Snomelt, Superflake Anhydrous.
Chemical Family:	Inorganic salt.
Molecular Formula:	CaCl ₂ or CaCl ₂ · 2 H ₂ O.
Product Use:	For use in animal feed and nutrition.

Details of the supplier of the safety data sheet

Supplier	Pestell Nutrition
Address	141 Hamilton Rd New Hamburg, Ontario Canada, N3A 2H1
Phone	519-662-2877
Email	qa@pestell.com
Emergency telephone number (24 hr)	Canada: CANUTEC 1 613-996-6666 US: CHEMTREC 1 703-527-3887

2. HAZARDS IDENTIFICATION

GHS Classification in accordance with Hazardous Products Regulations (HPR)

(SOR/2015-17)

Eye irritation (Category 2A),
 Skin irritation (Category 2)
 Acute Oral Toxicity (Category 4)

Pictogram



Signal word

WARNING

Hazard statement(s)

H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H319	Causes serious eye irritation.

Precautionary statement(s)

P232	Protect from moisture
P262	Do not get in eyes, skin, or on clothing. Wash skin thoroughly after handling.
P264	Do not eat, drink, or smoke while using this product.
P270	
P280	Wear eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 If eye irritation persists: Get medical advice/ attention

Hazards not otherwise classified (HNOC) or not covered by GHS

Product may generate heat when mixed with water.

Emergency Overview

Inhalation: Dust or mist inhalation may irritate nose, throat and lungs.
 Ingestion: May irritate gastrointestinal tract and cause nausea and vomiting.
 Skin: May cause skin irritation in the presence of moisture--may cause superficial burns. Contact with cuts or broken skin may cause necrosis of skin.
 Eyes: May irritate or burn eyes.

WHMIS Classification / Symbol:

D-2B: Toxic (eye irritant)

3. COMPOSITION/INFORMATION ON INGREDIENTS

<i>Ingredient</i>	<i>CAS#</i>	<i>ACGIH TLV (TWA)</i>	<i>% Concentration</i>
Calcium Chloride	10043-52-4	---	75 - 100
Potassium Chloride	7447-40-7	---	1 - 3
Sodium Chloride	7647-14-5	---	1 - 3
May also contain:			
Calcium Bromide	7789-41-5	---	0.1 - 1

4. FIRST AID MEASURES

FIRST AID PROCEDURES

General Guidelines: Prompt removal of the material is essential.

Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY.

Skin Contact: Flush skin with running water and wash affected areas thoroughly with soap and water. Start flushing while removing contaminated clothing. Obtain medical attention IMMEDIATELY. If burn is present treat as a thermal burn, after decontamination.

Eye Contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Take care not to rinse contaminated water into the unaffected eye or onto the face. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY.

Ingestion: Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. IMMEDIATELY contact local Poison Control Centre. Vomiting should only be induced under the direction of a physician or a poison control centre. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility.

Note to Physicians: Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications.

Treatment for thermal, surface burns:

1. Immerse the burned part immediately in ice water to relieve pain and to prevent swelling and blistering. Place cold packs, ice or wet cloths on the burned area if immersion is not possible.
2. Remove anything that is constrictive, such as rings, bracelets or footwear, before swelling begins.
3. Cover the burn with a clean, preferably sterile, lint-free dressing.
4. For severe burns, immediately seek medical attention and monitor breathing and treat for shock.

Calcium Chloride: Vasopressor drugs (e.g. epinephrine, ephedrine etc.) should not be given on their own as there may be danger of cardiac arrhythmia. (7)

Medical conditions that may be aggravated by exposure to this product include diseases of the skin, eyes or respiratory tract, neurological, cardiovascular and skin disorders.

5. FIREFIGHTING MEASURES

<i>Flashpoint (°C)</i>	<i>Autolgnition Temperature (°C)</i>	Flammability Limits in Air (%):	
		<i>LEL</i>	<i>UEL</i>
Non-combustible (does not burn).	Not applicable.	Not applicable.	Not applicable.
Flammability Class (WHMIS):	Not regulated.		
Hazardous Combustion Products:	Thermal decomposition products are toxic and may include hydrochloric acid, oxides of chlorine, sodium, potassium, calcium and irritating gases.		
Unusual Fire or Explosion Hazards:	Not normally a fire or dust explosion hazard. Sealed containers may rupture from the pressure of water vapours released from crystals by intense heat. Minimize air borne spreading of dust. Spilled material may cause floors and contact surfaces to become slippery. Do not flush with water as aqueous solutions or powders that become wet render surfaces extremely slippery.		
Sensitivity to Mechanical Impact:	Not expected to be sensitive to mechanical impact.		
Rate of Burning:	Not available.		
Explosive Power:	Not available.		
Sensitivity to Static Discharge:	Not expected to be sensitive to static discharge.		
EXTINGUISHING MEDIA			
Fire Extinguishing Media:	Use media appropriate for surrounding fire and/or materials: Foam. Dry chemical, carbon dioxide or water spray.		
FIRE FIGHTING INSTRUCTIONS			
Instructions to the Fire Fighters:	Fire-exposed containers should be kept cool by spraying with water to reduce pressure. Spilled material may cause floors and contact surfaces to become slippery. Do not flush with water as aqueous solutions or powders that become wet render surfaces extremely slippery.		
Fire Fighting Protective Equipment:	Use self-contained breathing apparatus and protective clothing.		

