MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**Sifto Safe Step Enviro-Guard**
CAS #	Mixture
Product use	De-icer
Manufacturer	Sifto Canada Inc. A Compass Minerals Company 9900 West 109th Street, Suite 600 Overland Park, KS 66210 US Phone: 913-344-9200
CHEMTREC	1-800-424-9300
CANUTEC	1-800-996-6666

2. Hazards Identification

Emergency overview	Contact may cause eye and skin irritation.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	May cause irritation.
Skin	May cause irritation.
Inhalation	Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
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 NOT known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	May be harmful to freshwater aquatic species and to plants that are not saline tolerant.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Sodium chloride	7647-14-5	60 - 100
Potassium chloride	7447-40-7	3 - 25
Magnesium chloride, hexahydrate	7791-18-6	15 - 40
Alpha-D-Glucopyranoside, methyl	97-30-3	0.1 - 1
Urea	57-13-6	0.1 - 1
Silica, amorphous, fumed, crystalline free	112945-52-5	0 - 0.1

4. First Aid Measures

First aid procedures

Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Skin contact	Flush with cool 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. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
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. Oxides of sodium.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep people away from and upwind of spill/leak.
Environmental precautions	Do not contaminate water.
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. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling	Avoid breathing dusts from this material. Use good industrial hygiene practices in handling this material.
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
Alpha-D-Glucopyranoside, methyl	**ACGIH-TLV** Not established **OSHA-PEL** Not established
Magnesium chloride, hexahydrate	**ACGIH-TLV** Not established **OSHA-PEL** Not established
Potassium chloride	**ACGIH-TLV** Not established **OSHA-PEL** Not established
Silica, amorphous, fumed, crystalline free	**ACGIH-TLV** Not established **OSHA-PEL** TWA: 6 mg/m3
Sodium chloride	**ACGIH-TLV** Not established **OSHA-PEL** Not established
Urea	**ACGIH-TLV** Not established **OSHA-PEL** Not established

Engineering controls

TWA PEL: No specific limits have been established for sodium chloride or magnesium chloride (soluble substances). 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 sodium chloride or magnesium chloride (soluble substances). 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.
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

Appearance	Crystalline.
Color	White

Form	Crystalline.
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
Octanol/water coefficient	Not available
Percent volatile	Not available

10. Stability and Reactivity

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.
Hazardous decomposition products	May include and are not limited to: Hydrogen chloride. Oxides of sodium.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Alpha-D-Glucopyranoside, methyl	Not available
Magnesium chloride, hexahydrate	Not available
Potassium chloride	Not available
Silica, amorphous, fumed, crystalline free	Not available
Sodium chloride	> 21000 mg/m3 rat
Urea	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Alpha-D-Glucopyranoside, methyl	Not available
Magnesium chloride, hexahydrate	8100 mg/kg rat
Potassium chloride	1500 mg/kg mouse; 2500 mg/kg guinea pig; 2600 mg/kg rat
Silica, amorphous, fumed, crystalline free	3160 mg/kg rat
Sodium chloride	3000 mg/kg rat; 4000 mg/kg mouse
Urea	11000 mg/kg mouse; 8471 mg/kg rat; 510 mg/kg cattle; 510 mg/kg sheep

Effects of acute exposure

Eye	May cause irritation.
Skin	May cause irritation.
Inhalation	Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by WHMIS/OSHA criteria.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.

IARC - Group 3 (Not Classifiable)

Silica, amorphous, fumed, crystalline free	112945-52-5	Monograph 68 [1997] (listed under Amorphous silica)

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

Ecotoxicity May be harmful to freshwater aquatic species and to plants that are not saline tolerant.

Ecotoxicity - Freshwater Algae - Acute Toxicity Data

Potassium chloride	7447-40-7	72 Hr EC50 Desmodesmus subspicatus: 2500 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Potassium chloride	7447-40-7	96 Hr LC50 Lepomis macrochirus: 1060 mg/L [static]; 96 Hr LC50 Pimephales promelas: 750-1020 mg/L [static]
Sodium chloride	7647-14-5	96 Hr LC50 Lepomis macrochirus: 5560-6080 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 12946 mg/L [static]; 96 Hr LC50 Pimephales promelas: 6020-7070 mg/L [static]; 96 Hr LC50 Pimephales promelas: 7050 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 6420-6700 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4747-7824 mg/L [flow-through]
Urea	57-13-6	96 Hr LC50 Poecilia reticulata: 16200-18300 mg/L

Ecotoxicity - Water Flea - Acute Toxicity Data

Potassium chloride	7447-40-7	48 Hr EC50 Daphnia magna: 825 mg/L; 48 Hr EC50 Daphnia magna: 83 mg/L [Static]
Sodium chloride	7647-14-5	48 Hr EC50 Daphnia magna: 1000 mg/L; 48 Hr EC50 Daphnia magna: 340.7 - 469.2 mg/L [Static]
Urea	57-13-6	24 Hr EC50 Daphnia magna Straus: >10000 mg/L; 48 Hr EC50 Daphnia magna: 3910 mg/L [Static]

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

Disposal instructions	Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

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

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 Not Controlled

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical No

US Federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

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.

U.S. - Minnesota - Hazardous Substance List

Urea	57-13-6	Present

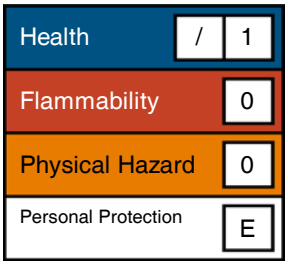
Inventory name

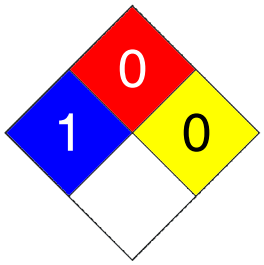
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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





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