



JUNSEI

Material safety data sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 64105

Catalog Name: Tin (II) fluoride

Company Identification:

Junsei Chemical Co., Ltd.

4-16, 4-Chome, Nihonbashi-Honcho, Chuo-ku

Tokyo, 103-0023 JAPAN

EMERGENCY TELEPHONE NUMBER: +81-48-988-3621

Sales Headquarters

6, 1-Chome, Ohmano-cho, Koshigaya, Saitama 343-0844, JAPAN

FAX: +81-48-988-8719 E-mail: shiyaku-t@junsei.co.jp

Web: <http://www.junsei.co.jp/>

CREATION DATE: February 28, 2013

SECTION 2 HAZARDS IDENTIFICATION

Physical and chemical hazard

Flammable solids : Out of category

Self-reactive substances and mixtures : Out of category

Pyrophoric solid : Out of category

Self-heating substances and mixtures : Out of category

Human health hazard

Acute toxicity Oral : Category 3

Serious eye damage/eye irritation : Category 2A

Germ cell mutagenicity : Out of category

Specific target organ systemic toxicity(single exposure)
: Category 3 (respiratory tract irritation)

Specific target organ systemic toxicity(repeated exposure)
: Category 1 (lung, bone, tooth)

Pictograms or symbol



Signal word : Danger

Hazard statement: Toxic if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

Causes damage to organs (lung, bone, tooth) through prolonged or repeated exposure.

Cautions

Safety measurements :

- Keep container tightly closed.
- Do not breathe dust/fume/mist/vapours/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.

First-aid measures :

- IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses , if present and easy to do. Continue rinsing. Get medical advice/attention.
- If eyes irritation persists: Get medical advice/attention.
- Get medical advice/attention, if you feel unwell.

Storage

- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

Disposal

- Dispose of contents and containers appropriately in accordance with related regulations.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Substance/Mixture : Substance

Component : Tin (II) fluoride

Chemical formula : F_2Sn

Cas number : 7783-47-3

US TSCA inventory : Registered

EC number (EINECS) : 231-999-3

JAPAN number (ENCS) : 1-346

Content : (Chemical Pure) 97.0 +%

SECTION 4 FIRST AID MEASURES

- If inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- If on skin : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing. Get medical advice/attention.
- If swallowed : Rinse mouth. Give one or two glasses of water to drink. Immediately call a POISON CENTER or doctor/physician.

Potential acute health effects :

Inhalation ; Cough. Sore throat.

Skin ; No data available

Eyes ; Redness. Pain.
Ingestion ; Abdominal pain. Burning sensation. Shock or collapse.
Important signs and symptoms : The substance is corrosive on ingestion. The substance is irritating to the eyes.

SECTION 5 FIRE FIGHTING MEASURES

This product is noncombustible.
Extinguishing media : In case of fire in the surroundings, use appropriate extinguishing media.
Prohibited extinguishing media : No data available
Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Protection for firefighters : Firefighters should wear protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

General Information : Use proper personal protective equipment as indicated in Section 8.
Cautions for environment : Avoid release to the rivers, lakes, ocean, groundwater.
Spills/Leak : Vacuum or sweep up material and place into a suitable disposal container.

SECTION 7 HANDLING AND STORAGE

Handling : Avoid breathing dust, fumes. Avoid contact with skin and eyes.
Use only in a chemical fume hood. Prevent dispersion of dust.
Do not eat, drink or smoke when using this product.
Storage : Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls : Use adequate ventilation to keep airborne concentrations low.
Administrative levels (Industrial Safety and Health Act) : Not-established
Occupational exposure limits :
ACGIH (2010) : $2\text{mg}/\text{m}^3$ (as Sn, oxide and inorganic compounds, except tin hydride)
(TLV-TWA),
 $2.5\text{mg}/\text{m}^3$ (as F) (TLV-TWA)
OELs (2012) : Not-established
Personal protective equipment :
Eye Protection : Goggles
Hand Protection : Protective gloves
Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection : Wear respiratory protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Solid
Appearance : White crystalline powder

