## SAFETY DATA SHEET



# PELADOW® PREMIER SNOW AND ICE MELTER CALCIUM CHLORIDE

North America EN SDS No.: M48005

Rev. Date: 11-Nov-2025

**Rev. Num.** 08

## SECTION 1. CHEMICAL PRODUCT / COMPANY IDENTIFICATION

Company Identification: Occidental Chemical Corporation

14555 Dallas Parkway, Suite 400 Dallas, Texas 75254-4300

24-Hour Emergency Telephone

Number:

1-800-733-3665 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and

Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186

To Request an SDS: MSDS@oxy.com or 1-972-404-3245

**Customer Service:** 1-800-752-5151 or 1-972-404-3700

Product Identifier: PELADOW® PREMIER SNOW AND ICE MELTER CALCIUM CHLORIDE

Synonyms: Calcium Dichloride; Calcium Chloride; Peladow; Calcium Chloride Pellets

**Product Use:** Ice and snow melting, Deicing agent for cured asphalt and concrete surfaces

Uses Advised Against: - Not approved for use in food or animal feed

**Restrictions on Use (United** 

States):

• NOT FOR FOOD OR DRUG USE

NOT FOR SALE IN CALIFORNIA

KEEP OUT OF REACH OF CHILDREN

Other Global Restrictions on

Use:

Other restrictions on use based on local, regional, state, or national regulations

may exist and must be determined on a case-by-case basis.

Chemical Family: Inorganic Salt

Additional Information: CONSUMER PRODUCTS: When packaged in quantities of 50 lbs. or less, and

used in a manner and frequency typical of consumer use, Occidental Chemical Corporation considers this product a consumer use product which is regulated by

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the Consumer Product Safety Commission (CPSC). Because CPSC labeling requirements differ from the Occupational Safety and Health Administration (OSHA) GHS requirements for safety data sheets (SDS), slight differences in hazard information between the product label and SDS may be observed.

# **SECTION 2. HAZARDS IDENTIFICATION**

**OSHA REGULATORY STATUS:** Health hazard classifications were performed using OSHA Hazard Communication 2024 (1910.1200) Appendix A and/or UN GHS Rev. 9 (2021). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**HEALTH CANADA HPR REGULATORY STATUS:** This material is considered hazardous by the Health Canada Hazardous Products Act's Hazardous Products Regulations (HPR) (SOR/2015-17).

#### **EMERGENCY OVERVIEW:**

Color: White
Physical State: Solid
Appearance: Pellets
Appearance: Pellets
Odor: Odorless

Signal Word: WARNING

MAJOR HEALTH HAZARDS: CAUSES SERIOUS EYE IRRITATION. HARMFUL IF SWALLOWED.

**PHYSICAL HAZARDS:** Calcium chloride has an exothermic heat of solution and solid products release a large amount of heat when dissolved in water. Heat is generated when mixed with water or aqueous acid solutions. Calcium chloride is hygroscopic and deliquescent, meaning it is capable of absorbing enough moisture from the air to become liquid. Chlorides in the presence of water and oxygen are associated with the accelerated corrosion of common metals, such as steel, copper and brass. Calcium chloride brines are electrically conductive.

**PRECAUTIONARY STATEMENTS:** Wash hands and exposed skin thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke when using this product. Wear eye protection.

**ADDITIONAL HAZARD INFORMATION:** Good hygiene practices include but are not limited to wearing chemical resistant gloves and eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

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## **HAZARD CLASSIFICATION:**

GHS: CONTACT HAZARD - EYE:	Category 2A - Causes serious eye irritation
GHS: ACUTE TOXICITY - ORAL:	Category 4 - Harmful if swallowed

#### **UNKNOWN ACUTE TOXICITY:**

## **Unknown Acute Oral Toxicity:**

100% of this product consists of ingredient(s) of known acute oral toxicity.

#### **Unknown Acute Dermal Toxicity:**

100% of this product consists of ingredient(s) of known acute dermal toxicity.

#### **Unknown Acute Inhalation Toxicity:**

There is no acute inhalation toxicity data available for this material.

