Material Safety Data Sheet
Tin(IV) chloride pentahydrate, 98+%

MSDS# 00318

Section 1 - Chemical Product and Company Identification

MSDS Name: Tin(IV) chloride pentahydrate, 98+%
Catalog Numbers: AC223690000, AC223690050, AC223691000
Synonyms: Stannic chloride pentahydrate; Tetrachlorostannane pentahydrate.

Company Identification:
Acros Organics BVBA
Janssen Pharmaceuticaal 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
800-ACROS-01
For information in Europe, call:
+32 14 57 52 11
Emergency Number, Europe:
+32 14 57 52 99
Emergency Number US:
201-796-7100
CHEMTREC Phone Number, US:
800-424-9300
CHEMTREC Phone Number, Europe:
703-527-3887

Section 2 - Composition, Information on Ingredients

Risk Phrases:
CAS#: 10026-06-9
Chemical Name: Stannic chloride pentahydrate
%: > 98
EINECS#: unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. Target Organs: Eyes, skin, mucous membranes.

Potential Health Effects
Eye: Contact with eyes may cause severe irritation, and possible eye burns.
Skin: May cause severe skin irritation with possible burns, especially if skin is wet or moist.
Ingestion: May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
Inhalation: Irritation may lead to chemical pneumonitis and pulmonary edema. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic exposure to tin oxide dusts and fumes may result in stannosis (benign pneumoconiosis).

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Not combustible, but if involved in a fire, decomposes to produce hydrogen chloride.

Extinguishing Media: Do NOT use water directly on fire. Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 0; instability: 1;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Use water spray to cool and disperse vapors and protect personnel.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only with adequate ventilation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Corrosives area. Do not get water inside containers.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stannic chloride, anhydrous</td>
<td>2 mg/m3 TWA (except Tin hydride, as Sn)</td>
<td>2 mg/m3 TWA (as Tin inorganic compounds)</td>
<td>2 mg/m3 TWA (as Sn, except Tin oxides)</td>
</tr>
<tr>
<td>Stannic chloride peptate</td>
<td>2 mg/m3 TWA</td>
<td>2 mg/m3 TWA (as Sn, except Tin oxides)</td>
<td>2 mg/m3 TWA (as Sn, except Tin oxides)</td>
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ntahydrate  | (except Tin hydride, as Sn) (listed under Tin inorganic compounds). |
| Sn, except Tin oxide) (listed under Tin inorganic compounds). |
| Sn, except oxides) (listed under Tin inorganic compounds). |

OSHA Vacated PELs: Stannic chloride, anhydrous: 2 mg/m³ TWA (as Sn, except oxides) (listed under Tin inorganic compounds) Stannic chloride pentahydrate: 2 mg/m³ TWA (as Sn, except oxides) (listed under Tin inorganic compounds)

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Color: white to yellow
Odor: hydrochloric odor - slight odor
pH: Acidic in solution.

Vapor Pressure: 10 mm Hg @ 10 deg C
Vapor Density: Not available
Evaporation Rate: Not applicable.
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 56 deg C (132.80°F)

Decomposition Temperature: Not available
Solubility in water: Freely Soluble
Specific Gravity/Density: 2.2 (water=1)
Molecular Formula: SnCl4.5H2O
Molecular Weight: 350.57

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. May decompose on exposure to moist air or water.

Conditions to Avoid: High temperatures, exposure to moist air or water.

Incompatibilities with Other Materials Strong bases, alcohols, amines, ethylene oxide, potassium, sodium, alkyl nitrates, turpentine.

Hazardous Decomposition Products Hydrogen chloride, tin/tin oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information
RTECS#:  
CAS# 7646-78-8: XP8750000  
CAS# 10026-06-9: XP8870000

LD50/LC50: 
RTECS:  
CAS# 7646-78-8: Inhalation, rat: LC50 = 2300 mg/m3/10M;

Carcinogenicity:  
Stannic chloride, anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Stannic chloride pentahydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other:  
See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

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

Section 14 - Transport Information

US DOT
Shipping Name: STANNIC CHLORIDE, PENTAHYDRATE
Hazard Class: 8
UN Number: UN2440
Packing Group: III

Canada TDG
Shipping Name: Not available
Hazard Class:  
UN Number:  
Packing Group:  

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C
Risk Phrases:
R 34 Causes burns.
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
S 7/8 Keep container tightly closed and dry.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)
CAS# 7646-78-8: 1
CAS# 10026-06-9: Not available

Canada
CAS# 7646-78-8 is listed on Canada's DSL List
Canadian WHMIS Classifications: E
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 7646-78-8 is not listed on Canada's Ingredient Disclosure List.
CAS# 10026-06-9 is not listed on Canada's Ingredient Disclosure List.

US Federal
CAS# 7646-78-8 is listed on the TSCA Inventory.
CAS# 10026-06-9 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

Section 16 - Other Information
MSDS Creation Date: 6/21/1999
Revision #6 Date 7/20/2009

Reviewed 2013.07.31
09:15:07 -04'00'

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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