Odor : No data available
pH (25°C) : No data available
Melting Point: 219°C
Boiling Point : 850°C
Explosion Limits : No data available
Vapor Pressure : No data available
Specific Gravity/Density: 4.57 (25°C)
Solubility : 30g/100ml (H₂O, 20°C)
Autoignition Temperature : No data available
Decomposition Temperature : No data available
Molecular Formula : SnF₂
Molecular Weight : 156.71

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability : Stable in ordinary handling conditions.
Conditions to Avoid : Contact with heat and incompatibilities.
Incompatibilities with Other Materials : Acids and chlorine.
Hazardous Decomposition Products: Irritating or toxic fumes (or gases)
Hazardous Polymerization : Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral : Classified into category 3 based on rat oral LD₅₀ = 200-300 mg/kg (HSDB (2003)).
Dermal : Not possible to classify because of no data.
Gas : Not applicable (GHS definition).
Vapours : Not possible to classify because of no data.
Dusts and mists : Not possible to classify because of no data.

Skin corrosion/Irritation: Not possible to classify because of insufficient data.

Serious eye damage/eye irritation: Classified into category 2A based on the description that eye irritation was indicated with this product (ICSC, 2004), and eye irritation was indicated with inorganic tin compounds (ACGIH-TLV(2006)).

Respiratory sensitization: Not possible to classify because of no data.

Skin sensitization: Not possible to classify because of no data.

Mutagenicity: Classified into out of category based on the description that there is the negativity in the mouse small core test (CICAD 65, 2005;DFGOT 14, 2000).

Carcinogenic effects: Not possible to classify because of insufficient data.

Effects on the reproductive system: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: Classified into category 3 (respiratory tract irritation) based on the description ; "An inorganic tin compound indicates respiratory irritant (ACGIH-TLV(2006))".

Specific target organ systemic toxicity repeated exposure

: Classified into category 1 (lungs, bones, tooth) based on the description ; "This product may affect a tooth or a bone (fluorosis) (ICSC, 2004) " and "It has a possibility of pneumoconiosis by as an inorganic tin compound, and has an effect on bone of fluorosis by as fluoride (ACGIH-TLV (2006))".

Aspiration hazard: Not possible to classify because of no data.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Hazardous to the aquatic environment (acute)

: Not possible to classify because of no data.

Hazardous to the aquatic environment (chronic)

: Not possible to classify because of no data.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

IATA Shipping Name: Toxic solid, inorganic, n.o.s.

Hazard Class: 6.1 (Toxic substances)

UN Number: 3288

Packing Group: III

IMO Shipping Name: TOXIC SOLID, INORGANIC, N.O.S.

Hazard Class: 6.1 (Toxic substances)

UN Number: 3288

Packing Group: III

RID/ADR Shipping Name: Toxic solid, inorganic, n.o.s.

Hazard Class: 6.1 (Toxic substances)

UN Number: 3288

Packing Group: III

SECTION 15 REGULATORY INFORMATION

Fire Service Act : Not regulated

Poisonous and Deleterious Substances Control Act

: Article 2 (2) Deleterious Substances, Attached Table 2-94.

Industrial Safety and Health Act

: Article 18-2, Attached Table 9-322(Tin and its compounds) 、 9-487 (Fluorine and its inorganic water soluble compounds) of Cabinet order.

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (MSDS required) (Effective from October 1, 2009) : 1-374 (Hydrogen fluoride and its water-soluble salts) .

Ordinance for Enforcement of the Civil Aeronautics Act

: Article 194 (vi) Toxic substances

Regulations for the carriage and storage of dangerous goods in ship

: Article 2 Toxic substances

Substance Registration :

Australia (AICS) : Registration

Canada(DSL) : Registered

Korea number (ECL) : KE-33846
China(IECSC) : Registration

SECTION 16 OTHER INFORMATION

REFERENCES:

- The Merck Index 14 edition, Monographs No. 8784
- Chemical Risk Information Platform (CHRIP)
- GHS Classification Guidance for the Japanese Government 2nd revised (March, 2010)
- Information about the status of the implementation of GHS in Japan (ID= 1280)
- Registry of Toxic Effects of Chemical Substances, No XQ3450000
- Hazardous Substances Data Bank (HSDB)
- International Chemical Safety Cards (ICSC) No. 0860

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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