

Section 1: Product & Company Information

Product Identifier: Sodium Fluorosilicate NSF

Other Means of Identification

Product Number: 112075

Recommended Use and Restrictions on Use

Recommended Use: Not available

Restrictions on Use: Not available

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Not classified.

Health Hazard(s)

Acute Toxicity, Oral - 3

Acute Toxicity, Dermal - 3

Acute Toxicity, Inhalation - 3

Environmental Hazard(s)

Aquatic, Acute - 3

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H331: Toxic if inhaled.

H402: Harmful to aquatic life.

Precautionary Statements

General

Not applicable.

Prevention

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash face, hands and any exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P311: Call a POISON CENTER or doctor/physician.
 P312: Call a POISON CENTER or doctor/physician if you feel unwell.
 P321: Specific treatment (see supplemental first aid instructions on this label).
 P322: Specific measures (see supplemental first aid instructions on this label).
 P330: Rinse mouth.
 P361: Remove/Take off immediately all contaminated clothing.
 P363: Wash contaminated clothing before reuse.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNO)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Sodium Fluorosilicate	Sodium Silicofluoride	16893-85-9	>99	

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—" Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Remove to fresh air. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.

Skin Contact

Wash thoroughly with mild soap and water. Seek medical attention if irritation or chemical burns develop. Remove any contaminated clothing and launder thoroughly before reuse.

Eye Contact

Flush with tepid water for at least 20 minutes holding the eyelids wide open. Seek medical attention.

Ingestion

SEEK MEDICAL ATTENTION IMMEDIATELY! Give water to dilute. Do not induce vomiting unless directed by some licensed personnel. Advise medical personnel of possible fluoride exposure.

Most important symptoms/effects, acute and delayed

Symptoms

Coughing and/ or wheezing. Difficulty in breathing.

Indication of immediate medical attention and special treatment needed

Hazards

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information.

Treatment

Treat symptomatically.

Section 5: Fire-Fighting Measures

General Fire Hazards

Product will not burn.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use extinguishing material Suitable for surrounding fire.

Large Fire: Use of water spray when fighting fire may be inefficient.

Unsuitable Extinguishing Media

Do not scatter spilled material with high pressure water streams.

Specific Hazards Arising from the Chemical

Hazardous combustion products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Hydrogen fluoride. Silicon oxides. Sodium Oxides.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Material in or near fires should be cooled with a water spray or fog if compatible with firefighting techniques for the other materials involved in the fire.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid generation of dust. Do not breathe dust. Keep people away from and upwind of spill/leak.

Methods and Materials for Containment and Clean-Up

Pick up released product with appropriate implements and return to original container if reusable. If not reusable place in appropriate containers for disposal. Appropriate personal protective equipment should be worn during all clean up operations. Material collected during clean up operations may be contaminated and should be treated as hazardous unless specified testing including TCLP, shows the collected material to be nonhazardous. Releases may be reportable to local, state, and/ or federal authorities.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.

Conditions for Safe Storage, including any Incompatibilities

Do not store with or near incompatible materials. Store in tightly closed containers out of contact with the elements. Appropriate personal protective equipment should be employed to prevent the generation and accumulation of dusts. Wet mopping or vacuuming is recommended to clean up any dusts that may be generated during handling and processing. Wash hands and face thoroughly before eating, drinking or smoking.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Chemical Name	Type	Value	Agency
Sodium Silicofluoride	TWA	2.5 mg/m ³ F	ACGIH
Sodium Silicofluoride	TWA	2.5 mg/m ³ F	OSHA
Sodium Silicofluoride	TWA	2.5 mg/m ³ F	NIOSH
	IDLH	250 2.5 mg/m ³ F	

Occupational Exposure Limits

Sodium Silicofluoride (16893-85-9) = 2 mg/L - urine (Fluoride) - prior to shift
Sodium Silicofluoride (16893-85-9) = 3 mg/L - urine (Fluoride) - end of shift

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Local Exhaust ventilation should be provided to maintain exposures below the limits in section 2. Local exhaust ventilation systems should be designed by a professional engineer. Showers, eyewash stations, ventilation systems.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Chemical protective goggles are recommended where there is the possibility of eye contact with the product. Safety glasses with side shields are recommended for all other operations.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If exposures may exceed the limits cited in section 2, use as a minimum a NIOSH approved $\frac{1}{2}$ face piece respirator with cartridges approved for particulate matter with an exposure limit of not less than 0.05 mg/M³. If exposures exceed 10 times the limits cited in section 2, consult your respiratory protection equipment supplier or a professional industrial hygienist for selection of the proper equipment. The evaluation of the need for respiratory protection should be made by a professional industrial hygienist.