6. ACCIDENTAL RELEASE MEASURES

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases, which change from region to region.

Containment and Clean-Up Procedures: In all cases of leak or spill contact vendor at Emergency Number shown on the front page of this MSDS. Minimize air borne spreading of dust. Do not flush with water as aqueous solutions or powders that become wet render surfaces extremely slippery. Wear respirator, protective clothing and gloves. Avoid dry sweeping. Do not use compressed air to clean surfaces. Vacuuming is preferred. Return all material possible to container for proper disposal. Collect product for recovery or disposal. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment.

Where a package (drum or bag) is damaged and / or leaking, repair it, or place it into an over-pack drum immediately so as to avoid or minimize material loss and contamination of surrounding environment. Any recovered product can be used for the usual purpose, depending on the extent and kind of contamination.

7. HANDLING AND STORAGE

HANDLING

Handling Practices: Use normal "good" industrial hygiene and housekeeping practices. Dry Calcium Chloride can produce considerable amounts of heat when dissolving into water. (3) Use cool water when diluting or dissolving (temperature less than 27 degrees celsius). Always add product slowly to liquid surface, with constant stirring to assure that product is completely dissolved as it is added to dissipate heat.

Ventilation Requirements: Minimize air borne spreading of dust. Do not use in poorly ventilated or confined areas without proper respiratory protection. Ventilation should be corrosion proof.

Other Precautions: Use only with adequate ventilation and avoid breathing dusts. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

STORAGE

Storage Temperature (°C): See below.

Ventilation Requirements: Ventilation should be corrosion proof.

Storage Requirements: Store in a cool, dry and well-ventilated area. Keep away from heat, sparks and flames. Keep containers closed. Avoid moisture contamination. Prolonged storage may result in lumping or caking. Hygroscopic.

Special Materials to be Used for Packaging or Containers: Materials of construction for storing the product include: 304 stainless steel, titanium or polyethylene. Equipment for storage, handling or transport should NOT be made from the following material, or, where applicable, its alloys: brass, zinc, mild steel, aluminum or iron. Confirm suitability of any material before using.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation required. Ventilation should be corrosion proof. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense dust may collect.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye Protection: Safety glasses with side shields are recommended to prevent eye contact. Use chemical safety goggles when there is potential for eye contact. Contact lenses should not be worn when working with this material.

Calcium Chloride 94 (SDS)

Skin Protection:	Gloves and protective clothing made from neoprene, PVC, nitrile rubber, rubber or plastic should be impervious under conditions of use. Prior to use, user should confirm impermeability. Do not use gloves or protective clothing made from leather. Discard contaminated gloves.
Respiratory Protection:	No specific guidelines available. A NIOSH/MSHA approved dust mask for concentrations of nuisance dust up to 100 mg/m ³ particulate. An air-supplied respirator if concentrations are higher or unknown. If while wearing a respiratory protection, you can smell, taste or otherwise detect anything unusual, or in the case of a full facepiece respirator you experience eye irritation, leave the area immediately. Check to make sure the respirator to face seal is still good. If it is, replace the filter, cartridge or canister. If the seal is no longer good, you may need a new respirator. (6)
Other Personal Protective Equipment:	Wear an impermeable apron and boots. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

EXPOSURE GUIDELINES

Particulate Not Otherwise Classified:

ACGIH	OSHA
10 mg/m ³ - Inhalable particulate	50 mppcf* or 15 mg/m ³ - Total Dust
3 mg/m ³ - Respirable particulate	15 mppcf* or 5 mg/m ³ - Respirable Fraction

* mppcf = million particles per cubic foot

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid.
Appearance:	White briquettes, pellets, flakes, granules or powder.
Odour:	Odourless.
Odour Threshold (ppm):	Not applicable.
Boiling Range (°C):	Not available.
Melting/Freezing Point (°C):	260 (Dihydrate); 772 (Anhydrous). (3)
Vapour Pressure (mm Hg at 20° C):	Not available.
Vapour Density (Air = 1.0):	Not applicable.
Relative Density (g/cc):	Not applicable.
Bulk Density:	51 - 68 lb/ft ³ . (3)
Viscosity:	Not available.
Evaporation Rate (Butyl Acetate = 1.0):	Not applicable.
Solubility:	Soluble in water. Hygroscopic (readily absorbs water).
% Volatile by Volume:	Not applicable.
pH:	Not applicable.
Coefficient of Water/Oil Distribution:	Not available.
Volatile Organic Compounds (VOC):	Not applicable.
Flashpoint (°C):	Non-combustible (does not burn).

