

STANNOUS FLOURIDE

STF

CAUTIONARY RESPONSE INFORMATION

Common Synonyms		Crystalline solid White
Flouristan Tin difluoride		Sinks and mixes with water.
<p>Keep people away. Wear goggles and self-contained respirator. Notify local health and pollution control agencies. Protect water intakes.</p>		
Fire	Not flammable.	
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>SOLID Will burn eyes. Harmful if swallowed. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk and have victim induce vomiting.</p>	
Water Pollution	<p>HARMFUL TO AQUATIC LIFE IN LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>	

<p>1. CORRECTIVE RESPONSE ACTIONS</p> <p>Dilute and disperse Stop discharge Contain Collection Systems: Pump; Dredge</p>	<p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: Not listed. 2.2 Formula: SnF₂ 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: Currently not available 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 52310</p>
<p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Goggles and dust mask. 3.2 Symptoms Following Exposure: EYES: Severe irritation - corrosive, irreversible. SKIN: Corrosive on abraded skin, no effect on intact skin. 3.3 Treatment of Exposure: EYES: Flush with plenty of water for at least 15 minutes. SKIN: Flush with soap and water. INGESTION: Induce vomiting. Get medical attention. 3.4 TLV-TWA: 2 mg/m³ as Sn. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 3; LD₅₀ = 50 to 500 mg/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Long exposure to large amounts of the fluoride may cause loss of weight, anemia, wasting, and cachexia, and dental defects. An increase in bone density and discoloration of teeth may occur. A possible mutagen. 3.10 Vapor (Gas) Irritant Characteristics: Currently not available 3.11 Liquid or Solid Characteristics: No appreciable hazard. Practically harmless to intact skin. 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: 100 mg/m³ 3.14 OSHA PEL-TWA: 2 mg/m³ 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:** Not flammable
4.2 **Flammable Limits in Air:** Not flammable
4.3 **Fire Extinguishing Agents:** Not pertinent
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
4.5 **Special Hazards of Combustion Products:** Not pertinent
4.6 **Behavior in Fire:** Currently not available
4.7 **Auto Ignition Temperature:** Not pertinent
4.8 **Electrical Hazards:** Currently not available
4.9 **Burning Rate:** Not flammable
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent.
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent.
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
5.2 **Reactivity with Common Materials:** Avoid contact with acids - HF fumes may be produced.
5.3 **Stability During Transport:** Stable
5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available
5.5 **Polymerization:** Not pertinent
5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Fluoride salts are toxic to fish at concentrations as low as 2.3 ppm.
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** Fluorine is concentrated by aquatic animals.
6.5 **GESAMP Hazard Profile:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 97.5%
7.2 **Storage Temperature:** Currently not available
7.3 **Inert Atmosphere:** Currently not available
7.4 **Venting:** Currently not available
7.5 **IMO Pollution Category:** Currently not available
7.6 **Ship Type:** Currently not available
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Not listed
8.2 **49 CFR Class:** Not pertinent
8.3 **49 CFR Package Group:** Not listed.
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:** Not listed
8.6 **EPA Reportable Quantity:** Not listed.
8.7 **EPA Pollution Category:** Not listed.
8.8 **RCRA Waste Number:** Not listed
8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
9.2 **Molecular Weight:** 156.70
9.3 **Boiling Point at 1 atm:** 1052°F = 850°C = 1123.2°K
9.4 **Freezing Point:** 419°F = 215°C = 488.2°K
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 2.79
9.8 **Liquid Surface Tension:** Not pertinent
9.9 **Liquid Water Interfacial Tension:** Not pertinent
9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
9.12 **Latent Heat of Vaporization:** Currently not available
9.13 **Heat of Combustion:** Currently not available
9.14 **Heat of Decomposition:** Not pertinent
9.15 **Heat of Solution:** Currently not available
9.16 **Heat of Polymerization:** Not pertinent
9.17 **Heat of Fusion:** Currently not available
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
64	42.000		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E