Hygiene Measures

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not breathe dust. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Powder, Solid, Crystalline
Color: White

Odor:

None

Odor Threshold:

No data available.

pH:

3.5-4.0

Melting Point/Freezing Point:

500 °C / 932 °F

Initial Boiling Point and Boiling Range:

No data available.

Flash Point:

Not applicable.

Evaporation Rate (butyl acetate=1):

No data available.

Flammability (solid, gas):

No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: Not applicable.
Flammability Limit – Lower: Not applicable.
Explosive Limit – Upper: Not applicable.
Explosive Limit – Lower: Not applicable.

Vapor Pressure:

No data available.

Vapor Density (air =1):

No data available.

Relative Density (water=1):

2.7

Solubility(ies):

Solubility in water: 0.65g/100g @ 63°F / 17°C
Solubility (other): No data available.

Partition coefficient (n-octanol/water):

No data available.

Auto-Ignition Temperature:

Not applicable.

Decomposition Temperature:

620°C / 1148°F

Viscosity:

No data available.

Other Information:

Molecular Weight: 188.0555
Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Excessive heat. Avoid generation of dust. Incompatible materials.

Incompatible Materials

Strong acids or alkaline materials. Avoid contact with materials containing iron. May react with strong mineral acids to liberate hydrogen fluoride gas or hydrofluoric acid which are highly toxic and corrosive.

Hazardous Decomposition Products

Temperatures above 500C, such as fires, will cause decomposition and formation of hydrofluoric acid and fluorine. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Hydrogen fluoride. Sodium Oxides. Silicon oxides.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: MAY BE FATAL IF INGESTED. May cause abdominal pain, diarrhea, vomiting, excess salivation and painful spasms of the limbs. Toxic if swallowed.

Inhalation: May cause irritation of the mucous membranes and respiratory tract and bronchospasms. Toxic by inhalation.

Skin Contact: May cause irritation to skin. Toxic in contact with skin.

Eye Contact: May cause irritation to eyes.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Sodium Silicofluoride: 125 mg/kg (Rat)

Dermal

Not available

Inhalation

Sodium Silicofluoride: 2.021 mg/L (Rat) 4 h

Sodium Silicofluoride: 1.673 mg/L (Rat) 4 h

Repeated Dose Toxicity

Not available

Skin Corrosion/Irritation

May cause irritation to skin.

Serious Eye Damage/Eye Irritation

May cause irritation to the eyes.

Respiratory/Skin Sensitization

May cause irritation to the respiratory tract.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Group 3

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

Coughing and/ or wheezing. Difficulty in breathing.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Sodium Silicofluoride: LC50 = 65 mg/L (96h, Poecilia reticulata)

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

There are no data on the degradability of this product.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number: UN 2674
UN Proper Shipping Name: Sodium Fluorosilicate
Technical Name: Not available
Hazard Class: 6.1
Subsidiary Hazard Risk: Not available
Packing Group: III
DOT Label/Placard Exemptions: Not determined
Special Provisions: IB8, IP3, T1, TP33
Packaging Exceptions: 49CFR 173.153
Packaging Non-Bulk: 49CFR 173.213
Packaging Bulk: 49CFR 173.240
Reportable Quantity (RQ): None
Marine Pollutant: No
Poison Inhalation Hazard: No
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Emergency Response Guidebook (ERG) #: 154

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3

Chronic Health Hazard: *

Flammability: 0

Physical Hazard: 0

Personal Protection: X

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL - Immediately Dangerous to Life and Health

Kg - Kilogram

l - Liter

lb - Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml - milliliter

N/A - Not Applicable

N/D - Not Determined

PEL - Permissible Exposure Limit

REL - Recommended Exposure Limit

STEL - Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA - American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS - Chemical Abstracts Service

DOT - US Department of Transportation

EPA - US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - US Occupational Health and Safety Administration

SARA - US EPA Superfund Amendments and Reauthorization Act

TSCA - US EPA Toxic Substances Control Act

UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

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