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Under Normal Conditions:	Stable.
Under Fire Conditions:	Not flammable.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	High temperatures, sparks, open flames and all other sources of ignition. Minimize air borne spreading of dust. Clean up immediately to eliminate slipping hazard. Avoid moisture contamination. Hygroscopic.
Materials to Avoid:	Strong oxidizers. Lewis or mineral acids. Alkali metals. Methyl Vinyl Ether. Boric Acid. Calcium Oxide. Bromine trifluoride.

May react violently with metals such as sodium, potassium and barium particularly if they are finely divided. Hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead and zinc.

Decomposition or Combustion Products: Thermal decomposition products are toxic and may include hydrochloric acid, oxides of chlorine, sodium, potassium, calcium and irritating gases.

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:

<i>SUBSTANCE</i>	<i>LD50 (Oral, Rat)</i>	<i>LD50 (Dermal, Rabbit)</i>	<i>LC50 (Inhalation, Rat, 4h)</i>
Calcium Chloride	1 000 mg/kg (1)	---	---
Potassium Chloride	2600 mg/kg (1,3)	---	---
Sodium Chloride	3 000 mg/kg (1,3)	---	---
Carcinogenicity Data:	The ingredient(s) of this product is (are) not classed as carcinogenic by ACGIH, IARC, OSHA or NTP.		
Reproductive Data:	No adverse reproductive effects are anticipated.		
Mutagenicity Data:	Mutagenicity tests have been negative or inconclusive. (3) See "Other Studies Relevant to Material".		
Teratogenicity Data:	No adverse teratogenic effects are anticipated.		
Respiratory / Skin Sensitization Data:	None known.		
Synergistic Materials:	None known.		
Other Studies Relevant to Material:	Calcium Chloride Anhydrous caused severe irritation in rabbits which did not reverse after 21 days in 2 of 3 rabbits. (4)		
	Calcium Chloride is a non to mild skin irritant when tested in rabbits. (4)		
	No studies using live animals were located. Negative results were obtained in an unconfirmed study in cultured mammalian cells and in confirmed and unconfirmed tests using bacteria. Positive results were obtained in yeast. (4)		
	No developmental effects were seen in rats, mice or rabbits following oral exposure to doses that caused no maternal toxicity. (4)		

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Calcium Chloride: 96-hour LC50 (Sunfish, Fresh water) = 10,650 ppm. (3) 96-hour LC50 (Bluegill) = > 5 000 - 10 650 mg/l. (3) LC50 (Water Flea) = 759 - 3 005 mg/l. (3) EC50 (activated sludge, respiratory inhibition) > 1 000 mg/l. (3)
Environmental Fate:	This material is not expected to bioaccumulate. (3) Can be hazardous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

13. DISPOSAL CONSIDERATIONS

Deactivating Chemicals:	Not available.
Waste Disposal Methods:	This information applies to the material as manufactured. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.
Safe Handling of Residues:	See "Waste Disposal Methods".

Disposal of Packaging: Empty containers retain product residue and can be hazardous. Do not dispose of package until thoroughly washed out. Dispose of waste material at an approved landfill site.

14. TRANSPORT INFORMATION

Ground Transport

TDG (Canada): not regulated as dangerous goods.

DOT (USA): not regulated as dangerous goods.

Marine Transport

IMDG/IMO: not regulated as dangerous goods.

Air Transport

IATA: not regulated as dangerous goods.

15. REGULATORY INFORMATION

CANADA

CEPA - NSNR: All components of this product are included on the DSL.

CEPA - NPRI: Not available.

Controlled Products Regulations Classification (WHMIS):

D-2B: Toxic (eye irritant)

USA

Environmental Protection Act: All components of this product are included on the TSCA inventory.

OSHA HCS (29CFR 1910.1200): Skin and Eye Irritant.

NFPA: 1 Health, 0 Fire, 0 Reactivity (3)

HMIS: 2 Health, 0 Fire, 0 Reactivity (3)

INTERNATIONAL

The following component or components of this product appear on the European Inventory of Existing Commercial Chemical Substances: Calcium Chloride.

16. OTHER INFORMATION

REFERENCES

1. RTECS-Registry of Toxic Effects of Chemical Substances, Canadian Centre for Occupational Health and Safety RTECS database.
2. Clayton, G.D. and Clayton, F.E., Eds., Patty's Industrial Hygiene and Toxicology, 3rd ed., Vol. IIA,B,C, John Wiley and Sons, New York, 1981.
3. Supplier's Material Safety Data Sheet(s).
4. CHEMINFO chemical profile, Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
5. Guide to Occupational Exposure Values, 2011, American Conference of Governmental Industrial Hygienists, Cincinnati, 2011.
6. Regulatory Affairs Group, Brenntag Canada Inc.
7. The British Columbia Drug and Poison Information Centre, Poison Managements Manual, Canadian Pharmaceutical Association, Ottawa, 1981.

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Pestell Nutrition and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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