

SAFETY DATA SHEET

Preparation Date: 02/19/2019

Revision date 02/19/2019

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: S1440
Product Name: SODIUM SILICOFLUORIDE, REAGENT

Other means of identification

Synonyms: Silicate (2-), hexafluoro-, disodium
 Salufer
 Sodium Hexafluorosilicate
 Sodium Fluosilicate
 Disodium hexafluorosilicate
 Destruxol applex
 Super prodan/prodan
 Safsan
 Salufer
 Silicon sodium fluoride

CAS #: 16893-85-9
RTECS # VV8410000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: In the manufacture of glass. Pesticide. Rodenticide.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Tom Tyner (USA - West Coast)

Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Serious eye damage/eye irritation	Category 1

Label elements

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Danger

Hazard statements

Toxic if swallowed or if inhaled
Causes serious eye damage



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Sodium Silicofluoride	16893-85-9	100

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Toxic by inhalation. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion: Toxic if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms Toxic by inhalation and if swallowed
 Respiratory paralysis or failure
 Irritating to mucous membranes
 Causes serious eye damage
 Ataxia
 Ingestion may cause vomiting and nausea
 Tremors
 Shock
 May cause diarrhea
 Abdominal pain

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Carbon dioxide (CO2). Water spray, mist, or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products Carbon Monoxide, Carbon Dioxide. Silicon oxides. Hydrogen fluoride gas. Sodium oxides.

Specific hazards May be combustible at high temperatures. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent from entering into soil, ditches, sewers, waterways, and/or ground water.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Strong oxidizing agents
Strong acids
Alkalis
Iron
Mineral acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Sodium Silicofluoride	16893-85-9	2.5 mg/m ³ TWA (as F) 2.5 mg/m ³ TWA (as dust)	2.5 mg/m ³ TWA (as F, listed under Sodium fluoride)	2.5 mg/m ³ TWA (as F)	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Sodium Silicofluoride	16893-85-9	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWAEV (as F)

Australia and Mexico

Component	CAS No	Australia	Mexico
Sodium Silicofluoride	16893-85-9	2.5 mg/m ³ TWA (as F)	2.5 mg/m ³ TWA (as F)

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Chemical resistant apron
Gloves
Long sleeved clothing
- Respiratory protection:** Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Solid

Appearance:

Powder.

Color:

White.

Odor:

Odorless.

Taste

No information available.

Formula

Na₂SiF₆

Molecular/Formula weight (g/mole):

188.06

Flammability (solid, gas)

no data available

Flashpoint (°C/°F):

No information available

Flash Point Tested according to:

Not available

Autoignition Temperature (°C/°F):

No information available

Lower Explosion Limit (%):

No information available

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Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): 500°C/ 932°F
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): No information available
Specific gravity: 2.68	pH 3.0-4.5 1%	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Slightly soluble in cold water Soluble in hot water Insoluble in Ethanol	

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Strong oxidizing agents
Strong acids
Alkalis
Iron
Mineral acids

Hazardous decomposition products: Hydrogen fluoride. Sodium Fluoride.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Inhalation. Ingestion. Eyes. Skin.

Acute Toxicity

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Component Information

Sodium Silicofluoride	
CAS No	16893-85-9

LD50/oral/rat = 125 mg/kg Oral LD50 Rat
LD50/oral/mouse = 70mg/kg oral LD50 mouse
LD50/dermal/rabbit = 500mg dermal rabbit mild irritant
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 100mg eye rabbit severe irritation
33mg/m³ inhalation LC50 human 6h
5.7mg/kg unreported LD50 human

Product Information

LD50/oral/rat =
Value - Acute Tox = 125 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 70 mg/kg

LD50/dermal/rabbit
Value - Acute Tox = 500 mg

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.

Eye Contact: Causes serious eye damage.

Inhalation Toxic by inhalation. Causes respiratory tract and mucous membrane irritation. May cause death by respiratory failure.

