

# Industrial Systems Ltd.

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## Safety Data Sheet (SDS)

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### **InfernalMelt CI (Corrosion Inhibited)**

Effective Date: 05/01/2019

## 1. IDENTIFICATION

Trade Name and Synonyms: **InfernalMelt CI (Corrosion Inhibited)**

Chemical Name and Synonyms: Four Chloride Liquid, Calcium Dichloride, Calcium Chloride, Potassium Chloride, Magnesium Chloride, Sodium Chloride

Recommended Use: Roadway Ice Control, Road Base Stabilization, Dust Control

Product Information Hotline: 1-815-344-5566 (Monday - Friday 8:30 a.m. – 4:30 p.m. CST)

Manufacturer/Supplier: Industrial Systems Ltd.  
112 Rand Rd.  
Lakemoor, IL 60051 USA

## 2. HAZARDS IDENTIFICATION

**GHS Symbol:** Exclamation Mark



**Hazard Classification of Chemical:**

(GHS-US Eye Irritant)

(GHS-US Skin Irritant)

**GHS Health Hazard Statement:**

Causes skin irritation

Causes serious eye irritation

**GHS Precautionary Statements – Prevention:** Wear eye protection. Wear protective gloves.  
Wash thoroughly after handling.

**GHS Precautionary Statements – Response:** If in eyes rinse thoroughly with water for several minutes. Removes contact lenses if present and continue rinsing. If irritation persists seek medical attention.

If on skin wash with water. If skin irritation persists seek medical attention.

**GHS Signal Word:** WARNING

**Uses Advised Against:** None identified

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	Weight % Range**
Water	69-76	N/A
Calcium Chloride	10043-18-5	N/A
Sodium Chloride	7647-14-5	N/A
Magnesium Chloride	7786-30-3	N/A
Potassium Chloride	1344-28-1	N/A
Proprietary Ingredient	Trade Secret	N/A

\*\* Weight Range not listed due to composition is proprietary.

**4. FIRST AID MEASURES**

**Inhalation:** If respiratory tract irritation develops, move the person to a well ventilated location or open air. Get medical attention if the irritation continues.

**Eye Irritation:** If eyes become irritated, flush immediately with large amounts of lukewarm water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not rub eyes. Get medical attention if irritation persists.

**Skin Irritation:** If skin becomes irritated, remove soiled clothing. Do not rub or scratch exposed skin. Wash area of contact thoroughly with soap and water. Using a skin cream or lotion after washing may be helpful.

**Ingestion:** If swallowed rinse mouth with water. Do not induce vomiting. Seek medical attention if discomfort persists.

**Most important Symptoms or Effects – Acute and Delayed**

**Inhalation:** Cough, sore throat

**Skin:** Contact with skin may cause redness, itching, swelling and irritation. Skin that is damp, scratched, cut or covered by contaminated clothing, shoes or gloves may have a more severe reaction.

**Ingestion:** Sore throat, burning sensation, nausea, vomiting or increased thirst.

**Recommendations for Medical Care and Special Treatments when Necessary:** Do not induce vomiting. Swallowing may result in burns/ ulceration of mouth, stomach and lower gastrointestinal tract.

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**5. FIRE FIGHTING MEASURES**

**This material does not burn.** Use extinguishing agent appropriate for surrounding fire.

**This material is not Combustible, Explosive or Flammable.**

**Firefighters:** Use caution when fighting chemical fires.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions and Protection for non-emergency personnel and emergency responders:** Use appropriate protective gear to minimize exposure to skin, eyes and clothing.

**Emergency Procedures:** Isolate area. Keep non-necessary personnel away from area. Affected area may be slippery.

**Methods and Materials for containment and cleanup:** Contain spilled material if possible. Absorb spilled material with sand or other inert material and dispose of waste according to local, regional, state, federal and/or international regulations. Rinse residue with plenty of water.

**Environmental Precautions:** Prevent large spills from entering ditches, sewers, and waterways. See Section 12 for ecological information.

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid contact with eyes, skin and clothing. Do not swallow. Wash exposed areas with soap and water immediately after exposure and before eating, drinking, or smoking.

**Recommendations for safe storage:** Keep containers closed when not in use. Do not store in metal containers for long periods of time.

**Incompatible Products:** Corrosive bases, corrosive acids. Contact with zinc forms flammable hydrogen gas which can be explosive.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**



**Regulatory Exposure Limit:** No Occupational Exposure Limits (OELs) have been established for this material or its components.

**Engineering Controls:** Use local exhaust ventilation or other controls to ensure exposure is below occupational limits, if limits are applicable. Good general ventilation should be sufficient to control airborne levels.

**Personal Protective Equipment:** Control exposure with the following equipment

**Eyes:** Wear protective goggles or safety glasses

**Hands and Skin:** Wear chemical resistant gloves, such as neoprene, polyvinyl chloride (PVC or vinyl), Nitrile/butadiene (nitrile or NBR). Wear appropriate clothing to avoid skin contact.

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**Respiratory:** If exposure limits are exceeded or irritation or discomfort is experienced use an approved particulate respirator.