GHS SYMBOL: Exclamation mark



GHS SIGNAL WORD: WARNING

#### **GHS HAZARD STATEMENTS:**

#### **GHS - Physical Hazard Statement(s)**

• No GHS physical hazard categories were identified for this product

## **GHS - Health Hazard Statement(s)**

- · Harmful if swallowed
- · Causes serious eye irritation

#### GHS - Environmental Hazard Statement(s)

· No GHS environmental hazards were identified for this product

## GHS - Precautionary Statement(s) - Prevention

- · Wash hands and exposed skin thoroughly after handling. Do not touch eyes
- Do not eat, drink, or smoke when using this product
- · Wear eye protection

## GHS - Precautionary Statement(s) - Response

- IF SWALLOWED: Get medical help
- · Rinse mouth if ingested
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical help

#### GHS - Precautionary Statement(s) - Storage

• There are no Precautionary-Storage phrases assigned

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## GHS - Precautionary Statement(s) - Disposal

• Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

#### Physical Hazards of Significance Not Mentioned in GHS Classification

- Calcium chloride is hygroscopic and is capable of absorbing moisture from the air to become liquid. Chlorides in the presence of water and oxygen are associated with the accelerated corrosion of common metals, such as steel, copper and brass
- Calcium chloride has an exothermic heat of solution and solid products release a large amount of heat when dissolved in water
- Calcium chloride brines are electrically conductive. There is a risk of electric shock if energized electrical equipment is handled with hands or fabric gloves that are wet with brine

# Persistent, Bioaccumulative, and Toxic (PBT) and Very Persistent and Very Bioaccumulative (vPvB) Assessment:

According to Annex XIII of the REACH Regulation 1907/2006/EC inorganic substances do not need to be subjected to a PBT assessment.

## **Endocrine Disruptor Assessment:**

Potassium chloride is listed on The Endocrine Disruptors Exchange's (TEDX) List of Potential Endocrine Disruptors database of chemicals with the potential to affect the endocrine system. Every chemical on the TEDX List has one or more verified citations published, accessible, primary scientific research demonstrating effects on the endocrine system.

Component		EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation
Sodium Chloride	Not listed	Not Listed as SVHC

See Section 11: TOXICOLOGICAL INFORMATION

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Systematic Chemical Name	Common name	CAS Number	Percent [%]
Calcium chloride 10043-52-4	Calcium Chloride	Calcium Chloride	10043-52-4	> 90 - < 92
Water 7732-18-5	Dihydrogen monoxide (H <sub>2</sub> O)	Water	7732-18-5	> 4 - < 6
Potassium Chloride 7447-40-7	Potassium Chloride	Potassium Chloride	7447-40-7	> 2 - < 3
Sodium Chloride 7647-14-5	Sodium Chloride (NaCl)	Sodium Chloride (Salt)	7647-14-5	> 1 - < 2

Notes: Potassium chloride and sodium chloride are impurities from the naturally-occurring source material, brine

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## **SECTION 4. FIRST AID MEASURES**

**EYE CONTACT:** If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.

**SKIN CONTACT:** If on skin, wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical help.

**INHALATION:** If inhalation of dust occurs and adverse effects result, remove to uncontaminated area. IF INHALED: Get medical help if you feel unwell.

**INGESTION:** IF SWALLOWED: Get medical help. If swallowed, rinse mouth.

## MOST IMPORTANT SYMPTOMS/EFFECTS (ACUTE AND CHRONIC [DELAYED]):

#### **Acute Symptoms/Effects:**

**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.

**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.

**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.

**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.

**Chronic (Delayed) Symptoms/Effects:** Chronic exposures to skin and mucus membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem.

**Protection of First-Aid Responders:** At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission. If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Notes to Physician:** 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.

**Interaction with Other Chemicals Which Enhance Toxicity:** Because of its additive effect, calcium should be administered very cautiously to a patient who is digitalized or who is taking effective doses of digitalis or

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digitalis-like preparations.

**Medical Conditions Aggravated by Exposure:** Any skin condition that disrupts the skin, such as abrasions, cuts, psoriasis, fungal infections, etc. Any upper respiratory conditions that compromise mucosa can increase local damage from dust contact. Any eye condition that compromises tear production, conjunctiva, or normal corneal homeostasis.

## SECTION 5. FIRE FIGHTING MEASURES

Fire Hazard: This material does not burn.

**Explosive properties:** Prolonged action of calcium chloride solution upon the zinc coating of a galvanized iron vessel causes slow evolution of hydrogen, which may ignite and explode. The exotherm produced by adding solid calcium chloride to hot water causes violent boiling. Calcium chloride catalyzes exothermic polymerization of methyl vinyl ether.

