SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Substance
Physical state: Solid
Substance name: TIN(II) FLUORIDE
Product code: SNT7940
Formula: F2Sn
Synonyms: STANNOUS FLUORIDE; FLUORISTAN
Chemical family: INORGANIC TIN

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Chemical intermediate
For research and industrial use only

1.3. Details of the supplier of the safety data sheet
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 - www.gelest.com

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Warning
Hazard statements (GHS-US):
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
Precautionary statements (GHS-US):
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P330 - Rinse mouth
P301+P312 - If swallowed: Call a doctor if you feel unwell
P332+P313 - If skin irritation occurs: Get medical advice/attention
P302+P352 - If on skin: Wash with plenty of soap and water
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)
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Other hazards
No additional information available
TIN(II) FLUORIDE
Safety Data Sheet

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>TIN(II) FLUORIDE</td>
</tr>
<tr>
<td>CAS No</td>
<td>7783-47-3</td>
</tr>
<tr>
<td>EC no</td>
<td>231-999-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin(II) fluoride</td>
<td>(CAS No) 7783-47-3</td>
<td>95 - 100</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

3.2. Mixture
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. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get medical advice/attention.

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. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.
Symptoms/injuries after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

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

5.2. Special hazards arising from the substance or mixture

Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. 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.

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
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
TIN(II) FLUORIDE
Safety Data Sheet

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. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust.
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. Contact or storage with strong oxidizing agents.
Incompatible materials: Strong oxidizing agents.
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
<table>
<thead>
<tr>
<th>Tin(II) fluoride (7783-47-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Provide local exhaust or general room ventilation.
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 dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>156.69 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>219.5 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>850 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>4.57</td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 1 %</td>
</tr>
</tbody>
</table>
**Solubility** : Soluble in water. Water: 350 g/l

**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

Moderately stable, very slowly oxidizing to tin oxyfluoride.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

None known.

#### 10.5. Incompatible materials

Strong oxidizing agents.

#### 10.6. Hazardous decomposition products

Tin fluoride, Tin oxides.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity** : Oral: Harmful if swallowed.

<table>
<thead>
<tr>
<th><strong>TIN(II) FLUORIDE (7783-47-3)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>360,000 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tin(II) fluoride (7783-47-3)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>360 mg/kg ; 377 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>360,000 mg/kg body weight</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation** : Causes skin irritation.

**Serious eye damage/irritation** : Causes serious eye irritation.

**Respiratory or skin sensitization** : Not classified

**Germ cell mutagenicity** : Not classified

**Carcinogenicity** : Not classified

**TIN(II) FLUORIDE (7783-47-3)**

<table>
<thead>
<tr>
<th>IARC group</th>
<th>3 - Not classifiable</th>
</tr>
</thead>
</table>

**Reproductive toxicity** : Not classified

**Specific target organ toxicity (single exposure)** : Not classified

**Specific target organ toxicity (repeated exposure)** : Not classified

**Aspiration hazard** : Not classified

**Symptoms/injuries after inhalation** : May cause irritation to the respiratory tract.

**Symptoms/injuries after skin contact** : Causes skin irritation.

**Symptoms/injuries after eye contact** : Causes serious eye irritation.

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

**Reason for classification** : Expert judgment

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available
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
Other adverse effects: This substance may be hazardous to the environment.
Effect on ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.

### SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Waste 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
Not regulated for transport.

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information: No supplementary information available.

#### Transport by sea
No additional information available

#### Air transport
No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations
Tin(II) fluoride (7783-47-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations
Tin(II) fluoride (7783-47-3)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
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
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)

#### 15.3. US State regulations

<table>
<thead>
<tr>
<th>tin(II) fluoride (7783-47-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
</tbody>
</table>
SECTION 16: Other information

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.

Full text of H-phrases:

- **Acute Tox. 4 (Oral)**: Acute toxicity (oral) Category 4
- **Eye Irrit. 2A**: Serious eye damage/eye irritation Category 2A
- **Skin Irrit. 2**: Skin corrosion/irritation Category 2
- **H302**: Harmful if swallowed
- **H315**: Causes skin irritation
- **H319**: Causes serious eye irritation

HMIS III Rating:

- **Health**: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- **Flammability**: 0 Minimal Hazard
- **Physical**: 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 10/19/2015  
Version: 1.0

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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