**Other Advice:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands and skin immediately after handling, before eating or smoking, and at the end of the workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid

**Color:** Clear to light amber

**Odor:** None

**Vapor Pressure:** 17mmHg @ 72°F (22.2°C)

**pH:** 5-7

**Relative Density:** 1.27± 0.04

**Freezing Point:** -36°F (-37.8°C)

**Water Solubility:** Fully miscible

**Boiling Point/Range:** 212°F (100°C)

**Flash Point:** Not applicable

**Auto-Ignition Temperature:** Not applicable

**Evaporation Rate:** No data available

**Decomposition Temperature:** No data available

**Flammability:** Not applicable

**Viscosity:** No data available

**Explosive limits:** No data available

**Upper/Lower flammability limits:** No data available

**Hygroscopic:** Yes

**Melting Point:** Not applicable

## 10. STABILITY AND REACTIVITY

**Reactivity:** Hygroscopic product. Hazardous reactions will not occur under normal conditions.

**Stability:** Product is stable under normal ambient temperatures and conditions.

**Possibility of Hazardous Reactions:** None known.

**Conditions to Avoid:** None known

**Incompatibilities / Materials to avoid:** Corrosive bases, corrosive acids, oxidizers. Bromine Trifluoride, Methyl Vinyl Ether, Boron Oxide, Calcium Oxide. Contact with zinc when water is present may form flammable hydrogen gas which can be explosive. Calcium chloride will corrode most metals when exposed to air and will attack aluminum and its alloys.

## 11. TOXICOLOGICAL INFORMATION

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Calcium Chloride	1000 mg/kg (rat)	2630 mg/kg (rat)	xxxxxxxxxx
Sodium Chloride	3 mg/kg (rat)	10 mg/kg (rat)	42 mg/kg (rat)
Magnesium Chloride	2800 mg/kg (rat)	xxxxxxxxxx	xxxxxxxxxx
Potassium Chloride	2600 mg/kg (rat)	xxxxxxxxxx	xxxxxxxxxx
Proprietary Ingredient	xxxxxxxxxx	xxxxxxxxxx	xxxxxxxxxx

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**Routes of Exposure:** Skin, eyes, ingestion

**Effects from Short and Long Term Exposure:** Immediate, Delayed and Chronic

**Eyes:** Serious eye irritation, redness, pain

**Skin:** Brief contact is usually non-irritating to skin. Prolonged contact may cause irritation to skin, possible burning sensation, redness, itching. Damp, abraded or areas covered by clothing may have a more severe response. Chronic exposure may cause dermatitis.

**Ingestion:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling are not likely to cause injury. Swallowing larger amounts may cause injury and/or nausea, vomiting, irritation of respiratory tract and mucus membranes.

**Signs and Symptoms of Exposure:** Solutions may be visible on the skin and/or eyes. Localized redness, irritation and itching may occur.

**Acute toxicity:** Not classified.

**Carcinogenicity:** This product is not classified as a carcinogen per GHS criteria. This product is not listed as a carcinogen by NTP, IARC, or OSHA.

**Germ Cell Mutagenicity:** Not classified as a mutagen.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity (single exposure):** Not classified

**Specific Target Organ Toxicity (repeated exposure):** Not classified

**Aspiration Hazard:** Not classified

## 12. ECOLOGICAL INFORMATION

**Toxicity:** InfernalMelt CI (Corrosion Inhibited) is not classified as hazardous for the environment. InfernalMelt CI (Corrosion Inhibited) components are normally occurring ions in the entire ecosystem and release to the environment is not thought to have any long term negative effects. However, dissolution of large quantities of chlorides in water may create an elevated level of salinity that may be harmful to fresh water aquatic species and to plants that are not salt-tolerant.

### COMPONENT TOXICITY DATA:

**Freshwater Fish:** Calcium Chloride: LC50 Bluegill (*Lepomis macrochirus*) 8,350-10,650 mg/l

Sodium Chloride: LC50 Rainbow Trout (*Oncorhynchus mykiss*) 96 h: 4,236 mg/l

Magnesium Chloride: LC50 Mosquitofish (*Gambusia affinis*) 4,210 mg/l

Potassium Chloride: LC50 Fathead Minnow (*Pimephales promelas*) 10,610 mg/l

**Invertebrate:** Calcium Chloride: LC50 Water Flea (*Daphnia magna*) 759 - 3,005 mg/l

Magnesium Chloride: EC50 Water Flea (*Daphnia magna*) 1400 mg/l

Sodium Chloride: LC50 Water Flea (*Daphnia magna*) 4,571 mg/l

Potassium Chloride: LC 50 Water Flea (*Ceriodaphnia dubia*) 96 h: 3,470 mg/l

EC50 Water Flea (*Daphnia magna*) 24hr, immobilization: 590 mg/l

**Persistence and Biodegradation:** Material is inorganic and not subject to biodegradation. Chloride salts are highly water soluble.

**Bioaccumulative Potential:** InfernalMelt CI (Corrosion Inhibited) - Not established

InfernalMelt CI (Corrosion Inhibited) components - No bioaccumulation

**Mobility in Soil:** No information available

**Other Adverse Effects:** None known

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**13. DISPOSAL CONSIDERATION**

Contain and reuse material from spills when possible. Report spills in accordance with local and/or state regulations. Waste material and material containers should be disposed of in accordance with all local, regional, state, national, and international regulations.

Do not allow material to enter ditches, sewers or waterways.

Refer to Section 8 for more information on minimizing personal exposures.

**14. TRANSPORT INFORMATION**

**Transport Hazardous Class:** Not classified as hazardous material.

**Land Transport:** Not regulated

**Sea Transport:** Not regulated

**Air Transport:** Not regulated

**Rail Transport:** Not regulated

**15. REGULATORY INFORMATION**

**U.S. Regulations:** United States TSCA (Toxic Substances Control Act) inventory lists the following components:

Calcium Chloride CAS 10043-52-4, Magnesium Chloride CAS 7786-30-3, Sodium Chloride CAS 7647-14-5, Potassium Chloride CAS 7447-40-7, Water CAS 7732-18-5

**16. OTHER INFORMATION**

This document has been revised to be compliant with OSHA Hazard Communication Standard (HCS) rules.

**Prepared By:** Industrial Systems Ltd

**SDS Revision Date:** 05/2019

**Disclaimer:** The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, Industrial Systems Ltd. does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.