**Extinguishing Media:** Use water, dry chemical, carbon dioxide or foam to extinguish. Do not extinguish fire unless release can be stopped. Use water to cool containers but avoid getting water into containers.

Unsuitable Extinguishing Media: No information available.

**Specific Hazards:** Avoid direct contact of this product with water as this can cause an exothermic reaction.

**Unusual Hazards:** May spatter or generate heat when mixed with water.

**Fire Fighting:** Keep unnecessary people away, isolate hazard areas 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. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

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

**Sensitivity to Mechanical Impact:** Not sensitive.

**Sensitivity to Static Discharge:** Not sensitive.

Lower Flammability Level (air): Not applicable

Upper Flammability Level (air): Not applicable

Flash point: Not applicable

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Auto-ignition Temperature: Not applicable

#### Physical Hazards of Significance Not Mentioned in GHS Classification

- Calcium chloride is hygroscopic and is capable of absorbing moisture from the air to become liquid. Chlorides in the presence of water and oxygen are associated with the accelerated corrosion of common metals, such as steel, copper and brass
- Calcium chloride has an exothermic heat of solution and solid products release a large amount of heat when dissolved in water
- Calcium chloride brines are electrically conductive. There is a risk of electric shock if energized electrical equipment is handled with hands or fabric gloves that are wet with brine

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

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**Personal Precautions:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard on some surfaces. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

**Personal Protective Equipment:** See Section 8 for information on personal protective equipment.

**Emergency Procedures:** Restrict access to spill site, call fire department and notify manufacturer, stop the flow and contain spill if safe to do so, keep contaminated water from entering sewers or water courses, and avoid contact with liquid and solid.

**Environmental Precautions:** Prevent large spills from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

#### **Methods and Materials for Clean-up**

**Recovery:** When solid calcium chloride is spilled on land, shovel into appropriate containers (avoid dusting) for recovery or disposal. The recovered product must be transferred to an appropriate and compatible container (stainless steel, PVC, Fiberglass or similar).

**Neutralization:** Flush spill area with water, if appropriate. **Final Disposal:** For waste disposal, see section 13.

# SECTION 7. HANDLING AND STORAGE

## **Handling:**

#### **Precautions for Safe Handling:**

Wash hands, exposed skin, and contaminated clothing thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke in areas where this material is used. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS.

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**Technical measures/precautions:** Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80°F, 27°C). Keep container tightly closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

#### Other precautions:

**Prevention of contact:** Wear protective gloves, protective clothing, eye, and face protection. See Section 8, Exposure Controls and Personal Protection, for additional information.

#### Storage:

**Safe Storage Conditions:** Store in a dry place. Protect from atmospheric moisture. Keep container tightly closed. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

**Technical measures:** Solid calcium chloride is both hygroscopic and deliquescent. This means that the product can absorb moisture from the air, even to the point of converting to liquid brine. For this reason, solid calcium chloride should be protected from atmospheric moisture to maintain product quality while in storage. Store in a dry area. Opened packages should be tightly resealed after each use. If storing outdoors, cover with waterproof tarps.

**Incompatible Substances:** 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.

Packaging or Materials of Construction: Dry bulk calcium chloride can be stored in bins fabricated from most construction-grade steel materials. Care should be taken to minimize moisture. Venting should be limited to times of filling and discharging calcium chloride from the storage bin. The preferred material of construction for large, liquid-storage tanks is carbon steel with an epoxy based interior lining and epoxy-based exterior paint. Common stainless steels should not be used for liquid calcium chloride storage because they are subject to chloride stress cracking, even at temperatures as low as100°F (38°C). Nonmetallic materials, such as fiberglass or plastic, work well for smaller tanks at near ambient temperatures; however, the puncture resistance and structural strength of these materials, relative to carbon steel, should be evaluated.

## **Additional Information:**

## Physical Hazards of Significance Not Mentioned in GHS Classification

- Calcium chloride is hygroscopic and is capable of absorbing moisture from the air to become liquid. Chlorides in the
  presence of water and oxygen are associated with the accelerated corrosion of common metals, such as steel, copper
  and brass
- Calcium chloride has an exothermic heat of solution and solid products release a large amount of heat when dissolved in water
- Calcium chloride brines are electrically conductive. There is a risk of electric shock if energized electrical equipment is handled with hands or fabric gloves that are wet with brine

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## **REGULATORY EXPOSURE LIMIT(S):**

Listed below for the product components that have regulatory occupational exposure limits (OEL's) established.

