

# MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION AND GENERAL INFORMATION		NFPA Code
P/N#:	2050-01	H 3
Nomenclature:	Irritant Smoke Tube	F 0
Company Name:	Allegro Industrie:	R 1
Address:	7221 Oranewood Avenue Garden Grove, CA 92841 714-899-9855 Chemtrac: 800-424-9300	O 0

2. COMPOSITION		
Chemical Name:	Stannic Chloride	
Chemical Family	Tin Chlorides	
Synonyms:	Tin (IV) Chloride, tin tetrachloride, Labavious Fuming Spirit	
<b>Ingredient:</b>	<b>Stannic Chloride</b>	<b>Inert Ingredients</b>
Molecular Weight	260.5	N/A
Molecular Formula	Sn Cl <sub>4</sub>	N/A
CAS Number:	7646-78-8	N/A
Percent:	5-15% (0.7g)	85-95%

3. HAZARDS IDENTIFICATION	
Physical Dangers	The vapor is heavier than air.
Chemical Dangers:	The substance decomposes on heating producing toxic fumes. Reacts violently with water forming corrosive hydrochloric acid and tin oxide fumes. Reacts with turpentine, alcohols and amines causing fire and explosion hazard. Attacks many metals, some forms of plastics, rubber and coatings. Reacts with moist air to form hydrochloric acid.
Routes of Exposure:	The substance can be absorbed into the body by inhalation of its vapor and aerosol.
Target Organs:	Respiratory System.
<b>Health Hazards:</b>	
Inhalation:	May cause burning sensation. Cough. Labored breathing. Shortness of breath. Sore throat. Wheezing.
Skin Contact:	May cause redness. Skin burns. Pain. Blisters.
Eye Contact:	May cause redness. Pain. Severe deep burns.
Ingestion:	May cause abdominal cramps. Burning sensation. Diarrhea. Vomiting. (See Inhalation).
Chronic Exposure:	The substance may have effects on the respiratory tract, resulting in impaired functions. Hydrogen chloride gas (and the acid fume) is corrosive to all human tissue. Prolonged inhalation of gas concentrations moderately above the TLV can damage teeth and irritate nasal passages. Inhalation of higher concentrations (above 50 ppm) for a short period of time can cause choking and coughing, and produce severe irritation and damage to the mucous membranes of the upper respiratory tract. The NIOSH-recommended IDLH* level is 100 ppm. HCl can cause severe irritation and tissue burns. (Anhydrous HCl is more dangerous than the acid mist, since it has an additional dehydrating effect on tissues.) If deeply inhaled, pulmonary oedema may occur. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.
Acute Exposure:	The substance is corrosive to the eyes, the skin and the respiratory tract. Inhalation of fumes and aerosols may cause lung oedema.
Aggravation of Pre-Ex.Cond:	Any medical respiratory condition.

4. FIRST AID MEASURES	
Inhalation:	Fresh air, rest. Half-upright position. Artificial respiration if indicated. Refer for medical attention.
Skin Contact:	Rinse and then wash skin with water and soap. Refer for medical attention.
Eye Contact:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion:	Give plenty of water to drink. Refer for medical attention

5. FIRE FIGHTING MEASURES	
Fire Hazards	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Fire Extinguisher	In case of fire in the surroundings: dry sand, powder, carbon dioxide, NO hydrous agents.
Explosion:	In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water
Flash Point:	N/A
Volatile (% by volume)	N/A
Exp. Limits (Vol % in air):	N/A
Auto Ignition Temperature	N/A
Special Fire Fighting Proc:	N/A
PPE for Fire Fighters:	Firefighters should use SCBA units to protect from possible toxic decomposition product
Notes:	N/A

6. ACCIDENTAL RELEASE MEASURES	
Procedure for spill/leak	Neutralize spilled liquid with soda ash or lime. Do NOT wash away into sewer, then remove to safe place
Waste Disposal	Dispose of in accordance with current laws and regulation:

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## 7. HANDLING AND STORAGE

Storage: Store in tight containers in a cool dry place away from light and heat. Keep separate from combustible materials, food and feed stuffs.

Self Life: 2 Years

PPE: Use Safety goggles and gloves if handling in large quantities.

Notes: None

## 8. EXPOSURE CONTROLS

PPE: Safety glasses with side shields should be worn to minimize eye contact. Safety gloves if possible skin contact with HCl and broken glass tubes.

Inhalation: Ventilation, local exhaust, or breathing protection.

Skin: Protective gloves. Protective clothing.

Eye: Safety goggles, face shield, or eye protection in combination with breathing protection.

Ingestion: Do not eat, drink, or smoke during work.

Ventilation: Local ventilation must be adequate to prevent repeated exposure

Engineering Controls: Persons conducting tests should use a respirator suitable for dust, fumes, mists and acid gases.

Work/Hygienic Practices: Strict hygiene when conducting respirator fit testing, test only respirator types specified in the appropriate protocol.

**Exposure Limits:**

Chemical: Stannic Chloride

TLV (ACGIH TLV): 2 mg/m<sup>3</sup> as tin (ACGIH 1997)

PEL (OSHA PEL): 2 mg/m<sup>3</sup>

Control Parameter: N/A

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color/Appearance/Odor: Colorless or slightly yellow fuming liquid, with pungent odor

Boiling Point: 114°C

Melting Point: -33°C

Specific Gravity (F<sub>2</sub>O=1): N/A

Refractive Index: N/A

Relative Density: 2.226 g/cc

Evaporative Rate: N/A

Water Content: None

Vapor Density (Air-1): 9.0

Vapor Pressure: 20 mm Hg @ 20° C

Solubility in Water: Reaction

## 10. STABILITY AND REACTIVITY

Conditions to avoid: Do not expose to air until use.

Materials to avoid: Water, bases, ethylene oxide, water alcohols, metals.

Stability: Reacts with water and moisture in the air to form a smoke of HCl and tin oxychlorides.

Hazardous Polymerization: Will not occur, but HCl may catalyze the polymerization of the other compounds.

## 11. TOXICOLOGICAL INFORMATION

Health effects: N/A

Oral LD50: N/A

Human Lethal Dose: N/A

Notes: N/A

Dermal LD50: N/A

## 12. ECOLOGICAL INFORMATION

None Available

## 13. DISPOSAL CONSIDERATIONS

Do not wash away into sewer

## 14. TRANSPORT INFORMATION

Proper shipping name: Stannic Chloride

Transport Emergency Card: TEC (R) -80G10

Packing Group: II

UN Number: 1827

Reportable Quantity: N/A

Packaging: Airtight. Unbreakable packaging; put breakable packaging into closed unbreakable container.

Notes: UN Hazard Class: 8 Do not transport with food and feedstuff

## 15. REGULATORY INFORMATION

TSCA Registered: Yes

FDA Approved: No

ICSC: 0953

RTECS: XP8750000

EC #: 050-001-00-5

## 16. OTHER INFORMATION

None Available

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