



Enabling Your Technology

**SODIUM HEXAFLUOROSILICATE**

Safety Data Sheet SIS6981.0

Date of issue: 12/29/2016

Version: 1.0

**SECTION 1: Identification****1.1. Identification**

Product name : SODIUM HEXAFLUOROSILICATE  
 Product code : SIS6981.0  
 Product form : Substance  
 Physical state : Solid  
 Formula : F6Na2Si  
 Synonyms : SODIUM SILICOFLUORIDE  
 ALKALI FLUOROSILICATES(Na)  
 DISODIUM HEXAFLUOROSILICATE  
 Chemical family : FLUOROSILICATE

**1.2. Recommended use and restrictions on use**

Recommended use : Chemical intermediate

**1.3. Supplier****GELEST, INC.**

11 East Steel Road  
 Morrisville, PA 19067

**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

Acute toxicity (oral) Category 3	H301 Toxic if swallowed
Serious eye damage/eye irritation Category 2A	H319 Causes serious eye irritation
Specific target organ toxicity (single exposure) Category 3	H335 May cause respiratory irritation
Hazardous to the aquatic environment - Acute Hazard Category 3	H402 Harmful to aquatic life

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS US labeling**

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H301 - Toxic if swallowed  
 H319 - Causes serious eye irritation  
 H335 - May cause respiratory irritation  
 H402 - Harmful to aquatic life

Precautionary statements (GHS US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P312 - Call a POISON CENTER if you feel unwell  
 P261 - Avoid breathing dust.  
 P264 - Wash hands 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.  
 P301+P310 - If swallowed: Immediately call a POISON CENTER  
 P330 - Rinse mouth.  
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337+P313 - If eye irritation persists: Get medical advice/attention.  
 P321 - Specific treatment (see first aid instructions on this label)  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to licensed waste disposal facility.

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### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : SODIUM HEXAFLUROSILICATE  
CAS-No. : 16893-85-9

Name	Product identifier	%	GHS-US classification
Sodium hexafluorosilicate	(CAS-No.) 16893-85-9	98 - 100	Acute Tox. 3 (Oral), H301 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Wash with plenty of soap and water. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation. May be harmful if inhaled. Overexposure causes inflammation and edema of the larynx and bronchii. Symptoms of exposure are a burning sensation, coughing, wheezing and laryngitis.

Symptoms/effects after skin contact : May be harmful in contact with skin. Material is extremely destructive to mucous membranes.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms : May cause osteofluorosis.

### 4.3. Immediate medical attention and special treatment, if necessary

Note to Physician: Calcium gluconate is often considered in topical exposures to hydrofluoric acid and may be appropriate for severe exposures to fluorosilicates.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Not flammable.  
Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Irritating fumes vapors may develop when material is mixed with other materials and exposed to elevated temperatures or open flame.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.  
Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.

Incompatible materials : Compatible with most materials.

Storage area : Store in a well-ventilated place. Store away from heat.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Sodium hexafluorosilicate (16893-85-9)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> inorganic fluoride as F

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Handle in an enclosing hood with exhaust ventilation.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Hand protection:

Neoprene or nitrile rubber gloves

#### Eye protection:

Chemical goggles. Contact lenses should not be worn

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination dust mask/acid gas (yellow cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 188.06 g/mol
Color	: White.
Odor	: No data available
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available

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Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: > 1
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Dissolves in strong acid or base.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Compatible with most materials.

### 10.6. Hazardous decomposition products

Hydrogen fluoride.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>SODIUM HEXAFLUROSILICATE (16893-85-9)</b>	
ATE US (oral)	125 mg/kg body weight
<b>Sodium hexafluorosilicate (16893-85-9)</b>	
LD50 oral rat	125 mg/kg RTECS Number: VV8410000
LD50 oral mouse	70 mg/kg
ATE US (oral)	125 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

This product contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

<b>Sodium hexafluorosilicate (16893-85-9)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause respiratory irritation.

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Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause respiratory irritation. May be harmful if inhaled. Overexposure causes inflammation and edema of the larynx and bronchii. Symptoms of exposure are a burning sensation, coughing, wheezing and laryngitis.
Symptoms/effects after skin contact	: May be harmful in contact with skin. Material is extremely destructive to mucous membranes.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: May cause osteofluorosis.
Reason for classification	: Expert judgment

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.

#### Sodium hexafluorosilicate (16893-85-9)

LC50 fish 1	65 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [static])
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#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on the ozone layer : No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

UN-No.(DOT)	: 2674
DOT NA no.	UN2674

#### 14.2. UN proper shipping name

Transport document description	: UN2674 Sodium fluorosilicate, 6.1, III
Proper Shipping Name (DOT)	: Sodium fluorosilicate
Class (DOT)	: 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153

#### 14.3. Additional information

Emergency Response Guide (ERG) Number : 154

Other information : No supplementary information available.

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### Transport by sea

- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- DOT Vessel Stowage Other : 52 - Stow "separated from" acids

### Air transport

- DOT Quantity Limitations Passenger aircraft/rail : 100 kg  
(49 CFR 173.27)
- DOT Quantity Limitations Cargo aircraft only (49 : 200 kg  
CFR 175.75)

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Sodium hexafluorosilicate (16893-85-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Sodium hexafluorosilicate (16893-85-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification : Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

#### EU-Regulations

#### Sodium hexafluorosilicate (16893-85-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### Sodium hexafluorosilicate (16893-85-9)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Poisonous and Deleterious Substances Control Law  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

#### Sodium hexafluorosilicate (16893-85-9)

U.S. - Massachusetts - Right To Know List  
U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Full text of H-phrases::

H301	Toxic if swallowed
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H402	Harmful to aquatic life

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

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### Hazard Rating

Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 0 Minimal Hazard - Materials that will not burn
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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