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OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration;

PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

## **NON-REGULATORY EXPOSURE LIMIT(S):**

Listed below are the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established.

Component	ACGIH TWA	ACGIH STEL	Skin Absorptio	AIHA WEELs	OSHA TWA	OSHA STEL	OSHA Ceiling
			n - ACGIH		(Vacated)	(Vacated)	(Vacated)
Particulates Not	10 mg/m <sup>3</sup>		 	 			
Otherwise	(inhalable)						
Specified (PNOS)	3 mg/m <sup>3</sup>						
Not Assigned	(respirable						
(100 %)	)						
Calcium chloride			 	 			
10043-52-4 (0							
%)							

<sup>-</sup> The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

**Additional Advice:** Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

**ENGINEERING CONTROLS:** Use closed systems when possible. Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### PERSONAL PROTECTIVE EQUIPMENT:

**Eye Protection:** For dusty operations or when handling solutions of the material, wear chemical goggles. Where splashing or spraying is possible, use a face-shield in addition to chemical protective goggles.

**Skin and Body Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

**Hand Protection:** Wear appropriate chemical resistant gloves. If contact with forearms is likely, wear gauntlet style gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

Protective Material Types: Neoprene, Polyvinyl chloride (PVC), Nitrile rubber gloves.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: High efficiency particulate air (HEPA)

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N95. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

**Other Protective Equipment:** An emergency eyewash fountain and quick drench shower should be provided in the immediate work area.

**HYGIENE MEASURES:** Do not breathe dust or spray mist. Do not get in eyes, on skin, or on clothing. Wear protective gloves, protective clothing, eye, and face protection. For environmental protection remove and wash all contaminated protective equipment before re-use. Keep separated from incompatible substances.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:PelletsPhysical State:SolidColor:WhiteOdor:Odorless

No data available Odor Threshold [ppm]: 772 °C (1,422 °F) **Melting Point/Range:** Freezing Point/Range: Not applicable to solids **Boiling Point °C** 1935°C (3,515°F) **Evaporation Rate (ether=1):** Not applicable Flammability (solid, gas): Not applicable Lower Flammability Level (air): Not applicable **Upper Flammability Level (air):** Not applicable

Explosion limits:Not applicableFlash point:Not applicableAuto-ignition Temperature:Not applicableDecomposition Temperature:Not applicable

**pH:** Not applicable to solids

Viscosity:
Not applicable to some viscosity:
Not applicable to some viscosity:
No data available

Water Solubility: Readily soluble Partition Coefficient (n-octanol/water): No data available

 Vapor Pressure:
 Negligible at ambient temperature

Density: No data available Relative Density/Specific Gravity (water=1): Not applicable to solids

Vapor Density (air=1): Not applicable

Particle Size Distribution: <4% through 30 (0.6 mm) sieve 10% through 20 (0.84 mm) sieve 80% through 4 (4.76 mm) sieve

100% through 9.5 mm sieve

Other Information

Molecular Formula: CaCl<sub>2</sub>

Chemical Family: Inorganic Salt

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Molecular Weight:111 g/moleExplosive properties:Not applicableOxidizing properties:Not applicableBulk Density:58 - 66 lb/ft3Volatility:Not applicable

Hygroscopic: Yes

# **SECTION 10. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable at normal temperatures and pressures.

**Reactivity:** Hygroscopic. Liberates large amounts of heat when dissolving in water or agueous acids.

Possibility of Hazardous Reactions: Avoid moisture.

Conditions to Avoid (e.g., static discharge, shock, or vibration): None known.

**Incompatible Substances:** 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.

**Hazardous Polymerization:** Polymerization will not normally occur; however, violent polymerization occurs when mixed with Methyl Vinyl Ether.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **POTENTIAL HEALTH EFFECTS:**

#### **ACUTE TOXICITY:**

**Eye contact:** For solid: May cause slight eye irritation, mechanical injury only. Dust formation should be avoided, as dust can cause severe eye irritation with corneal injury.

**Skin contact:** Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation, even a burn. Not classified as corrosive to the skin according to DOT guidelines. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear.

