



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

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|---------------------|---|
| Product Name | Safe Step Calcium Chloride |
| CAS # | Mixture |
| Product use | De-icer |
| Manufacturer | North American Salt Company A Compass Minerals Company 9900 West 109th Street, Suite 100 Overland Park, KS 66210 US Phone: 913-344-9200 |
| CHEMTREC | 1-800-424-9300 |
| CANUTEC | 1-613-996-6666 |

2. Hazards Identification

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|--|--|
| Emergency overview | CAUTION CAUSES EYE IRRITATION. |
| Potential short term health effects | |
| Routes of exposure | Eye, Skin contact, Inhalation, Ingestion. |
| Eyes | Causes irritation. |
| Skin | Prolonged or repeated contact may cause skin irritation. |
| Inhalation | May cause respiratory tract irritation. |
| Ingestion | May cause stomach distress, nausea or vomiting. |
| Target organs | Eyes. Skin. |
| Chronic effects | Prolonged or repeated exposure can cause drying, defatting and dermatitis. |
| Signs and symptoms | Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. |
| OSHA Regulatory Status | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
| Potential environmental effects | See section 12. |

3. Composition / Information on Ingredients

| Ingredient(s) | CAS # | Percent |
|----------------------|--------------|----------------|
| Calcium chloride | 10043-52-4 | 60 - 100 |

4. First Aid Measures

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| First aid procedures | |
| Eye contact | Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention if irritation develops or persists. |
| Skin contact | Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists. |
| Inhalation | If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention. |
| Ingestion | Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention. |
| General advice | If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children. |

5. Fire Fighting Measures

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|-----------------------------|---------------------------------------|
| Flammable properties | Not flammable by WHMIS/OSHA criteria. |
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Extinguishing media

Suitable extinguishing media Treat for surrounding material.

Unsuitable extinguishing media Not available

Protection of firefighters

Specific hazards arising from the chemical Not available

Protective equipment for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products May include and are not limited to: Hydrogen chloride. Chlorine gas. Calcium oxide

Explosion data

Sensitivity to mechanical impact Not available

Sensitivity to static discharge Not available

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions Do not discharge into lakes, streams, ponds or public waters.

Methods for containment Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Finish cleaning by spreading water on the affected surface and dispose of according to local and regional authority requirements.

7. Handling and Storage

Handling Use good industrial hygiene practices in handling this material.
Avoid contact with eyes.
Wash thoroughly after handling.

Storage Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)

Exposure Limits

Calcium chloride

ACGIH-TLV

Not established

OSHA-PEL

Not established

Engineering controls

TWA PEL: No specific limits have been established for calcium chloride (soluble substance). As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 5mg/cu.m. Respirable Dust 8-Hour TWA PEL, 15mg/cu.m. Total Dust 8-Hour TWA PEL.

TWA TLV: No specific limits have been established for calcium chloride (soluble substance). As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): 10mg/cu.m. Inhalable Particulate 8-Hours TWA TLV, 3mg/cu.m. Respirable Particulate TWA TLV.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Wear safety glasses with side shields.

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection As required by employer code.

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| Respiratory protection | Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. |
| General hygiene considerations | Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product. |

9. Physical and Chemical Properties

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| Appearance | Pellets |
| Color | White |
| Form | Solid. |
| Odor | Odorless |
| Odor threshold | Not available |
| Physical state | Solid |
| pH | Not available |
| Melting point | Not available |
| Freezing point | Not available |
| Boiling point | Not available |
| Pour point | Not available |
| Evaporation rate | Not available |
| Flash point | Not available |
| Auto-ignition temperature | Not available |
| Flammability limits in air, lower, % by volume | Not applicable |
| Flammability limits in air, upper, % by volume | Not applicable |
| Vapor pressure | Not available |
| Vapor density | Not available |
| Specific gravity | Not available |
| Relative density | 0.75 g/cm ³ (20°C) |
| Octanol/water coefficient | Not available |
| Viscosity | Not available |
| Percent volatile | Not available |

