Material Safety Data Sheet

**Section 1. Chemical Product and Company Identification**

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>Sodium silicofluoride</th>
<th>Catalog Number(s.)</th>
<th>S1440</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC.</td>
<td>14422 S. SAN PEDRO STREET</td>
<td>GARDENA, CA 90248</td>
</tr>
<tr>
<td>Commercial Name(s)</td>
<td>Sodium Silicofluoride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synonym</td>
<td>Sodium hexafluorosilicate; Sodium fluosilicate; Sodium hexafluosilicate; Sodium silicon fluoride; Silicon sodium fluoride; Disodium silicofluoride; Disodium hexafluorosilicat (2-); Disodium silicofluoride; Hexafluorosilicate, disodium; Sodium hexafluorosilicate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Silicate (2-), hexafluoro-, disodium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>Na2SiF6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC.</td>
<td>14422 S. SAN PEDRO STREET</td>
<td>GARDENA, CA 90248</td>
</tr>
<tr>
<td></td>
<td>CALL (310) 516-8000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 2. Composition and Information on Ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Sodium silicofluoride</td>
<td>16893-85-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Toxicological Data on Ingredients**: Sodium silicofluoride:
- ORAL (LD50): Acute: 125 mg/kg [Rat], 70 mg/kg [Mouse].

**Section 3. Hazards Identification**

**Potential Acute Health Effects**: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death.

**Continued on Next Page**
**Sodium silicofluoride**

**Potential Chronic Health Effects**

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

**Section 4. First Aid Measures**

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th>Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.</td>
</tr>
<tr>
<td>Serious Skin Contact</td>
<td>Not available.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.</td>
</tr>
<tr>
<td>Serious Inhalation</td>
<td>Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Warning: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.</td>
</tr>
<tr>
<td>Serious Ingestion</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

**Section 5. Fire and Explosion Data**

<table>
<thead>
<tr>
<th>Flammability of the Product</th>
<th>Non-flammable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flash Points</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Products of Combustion</td>
<td>Not available.</td>
</tr>
<tr>
<td>Fire Hazards in Presence of Various Substances</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Fire Fighting Media and Instructions</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Special Remarks on Fire Hazards

When heated to decomposition it emits toxic fumes of hydrogen fluoride. When heated to decomposition it emits highly corrosive fumes.

Special Remarks on Explosion Hazards

Not available.
Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill
Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions
Keep container dry. Do not ingest. Do not breathe dust. Avoid contact with eyes. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as acids, alkalis.

May corrode glass. Store in an appropriate container.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls
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.

Personal Protection
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
TWA: 2.5 (mg(F)/m³) from OSHA (PEL) [United States]
Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Solid crystalline powder.)

Molecular Weight
188.06 g/mole

pH (1% soln/water)
Not available.

Boiling Point
Not available.

Melting Point
Decomposes.

Critical Temperature
Not available.

Specific Gravity
2.7 (Water = 1)

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volatile
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
Not available.

Ionicity (in Water)
Not available.

Dispersion Properties
See solubility in water.

Solubility
Partially soluble in cold water, hot water. Insoluble in ethanol.
Soluble in 150 parts cold water, 40 parts boiling water. Solubility in water: 0.64 g/100 g at 20 deg. C.; 0.76 g/100 g at 25 deg. C.; 1.27 g/100 g at 50 deg. C.; 2.45 g/100 g at 100 deg. C.
**Section 10. Stability and Reactivity Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Incompatible materials</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with acids, alkalis.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Incompatible with strong acids, alkaline materials, iron containing materials. It may react with strong mineral acids to liberate hydrogen fluoride or hydrofluoric acid which are highly toxic and corrosive.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

**Section 11. Toxicological Information**

**Routes of Entry**
- Inhalation. Ingestion.

**Toxicity to Animals**
- Acute oral toxicity (LD50): 70 mg/kg [Mouse].

**Chronic Effects on Humans**
- CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

**Other Toxic Effects on Humans**
- Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals**
- Not available.

**Special Remarks on Chronic Effects on Humans**
- May cause cancer based on animal test data. No human data found.

**Special Remarks on other Toxic Effects on Humans**
- Acute Potential Health Effects:
  - Skin: Causes mild to moderate skin irritation. Symptoms may include redness, burning sensation (feeling), and sometimes ulcers.
  - Eyes: Causes moderate to severe irritation.
  - Inhalation: It can irritate the nose, throat, lungs causing coughing, wheezing and/or shortness of breath.
  - Ingestion: Harmful if swallowed. It is toxic by oral exposure route. Symptoms of acute ingestion include a salty or soapy taste in the mouth, excessive salivation, nausea, abdominal cramps, vomiting, diarrhea, thirst. It may also affect behavior/central nervous system (central nervous system depression, muscle weakness, tremors or spasms, ataxia, convulsions) and may also cause disturbed color vision, kidney damage, liver damage, bleeding from the stomach, shortness of breath, loss of consciousness or death.
  - Chronic Potential Health Effects:
    - Skin: Repeated or prolonged skin contact may produce pustular rash.
    - Inhalation or Ingestion: Prolonged or repeated exposure may cause excess respiratory, cardiac, and gastrointestinal disturbances, and chronic bronchitis. It may also cause liver and kidney damage, fluorosis and osteosclerosis. Fluorosis can cause mottling of teeth.

**Section 12. Ecological Information**

**Ecotoxicity**
- Not available.

**BOD5 and COD**
- Not available.

**Products of Biodegradation**
- Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation**
- The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation**
- Not available.
Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
CLASS 6.1: Poisonous material.

Identification
UNNA: 2674 : Sodium fluorosilicate PG: III

Special Provisions for Transport
Not available.

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
Massachusetts RTK: Sodium silicofluoride
New Jersey: Sodium silicofluoride
TSCA 8(b) inventory: Sodium silicofluoride

California Proposition 65
Warnings
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 240-934-8).
Canada: Listed on Canadian Domestic Substance List (DSL).
China: Listed on National Inventory.
Japan: Listed on National Inventory (ENCS).
Korea: Listed on National Inventory (KECI).
Philippines: Listed on National Inventory (PICCS).
Australia: Listed on AICS.

Other Classifications
WHMIS (Canada)
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)
R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.
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).

HMIS (U.S.A.)
Health Hazard 2
Fire Hazard 0
Reactivity 0
Personal Protection E

WHMIS (Canada) (Pictograms)

Continued on Next Page
**Protective Equipment**

- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Splash goggles.

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**Section 16. Other Information**

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>S4450</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>


**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.