**Inhalation:** Dust may cause irritation to upper respiratory tract (nose and throat).

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**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause local mucosal damage to esophagus and stomach. Swallowing may result in gastrointestinal irritation or ulceration.

#### **CHRONIC TOXICITY:**

**Chronic Effects:** Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component(s): POTASSIUM CHLORIDE: In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart, and kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. SODIUM CHLORIDE: Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

## SIGNS AND SYMPTOMS OF EXPOSURE:

Solution and or solids may be visible on the skin and or eyes. Localized redness, warmth, and irritation consistent with mechanism of injury: abrasion, burn, hypertonic solution.

**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.

**Interaction with Other Chemicals Which Enhance Toxicity:** Because of its additive effect, calcium should be administered very cautiously to a patient who is digitalized or who is taking effective doses of digitalis or digitalis-like preparations.

#### **GHS HEALTH HAZARDS:**

GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation

GHS: ACUTE TOXICITY - ORAL: Category 4 - Harmful if swallowed

## **TOXICITY DATA:**

### PRODUCT TOXICITY DATA:

	=, ,			
LD50	Oral:	LD50 Dermal:		LC50 Inhalation:
1055 mg/kg - Or	al Acute Toxicity	2776 mg/kg - Dermal Acu	ite Toxicity	No data is available
Estimat	e (ATE)	Estimate (ATE)	)	

#### **COMPONENT TOXICITY DATA:**

The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	Oral LD50	Dermal LD50	Inhalation LC50
Calcium chloride 10043-52-4	1000 mg/kg (Rat)	>5000 mg/kg (Rabbit)	No data available

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Component	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	>90 mL/kg (Rat)	No data available	No data available
Potassium Chloride 7447-40-7	2600 mg/kg (Rat)	No data available	No data available
Sodium Chloride 7647-14-5	3550 mg/kg (Rat)	>10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h

**EYE IRRITATION/CORROSION:** May cause sufficient injury to the eye to include damage to the cornea which heals or nearly heals in a week and/or considerable conjunctival irritation with edema.

**SKIN IRRITATION/CORROSION:** Calcium chloride was found not to be irritating to rabbit skin in a GLP-compliant study, performed according to OECD Guideline 404 (Koopman et al., 1986e). No effects were noted in any of three rabbits at any observation time points (1, 24, 48 and 72 hours) following an application of the anhydrous substance under occlusive dressing for 4 hours.

Standard Draize (Skin): Score - 1.4 (Rabbit - 24 hours)

#### SKIN ABSORBENT/DERMAL ROUTE: NO.

Calcium chloride lacks the necessary lipophilicity that is required to allow penetration of the substance through the stratum corneum.

**RESPIRATORY OR SKIN SENSITIZATION:** Calcium chloride is not sensitizing to skin or respiratory tract. No evidence of skin or respiratory sensitization in humans have been reported despite long-term historical and wide dispersive use.

**CARCINOGENICITY:** Calcium chloride is not genotoxic in- vitro with calcium and chloride being essential nutrients for humans. In addition, the safe use of calcium chloride as a food additive was recently re-evaluated by the EFSA Panel on Food Additives and Flavorings (Scientific opinion dated 6 June 2019, doi: 10.2903/j.efsa.2019.5751). The assessment confirmed that there is no concern with respect to carcinogenicity. Based on this information, it is concluded that the substance is not carcinogenic and the performance of a carcinogenicity study for calcium chloride is not indicated. Not classified as a carcinogen per GHS and/or CLP criteria.

	Component	NTP:	IARC (GROUP 1):	IARC (GROUP 2):	OSHA:	ACGIH (American Conference of Governmental Industrial Hygienists)	
	Calcium chloride	Not listed	Not listed	Not listed	Not Listed	Not listed	Not listed
Γ	Potassium Chloride	Not listed	Not listed	Not listed	Not Listed	Not listed	Not listed

**SPECIFIC TARGET ORGAN TOXICITY (Single Exposure):** There is limited evidence that calcium chloride may cause respiratory tract irritation; however, this evidence is concluded to not be sufficient for classification and labelling. The substance is not classified as a specific target organ toxicant after single exposure per GHS and/or CLP criteria.

**SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure):** Calcium and chloride are essential nutrients for humans and with a known tolerable upper intake level for calcium set at 2500 mg per day, this equates to a tolerable level of approximately 6.9 g CaCl<sub>2</sub> per day. Therefore, repeat exposure target organ toxicity is not expected

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in an occupational exposure setting. The substance is not classified as a specific target organ toxicant upon repeated exposure per GHS and/or CLP criteria.

**INHALATION HAZARD:** No reliable animal data on acute inhalation toxicity are available; however, human data suggest that calcium chloride is not acutely toxic by inhalation.

**INGESTION HAZARD:** LD50 Acute Toxicity Estimates meet the GHS classification criteria of greater than 300 mg/kg and less than or equal to 2000 mg/kg. Therefore, this mixture is classified as Category 4 Acute Toxin Oral (harmful if swallowed).

**GERM CELL/IN-VITRO MUTAGENICITY:** Calcium chloride is considered not to have a genotoxic potential based on the results of two bacterial mutation assays and an in-vitro chromosome aberration test in Chinese hamster lung fibroblasts.

**REPRODUCTIVE TOXICITY:** An oral developmental study was performed in three (3) species (mouse, rat, and rabbit). In all three species no maternal or teratogenic effects were noted, and NOAELs (169mg/kg bw/day) were above the highest dose given. In addition, calcium chloride will neither reach the fetus or male and female reproductive organs, as it does not become systemically available, which indicates that there is no risk for developmental or reproductive toxicity. Not classified as a reproductive toxin per GHS and/or CLP criteria.

ASPIRATION HAZARD: Not classified as an aspiration hazard per GHS and/or CLP criteria.

**TOXICOKINETICS:** Calcium chloride is easily dissociated into calcium and chloride ions in water. The absorption, the distribution, and the excretion of the ions in animals are regulated separately. Calcium and chloride are essential constituents of the body of all animal species. Calcium is essential for the formation of skeletons and the regulation of neural transmission, muscle contraction and coagulation of the blood. Chloride is required for regulating intracellular osmotic pressure and buffering.

METABOLISM: See Toxicokinetics above.

BIOLOGICAL DISTRIBUTION: See Toxicokinetics above.

PATHOGENICITY AND ACUTE INFECTIOUSNESS (ORAL, DERMAL, AND INHALATION): Not applicable.

**ENDOCRINE DISRUPTOR:** Potassium chloride is listed on The Endocrine Disruptors Exchange's (TEDX) List of Potential Endocrine Disruptors database of chemicals with the potential to affect the endocrine system. Every chemical on the TEDX List has one or more verified citations published, accessible, primary scientific research demonstrating effects on the endocrine system. Potassium chloride, sodium chloride, and calcium bromide are impurities from the naturally occurring source material, brine solution.

**NEUROTOXICITY:** No relevant information available.

**IMMUNOTOXICITY:** No relevant information available; however, calcium ions are essential in the correct gene expression of the immune system.

# SECTION 12. ECOLOGICAL INFORMATION

**ECOTOXICITY (EC, IC, and LC):** 

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Ecotoxicity - Available LOLI Data for Components: The component ecotoxicity data is populated by the LOLI

database and may differ from the product ecotoxicity data given

database and may differ from	'		A1 T : ::	OII
Component:	Freshwater Fish:	Invertebrate	Algae Toxicity:	Other Toxicity:
		Toxicity:		
Calcium chloride	LC50, bluegill	LC50, water flea	No data available	No data available
10043-52-4 (> 90 - < 92 %)	(Lepomis	Daphnia magna: 759		
	macrochirus): 8,350 -	- 3,005 mg/l		
	10,650 mg/l			
Potassium Chloride	LC50, rainbow trout	EC50, water flea	*EC50 Desmodesmus	No data available
7447-40-7 (> 2 - < 3 %)	(Oncorhynchus	Daphnia magna, 24 h,	subspicatus (72 h)	
	mykiss), 96 h: 4,236	immobilization: 590	=2500 mg/L	
	mg/l	mg/l		
		- LC50, water flea		
		Ceriodaphnia dubia,		
		96 h: 3,470 mg/l		
		_		
Sodium Chloride	*LC50 Lepomis	*EC50 Daphnia	No data available	*LC50 Eisenia foetida
7647-14-5 (> 1 - < 2 %)	macrochirus: 5560 -	magna: 1000 mg/L		(48 h filter paper) 0.1
, , , , , ,	6080 mg/L 96h	48h		- 1 mg/cm2
	flow-through	*EC50 Daphnia		-
	*LC50 Lepomis	magna: 340.7 - 469.2		
	macrochirus: 12946	mg/L 48h		
	mg/L 96h static			
	*LC50 Pimephales			
	promelas: 6020 -			
	7070 mg/L 96h static			
	*LC50 Pimephales			
	promelas: 7050 mg/L			
	96h semi-static			
	*LC50 Pimephales			
	promelas: 6420 -			
	6700 mg/L 96h static			
	*LC50 Oncorhynchus			
	mykiss: 4747 - 7824			
	mg/L 96h			
	flow-through			

