



Safety Data Sheet

Section 01 - Identification

Product Identifier	Sodium Silicofluoride Sodium Fluorosilicate
Other Means of Identification	Sodium hexafluorosilicate, SFS, sodium silica fluoride
Product Use and Restrictions on Use	Water treatment, chemical processing, industrial/institutional cleaners, manufacture soaps/detergents, textiles.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

Acute Toxicity-Oral	Category 3
Acute Toxicity-Dermal	Category 3
Acute Toxicity-Inhalation	Category 3

Physical Hazards

No known physical hazards.

Danger

Hazard Statements

H301 – Toxic if swallowed.
H311 – Toxic in contact with skin.
H331 – Toxic if inhaled.

Pictograms



Precautionary Statements

P261 – Avoid breathing dust.
P271 – Use only outdoors or in a well-ventilated area.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P403 + P233 – Store in a well-ventilated place. Keep container tightly closed.

P264 – Wash hands thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.
P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330 – Rinse mouth.
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.
P362 – Take off contaminated clothing and wash before reuse.
P405 – Store locked up.
P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Sodium Silicofluoride	16893-85-9	>98%	

Section 04 - First Aid Measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Rinse skin with lukewarm, gently flowing water for 30 minutes. Seek medical attention.
Eye Contact	Immediately flush eye(s) with lukewarm, gently flowing water for 30 minutes while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If irritation persists, seek medical attention.
Ingestion	Seek immediate medical attention. Give water to dilute. Do not induce vomiting unless directed by medical personnel. Advise medical personnel of possible fluoride exposure.
Additional Information	Not Available

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Product does not burn. Where fire is involved, use any fire fighting agent appropriate for surrounding material. Use water spray to cool fire-exposed surfaces.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Hydrofluoric acid and fluorine will form after decomposition of material at temperatures above 500°C.
Special Protective Equipment and Precautions for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Further Information	Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue. Avoid dust formation. Avoid breathing vapours, mist, gas or dust.
Environmental Precautions	Prevent material from entering sewers.
Methods and Materials for Containment and Cleaning Up	Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Section 07 - Handling and Storage

Precautions for Safe Handling	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Never add water.
Conditions for Safe Storage	Ensure containers or packaging is closed during storage and well ventilated. Keep in a cool, dry place.
Incompatibilities	Strong acids, alkaline materials, iron containing materials, metals, mineral acids.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Fluoride	ACGIH	TLV-TWA	2.5mg/m ³
	OSHA	PEL	2.5mg/m ³

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Chemical goggles, full-face shield, or a full-face respirator should be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	If exposures may exceed limits shown in Section 3, a NIOSH approved ½ face-piece respirator with approved cartridges should be worn. For concentrations greater than 20ppm, a NIOSH approved self-contained breathing apparatus with full-face shield should be used.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Powder
Colour	White granules
Odour	Odourless
Odour Threshold	Not Applicable

Property

pH	3.5-4.0 (saturated solution)
Melting Point/Freezing Point	Decomposes
Initial Boiling Point and Boiling Range	Not Applicable
Flash Point	Not Applicable
Evaporation Rate	Not Available
Flammability	Non-Flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	Not Available
Vapour Density (Air=1)	Not Available
Relative Density	Not Available
Solubility(ies)	0.65g/100mL of water at 17°C. Insoluble in alcohol and ethanol.
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	500°C
Viscosity	Not Available
Specific Gravity (Water=1)	2.7
% Volatiles by Volume	Not volatile
Formula	Na ₂ SiF ₆
Molecular Weight	188.0

Section 10 - Stability and Reactivity

Reactivity	Reacts with acids liberating very toxic gas.
Stability	Product is stable under normal conditions.
Possibility of Hazardous Reactions	In presence of water, contact with metals may produce hydrogen with may form explosive mixtures with air.
Conditions to Avoid	Avoid dust generation, exposure to moisture, exposure to heat.
Incompatible Materials	Strong acids, alkaline materials, iron containing materials, metals, mineral acids.
Hazardous Decomposition Products	Hydrofluoric acid and fluorine

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Sodium Silicofluoride	125 mg/kg (rat)	Not Available	Not Available

Chronic Toxicity – Carcinogenicity

Component	IARC
Sodium Silicofluoride	Category 3: Not classifiable as to its carcinogenicity to humans.

Skin Corrosion/Irritation	Toxic in contact with skin. May cause mild skin irritation.
Ingestion	Toxic if swallowed. May cause abdominal pain, diarrhea, vomiting, excess salivation and spasms of limbs. May be fatal if large amounts are ingested.
Inhalation	Toxic if inhaled. May cause irritation of the mucous membranes and respiratory tract.
Serious Eye Damage/Irritation	Can cause eye irritation
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Reproductive Toxicity	Not Available
STOT-Single Exposure	The substance may cause effects on the blood and calcium metabolism. This may result in cardiac disorders. May cause irritation of the mucous membranes and respiratory tract.
STOT-Repeated Exposure	The substance may have effects on the bones and teeth. This may result in fluorosis. Repeated exposure may aggravate pre-existing lung, central nervous system and kidney conditions.
Aspiration Hazard	Not Available
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sodium Silicofluoride	Not Available	LC ₅₀ (Lepomis macrochirus, 96hrs): 49 mg/L	Not Available
Biodegradability	Not Available		
Bioaccumulation	Not Available		
Mobility	Not Available		
Other Adverse Effects	Not Available		

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN 2674	
UN Proper Shipping Name	SODIUM FLUOROSILICATE	
Transport Hazard Class(es)	6.1	
Packaging Group	III	
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.	
Special Precautions	Not Available	
Transport in Bulk	Not Available	
Additional Information	<u>Packing Group</u> III	<u>Limited Quantity Index</u> 5 Kg

TDG

Other Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date August 13, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) CHRIS
- 6) HSDB
- 7) ECHA

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