10. Stability and Reactivity

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|---|--|
| Reactivity | None known. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Chemical stability | Stable under recommended storage conditions. |
| Conditions to avoid | Do not mix with other chemicals. |
| Incompatible materials | Acids. Oxidizers. Hot water. |
| Hazardous decomposition products | May include and are not limited to: Hydrogen chloride. Chlorine gas. Calcium oxide |

11. Toxicological Information

Component analysis - LC50

| Ingredient(s) | LC50 |
|------------------|---------------|
| Calcium chloride | Not available |

Component analysis - Oral LD50

| Ingredient(s) | LD50 |
|------------------|----------------------------------|
| Calcium chloride | 1000 mg/kg rat; 1940 mg/kg mouse |

Effects of acute exposure

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|----------------------|--|
| Eye | Causes irritation. |
| Skin | Prolonged or repeated contact may cause skin irritation. |
| Inhalation | May cause respiratory tract irritation. |
| Ingestion | May cause stomach distress, nausea or vomiting. |
| Sensitization | Non-hazardous by WHMIS/OSHA criteria. |

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| Chronic effects | Non-hazardous by WHMIS/OSHA criteria. |
| Carcinogenicity | Not classified or listed by IARC, NTP, OSHA and ACGIH. |
| Mutagenicity | Non-hazardous by WHMIS/OSHA criteria. |
| Reproductive effects | Non-hazardous by WHMIS/OSHA criteria. |
| Teratogenicity | Non-hazardous by WHMIS/OSHA criteria. |
| Name of Toxicologically Synergistic Products | Not available |

12. Ecological Information

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| Ecotoxicity | See below |
| Ecotoxicity - Freshwater Fish - Acute Toxicity Data | |
| Calcium chloride | 10043-52-4 96 Hr LC50 <i>Lepomis macrochirus</i> : 10650 mg/L [static] |
| Ecotoxicity - Water Flea - Acute Toxicity Data | |
| Calcium chloride | 10043-52-4 48 Hr EC50 <i>Daphnia magna</i> : 52 mg/L |
| Persistence / degradability | Not available |
| Bioaccumulation / accumulation | Not available |
| Mobility in environmental media | Not available |
| Environmental effects | Not available |
| Aquatic toxicity | Not available |
| Partition coefficient | Not available |
| Chemical fate information | Not available |
| Other adverse effects | Not available |

13. Disposal Considerations

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| Disposal instructions | Dispose in accordance with all applicable regulations. |
| Waste from residues / unused products | Not available |
| Contaminated packaging | Not available |

14. Transport Information

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|---|-----------------------------------|
| U.S. Department of Transportation (DOT) | Not regulated as dangerous goods. |
| Transportation of Dangerous Goods (TDG - Canada) | Not regulated as dangerous goods. |

15. Regulatory Information

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|-------------------------------------|---|
| Canadian federal regulations | This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. |
| WHMIS status | Controlled |
| WHMIS classification | Class D - Division 2B |
| WHMIS labeling | |



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|---|-----|
| Occupational Safety and Health Administration (OSHA) | |
| 29 CFR 1910.1200 hazardous chemical | Yes |

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|-------------------------------|--|
| US Federal regulations | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |
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|---|------|
| CERCLA (Superfund) reportable quantity | None |
|---|------|

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
 Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory name

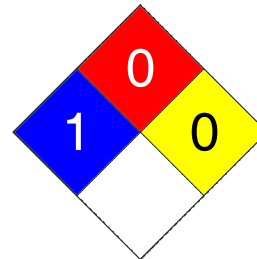
| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

| LEGEND HMIS/NFPA | |
|---------------------|---|
| Severe | 4 |
| Serious | 3 |
| Moderate | 2 |
| Slight | 1 |
| Minimal | 0 |

| | |
|---------------------|-----|
| Health | / 1 |
| Flammability | 0 |
| Physical Hazard | 0 |
| Personal Protection | E |



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Other information This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.