#### **Aquatic Toxicity:**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested)

## **Fish Toxicity:**

Fathead Minnow (Pimephales promelas) LC50 (96-hour) > 4630 mg/L Bluegill Sunfish (Lepomis macrochirus) /Mosquitofish (Gambusia affinis) LC50 (96-hour) > 9500 - 13400 mg/L

#### **Invertebrate Toxicity:**

Daphnia magna EC50 (48 hour) = 2400 mg/L Daphnia magna NOEC (21 days) = 230 mg/L

#### **FATE AND TRANSPORT:**

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**PERSISTENCE:** Calcium chloride is believed not to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into water in the form of calcium and chloride ions. Calcium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature, and their concentrations in surface water will depend on various factors, such as geological parameters, weathering, and human activities.

**BIODEGRADATION:** Calcium chloride is an inorganic substance which is not expected to undergo photolysis or biodegradation.

**BIOCONCENTRATION:** No bioconcentration is expected because of the relatively high-water solubility. Potential for mobility in soil is very high (Koc between 0 and 50). Partitioning from water to n-octanol is not applicable.

**BIOACCUMULATIVE POTENTIAL:** Calcium chloride is easily dissociated into calcium and chloride ions and both ions are essential constituents of the body of all animals hence if a high amount would be taken up this is regulated by the body. Bioaccumulation of calcium chloride is consequently not expected.

**MOBILITY IN SOIL:** Calcium chloride is not expected to be absorbed in soil due to its dissociation properties and high-water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable inorganic or organic salts with other counter ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

## ADDITIONAL ECOLOGICAL INFORMATION:

Persistent, Bioaccumulative, and Toxic (PBT) and Very Persistent and Very Bioaccumulative (vPvB) Assessment:

According to Annex XIII of the REACH Regulation 1907/2006/EC inorganic substances do not need to be subjected to a PBT assessment.

## **SECTION 13. DISPOSAL CONSIDERATIONS**

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## Waste from material:

Reuse or reprocess, if possible. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Report spills if applicable. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Landfill and wastewater treatment system.

#### **Container Management:**

Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

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#### **Contaminated Material:**

Contaminated packaging should be disposed of as unused product. Recycle any unused portion of the material for its approved use. Waste calcium chloride must never be discharged directly into sewers or surface waters.

## **SECTION 14. TRANSPORT INFORMATION**

#### LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

Status: Not Regulated

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:** 

Status: Not Regulated

#### MARITIME TRANSPORT (IMO / IMDG)

Status - IMO / IMDG: Not Regulated.

#### AIR TRANSPORT (ICAO / IATA)

Status - ICAO/IATA: Not Regulated

## **SECTION 15. REGULATORY INFORMATION**

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## **U.S. REGULATIONS**

#### **OSHA REGULATORY STATUS:**

Health hazard classifications were performed using OSHA Hazard Communication 2024 (1910.1200) Appendix A and/or UN GHS Rev. 9 (2021). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

## SARA EHS Chemical (40 CFR 355.30)

Not regulated.

## SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):

Health Hazard - Acute Toxin (any route of exposure)

Health Hazard - Serious eye damage or eye irritation

## EPCRA SECTION 313 (40 CFR 372.65):

No components are listed.

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DEPARTMENT OF HOMELAND SECURITY (DHS)- Chemical Facility Anti-Terrorism Standards (6 CFR 27):

No components in this material are regulated under DHS

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated.

**EPA'S CLEAN WATER AND CLEAN AIR ACTS:** 

Component(s) not listed on impacted regulatory lists.

#### **NATIONAL INVENTORY STATUS**

## U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

Component	TSCA Inventory	TSCA ACTIVE	TSCA 12(b)	TSCA/Section 4	TSCA/Section 5	TSCA/Section 6	TSCA/Section 8
		LIST					
Calcium chloride	Listed	ACTIVE	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
10043-52-4 (> 90 - < 92							
%)							
Potassium Chloride	Listed	ACTIVE	Not Listed	Not listed	Not Listed	Not Listed	Not listed
7447-40-7 (> 2 - < 3 %)							
Sodium Chloride	Listed	ACTIVE	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
7647-14-5 (> 1 - < 2 %)							

#### TSCA 12(b):

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

Component	DSL	NDSL
Calcium chloride	Listed	Not Listed
10043-52-4 (> 90 - < 92)		
Potassium Chloride	Listed	Not Listed
7447-40-7 (> 2 - < 3)		
Sodium Chloride	Listed	Not Listed
7647-14-5 (> 1 - < 2)		

#### STATE REGULATIONS

There are no applicable state regulations for this product or its components.

#### California Proposition 65:

This product is not listed on the California Governor's current list of Carcinogens, Reproductive Toxicants, and/or Candidate Carcinogens (Proposition 65), but it may contain trace amounts of impurities that are listed. For additional information, contact Occidental Chemical Corporation Customer Service (1-800-752-5151 or 1-972-404-3700). WARNING: This product (when used in aqueous formulations with a chemical oxidizer such as ozone) may react to form bromate, a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	U.S California -	CA. Prop. 65	California	California	Massachusetts	Rhode Island
	Proposition 65 -	Teratogen	Proposition 65	Proposition 65	Right to Know	Right to Know
	Carcinogens List		CRT List - Male	CRT List - Female	Hazardous	Hazardous
			reproductive	reproductive	Substance List	Substance List
			toxin:	toxin:		

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<sup>·</sup> This product is not subject to export notification

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| Calcium chloride<br>10043-52-4 (> 90 - < 92<br>%) | Not listed |
|---|------------|------------|------------|------------|------------|------------|
| Potassium Chloride<br>7447-40-7 (> 2 - < 3 %)     | Not listed |
| Sodium Chloride<br>7647-14-5 (> 1 - < 2 %)        | Not listed |

Component	New Jersey Right	New Jersey	New Jersey -	Pennsylvania	Pennsylvania	Pennsylvania
	to Know	Special Health	Environmental	Right to Know	Right to Know	Right to Know
	Hazardous	Hazards	Hazardous	Hazardous	Special Hazardous	Environmental
	Substance List	Substance List	Substance List	Substance List	Substances	Hazard List
Calcium chloride	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Potassium Chloride	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium Chloride	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

#### **CANADIAN REGULATIONS**

This product has been classified in accordance with the hazard criteria of the Workplace Hazardous Materials Information System (WHMIS 2015) which includes the amended Hazardous Products Act (HPA) and the Hazardous Product Regulations (HPR).

Component	Canada - CEPA - Schedule I - List of Toxic Substances	Canada - NPRI	Canada - CEPA - Greenhouse Gases (GHG) Subject to Mandatory Reporting	Canadian Chemical Inventory:	NDSL
Calcium chloride 10043-52-4 (> 90 - < 92)	Not listed	Not Listed	Not Listed	Listed on inventory	Not Listed
Potassium Chloride 7447-40-7 (> 2 - < 3)	Not listed	Not Listed	Not Listed	Listed on inventory	Not Listed
Sodium Chloride 7647-14-5 (> 1 - < 2)	Not Listed	Not Listed	Not Listed	Listed on inventory	Not Listed

## **SECTION 16. OTHER INFORMATION**

Prepared by: Occidental Chemical Corporation - HES&S Product Stewardship Department

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#### Disclaimer:

We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

## Reason for Revision:

- Scheduled review
- SDS format adopts revisions to the Hazardous Products Regulations (HPR) to include revisions to "Section 9: Physical and chemical properties" and ensures classification with at a minimum the seventh revised edition of GHS and certain elements from the eighth revised edition (Revision 8)
- SDS format adopts revisions to the OSHA's 2024 Hazard Communication Rule 29CFR 1910.1200 and ensures classification with at a minimum the seventh revised edition of GHS and certain elements from the eighth revised edition (Revision 8)

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#### **IMPORTANT:**

Important: The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our current knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, storage, disposal, and other factors that may involve other or additional legal, environmental, safety or performance considerations, and Occidental Chemical Corporation assumes no liability whatsoever for the use of or reliance upon this information. Appropriate handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State, local or foreign laws.

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees.

**End of Safety Data Sheet** 

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