



## 02SynQuest Laboratories, Inc.

PO Box 309, Alachua, FL 32616-0309

Tel. 386/462-0788; FAX 386/462-7097

# Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

Date last revised: June 27, 2011

Date printed: June 27, 2011

### SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: M050-2-02

NAME: TIN(IV) FLUORIDE

### SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS NUMBER: 7783-62-2

MOLECULAR FORMULA:  $F_4Sn$

MOLECULAR WEIGHT: 194.70

### SECTION 3. ----- HAZARDS IDENTIFICATION -----

#### LABEL PRECAUTIONARY STATEMENTS

TOXIC (USA) HARMFUL (EU).

HARMFUL IF SWALLOWED, INHALED OR IN CONTACT WITH SKIN.

TARGET ORGAN EFFECT.

TARGET ORGAN(S): BONES. TEETH.

### SECTION 4. ----- FIRST-AID MEASURES-----

#### ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

#### INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

#### DERMAL EXPOSURE

IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.

#### EYE EXPOSURE

IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

**SECTION 5. ----- FIRE FIGHTING MEASURES -----**

**EXTINGUISHING MEDIA**

SUITABLE: WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM.

**FIREFIGHTING**

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

**PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL**

EVACUATE AREA.

**PROCEDURE(S) OF PERSONAL PRECAUTION(S)**

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

**METHODS FOR CLEANING UP**

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

**SECTION 7. ----- HANDLING AND STORAGE-----**

**HANDLING**

USER EXPOSURE: DO NOT BREATHE DUST. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

**STORAGE**

SUITABLE: KEEP TIGHTLY CLOSED.

**SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

**ENGINEERING CONTROLS**

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

**PERSONAL PROTECTIVE EQUIPMENT**

RESPIRATORY: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

**GENERAL HYGIENE MEASURES**

WASH THOROUGHLY AFTER HANDLING.

**EXPOSURE LIMITS, RTECS**

<u>COUNTRY</u>	<u>SOURCE</u>	<u>TYPE</u>	<u>VALUE</u>
USA	ACGIH	TWA	2 mg(Sn)/m <sup>3</sup>
USA	ACGIH	TWA	2.5 mg(F)/m <sup>3</sup>
USA	MSHA STANDARD-AIR	TWA	2 mg(Sn)/m <sup>3</sup>
USA	OSHA	PEL	8H TWA 2 mg(Sn)/m <sup>3</sup>
USA	NIOSH	TWA	2.5 mg(F)/m <sup>3</sup>

**SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----**

APPEARANCE AND ODOR

WHITE TO OFF-WHITE SOLID

PHYSICAL PROPERTIES

MELTING POINT: 705 °C

**SECTION 10. -----STABILITY AND REACTIVITY -----**

STABILITY

STABLE: STABLE.

CONDITIONS OF INSTABILITY: AIR AND MOISTURE SENSITIVE.

MATERIALS TO AVOID: STRONG ACIDS, STRONG OXIDIZING AGENTS.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: HYDROGEN FLUORIDE, TIN/TIN OXIDES.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

**SECTION 11. ----- TOXICOLOGICAL INFORMATION -----**

ROUTE OF EXPOSURE

SKIN CONTACT: CAUSES SKIN IRRITATION.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

EYE CONTACT: CAUSES SEVERE EYE IRRITATION.

INHALATION: MATERIAL MAY BE IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. MAY BE HARMFUL IF INHALED.

INGESTION: HARMFUL IF SWALLOWED.

TARGET ORGAN(S) OR SYSTEM(S)

BONES. TEETH.

SIGNS AND SYMPTOMS OF EXPOSURE

SYMPTOMS OF FLUORIDE OVEREXPOSURE MAY INCLUDE SALIVATION, NAUSEA, VOMITING, ABDOMINAL PAIN, FEVER, AND LABORED BREATHING. FLUORIDE ION CAN REDUCE SERUM CALCIUM LEVELS POSSIBLY CAUSING FATAL HYPOCALCEMIA. PROLONGED EXPOSURE TO FLUORIDE DUSTS, VAPORS, OR MISTS RESULTS IN PERFORATION OF THE NASAL SEPTUM. CHRONIC EFFECTS INCLUDE EXCESSIVE CALCIFICATION OF THE BONES, LIGAMENTS, AND TENDONS. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN. INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS, AND PULMONARY EDEMA. SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA, AND VOMITING. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

CHRONIC EXPOSURE - CARCINOGEN

RESULT: THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP, OR EPA CLASSIFICATION.

IARC CARCINOGEN LIST

RATING: GROUP 3

ACGIH CARCINOGEN LIST

RATING: A4

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

DATA NOT YET AVAILABLE.

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION  
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE  
OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE  
SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN  
AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE, AND LOCAL  
ENVIRONMENTAL REGULATIONS.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

DOT  
UNRESTRICTED

**SECTION 15. ----- REGULATORY INFORMATION -----**

EU ADDITIONAL CLASSIFICATION  
SYMBOL OF DANGER: Xn  
INDICATION OF DANGER: HARMFUL.  
RISK STATEMENTS: R20/21/22,R36/37/38  
SAFETY STATEMENTS: S26,S27,S36/37/39  
UNITED STATES REGULATORY INFORMATION  
TSCA INVENTORY ITEM: NO

**SECTION 16. ----- OTHER INFORMATION-----**

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO  
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SYNQUEST LABS, INC. SHALL  
NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING  
OR FROM CONTACT WITH THE ABOVE PRODUCT.