Ingestion Toxic if swallowed. Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May affect behavior/central nervous system (ataxia). It may cause paralysis. May cause flaccid paralysis of the skeletal muscle.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated inhalation may cause difficulty breathing, shortness of breath. Chronic inhalation and ingestion may cause fluorosis (chronic fluoride poisoning) with skeletal abnormalities. Fluorosis is characterized by nausea, vomiting, loss of appetite, diarrhea, constipation, anemia, weakness, brittle bones, stiffness of joints. Can also result in osteosclerosis (an increase of bone density in characteristic patterns. Can also cause discoloration of teeth/mottled enamel, and may cause kidney damage.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Sodium Silicofluoride	16893-85-9	Supplement 7 [1987] Fluorides inorganic used in drinking-water	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: Bones. Teeth. Respiratory system. Heart.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Sodium Silicofluoride - 16893-85-9

Fish 65 mg/L LC50 *Poecilia reticulata* 96 h static 1
 2-7mg/L LC50 Trout
 419mg/L LC50 Misquito fish 96h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Do not re-use empty containers. Dispose of as unused product. Empty containers should be taken for local recycling, recovery or waste disposal. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sodium Silicofluoride	16893-85-9	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2674
Proper Shipping Name: Sodium fluorosilicate
Hazard Class 6.1
Subsidiary Class No information available
Packing group: III
Emergency Response Guide Number 154
Marine Pollutant Severe Marine Pollutant
DOT RQ (lbs): No information available
Special Provisions IB8, IP3, T1, TP33
Symbol(s): No information available
Description: UN2674, Sodium fluorosilicate, 6.1, III

TDG (Canada)

UN-No: UN2674
Proper Shipping Name: Sodium fluorosilicate
Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant No Information available
Description: UN2674, Sodium fluorosilicate, 6.1, III

ADR

UN Number UN2674
Proper Shipping Name: Sodium fluorosilicate
Transport hazard class(es) 6.1
Packing group III
Subsidiary Risk: No information available
Description: UN2674, Sodium fluorosilicate, 6.1, III

IMDG

UN-No: UN2674
Proper Shipping Name: Sodium fluorosilicate

Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant: No information available
EMS: F-A
Description: UN2674, Sodium fluorosilicate, 6.1, III

RID

UN Number: UN2674
Proper Shipping Name: Sodium fluorosilicate
Transport hazard class(es): 6.1
Subsidiary Risk: No information available
Packing group: III
Description: UN2674, Sodium fluorosilicate, 6.1, III

ICAO (air)

UN-No: UN2674
Proper Shipping Name: Sodium fluorosilicate
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN2674, Sodium fluorosilicate, 6.1, III

IATA

UN Number: UN2674
Proper Shipping Name: Sodium fluorosilicate
Transport hazard class(es): 6.1
Subsidiary Risk: No information available
Packing group: III
Precautionary Statements - Response: 6L
Special Provisions: No information available
Description: UN2674, Sodium fluorosilicate, 6.1, III

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
<i>Sodium Silicofluoride</i>	16893-85-9	Present ACTIVE	Present KE-12334	Present	Present (1)-334	Present	Present	Present 240-934-8

U.S. Regulations

Sodium Silicofluoride

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: SN 1701
 SN 0936
Pennsylvania RTK: Present
Minnesota - Hazardous Substance List: Present (as F, dust)
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium Silicofluoride	16893-85-9	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Sodium Silicofluoride	16893-85-9	None	None	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium Silicofluoride	16893-85-9	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Sodium Silicofluoride
16893-85-9 (100)

WHMIS 2015 Hazard Classification
Acute toxicity - Oral - Category 3: H301 Toxic if swallowed.; Acute toxicity - Inhalation - Category 4: H332 Harmful if inhaled.; Serious Eye Damage/Eye Irritation - Category 2A: H319 Causes serious eye irritation.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Sodium Silicofluoride	16893-85-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Sodium Silicofluoride	16893-85-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sodium Silicofluoride	16893-85-9	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Sodium Silicofluoride	16893-85-9	Acute toxicity - Oral - Acute Tox. 3: H301 Toxic if swallowed. (Minimum classification); Acute toxicity - Dermal -

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		Acute Tox. 3: H311 Toxic in contact with skin. (Minimum classification); Acute toxicity - Inhalation - Acute Tox. 3: H331 Toxic if inhaled. (Minimum classification)009-012-00-0
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EU - CLP (1272/2008)

R-phrase(s)

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
 S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
 S13 - Keep away from food, drink and animal feedingstuffs.
 S 1/2 - Keep locked up and out of the reach of children.
 S24/25 - Avoid contact with skin and eyes

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Sodium Silicofluoride	16893-85-9	T; R23/24/25	C \geq 10% 1% \leq C <10%	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic
 Xn - Harmful



16. OTHER INFORMATION

Preparation Date: 02/19/2019
 Revision date 02/19/2019
 Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet