

Updated February 17, 2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **AS-8150 / AS-8111**

CAS Number: Blend Formula: SnCl₂ - HCl

Company Identification:

AS Inc.
980 77th Avenue
Oakland, CA 94621

800-369-8056 (For product information) FAX: 510-562- 3260
Chemtrec for emergencies: 800-424-9300 or 703-527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS:

HAZARDOUS AND/OR REGULATED COMPONENTS

| Chemical Name | Amount (optional) |
|---------------|-------------------|
|---------------|-------------------|

CAS Number

| | |
|-------------------------|--|
| Stannous Chloride <70 % | |
| 7772-99-8 | |

| | |
|-------------------------|--|
| Hydrochloric Acid <50 % | |
| 7647-01-0 | |

EMERGENCY OVERVIEW

DANGER! CORROSIVE.

LIQUID AND MIST CAUSE SEVERE BURNS TO ALL BODY TISSUE. MAY BE FATAL IF SWALLOWED OR INHALED.

California Prop 65: This product does not contain any ingredients which are known to the state of California to cause cancer, birth defects, or other reproductive harm.

HAZARDS DISCLOSURE: This product contains known hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 and under Sara 311 and 312.

3. HAZARDS IDENTIFICATION

HMIS Rating: Health - 3, Flammability - 0, Reactivity - 1 Personal Protection Index - E

NFPA Rating: Health - 3, Flammability - 0, Reactivity - 1

NFPA/HMIS Definitions: (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme).

Protective Equip: GOGGLES & SHIELD; LAB COAT, PROPER GLOVES, Vent HOOD

POTENTIAL HEALTH EFFECTS

INHALATION:

Corrosive! Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases, pulmonary edema, circulatory failure, and death.

INGESTION:

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. May cause burning in mouth and throat, abdominal pain, reduced blood pressure, stomach bleeding, collapse and convulsions. May cause liver and kidney damage. Corrosive! Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. May cause nausea, vomiting, and diarrhea, and in severe cases, death.

SKIN CONTACT:

Corrosive! Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and discolor skin.

EYE CONTACT:

Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

CHRONIC EXPOSURE:

Prolonged inhalation (dust, mist or fume) may result in a benign pneumoconiosis, producing distinctive changes in the lungs with no apparent disability or complications. Long-term exposure to concentrated acid vapors may cause erosion of teeth, this is seldom possible.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

4. FIRST AID MEASURES

INHALATION FIRST AID:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

SKIN CONTACT FIRST AID:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

EYE CONTACT FIRST AID:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION FIRST AID:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

STATEMENT OF PRACTICAL TREATMENT:

Get medical attention if any symptoms develop or persist. Treat patient symptomatically.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: PMCC Flash Point: Not applicable.

FLAMMABLE LIMITS IN AIR, % by Volume: Non-Flammable LEL: N/A

AUTO IGNITION TEMPERATURE: Dust Cloud: Not applicable. Dust Layer: Not applicable. EXPLOSION: Not applicable.

EXTINGUISHING MEDIA: USE dry sand, graphite, dolomite, sodium chloride. NEVER USE water, halogenated agents, or class A, B, or C extinguishers.

FIRE & EXPLOSION SPECIAL INFORMATION:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

SPILLS PROCEDURE:

Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities; refer to section 15 to determine reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

ENVIRONMENTAL PRECAUTIONS:

Dike flow of spilled material using soil or sandbags to minimize contamination of drains, surface and ground waters.

7. HANDLING AND STORAGE

HANDLING (PERSONNEL): Handle in accordance with good hygiene and safety procedures. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. When transferring materials ground and bond containers, use spark proof tools and explosion proof equipment. Since empty containers contain product residue, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition.

STORAGE PRECAUTIONS:

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Avoid dust dispersal. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

-OSHA Permissible Exposure Limit (PEL):

Stannous Chloride - 2 mg/m³ (TWA)

Hydrochloric acid: 5 ppm (Ceiling)

-ACGIH Threshold Limit Value (TLV):

Stannous Chloride - 2 mg/m³ (TWA)

Hydrochloric acid: 2 ppm (Ceiling), A4 Not classifiable as a human carcinogen

VENTILATION SYSTEM:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH APPROVED):

If the exposure limit is exceeded and engineering controls are not feasible, a half face-piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face-piece positive pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

SKIN PROTECTION:

Wear protective gloves and clean body-covering clothing.

STANNOUS CHLORIDE SOLUTION

---NTP CARCINOGEN---

KNOWN ANTICIPATED IARC CATEGORY

NO NO NONE

NO NO 3

EYE PROTECTION:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Clear liquid COLOR: colorless

ODOR: Slight odor of hydrochloric acid, acrid. DENSITY: 1.0 - 2.0 g/cm³

SOLUBILITY IN WATER: complete

MOLECULAR WEIGHT: Not applicable to solution PH: <1

MELTING/FREEZING POINT: 0 C BOILING POINT: 120 C

EVAPORATION RATE: Not available FLASH POINT & METHOD: No information found

AUTOIGNITION TEMPERATURE: N/A VAPOR DENSITY (Air=1): No information found %

VOLATILES BY VOLUME @ 21C (70F): N/A VAPOR PRESSURE (mm Hg): No Information

10. STABILITY AND REACTIVITY

STABILITY:

Powerful reducing agent. Quantities of hydrochloric acid are present in aqueous solutions. Absorbs oxygen from air and forms the insoluble oxychloride.

CONDITIONS TO AVOID: Moisture, heat, flames, ignition sources and incompatibles.

POLYMERIZATION: Will not occur.

INCOMPATIBILITY WITH OTHER MATERIALS:

Sodium, potassium, bromine trifluoride, calcium carbide, calcium acetylide, ethylene oxide, and nitrates. Reacts with hydrazine hydrate to form dihydrazine chloride, which decomposes explosively when heated. Contact with strong oxidizing agents or alkalis will generate heat and fumes.

DECOMPOSITION: Emits toxic fumes of tin and chlorine when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

NO LD50/LC50 INFORMATION FOUND RELATING TO NORMAL ROUTES OF OCCUPATIONAL EXPOSURE. INVESTIGATED AS A TUMORIGEN.

\CANCER LISTS\

INGREDIENT

STANNOUS CHLORIDE (7772-99-8) HYDROGEN CHLORIDE (7647-01-0)

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: For Hydrochloric Acid (Concentrated Solutions):
When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater.

ENVIRONMENTAL TOXICITY: For Hydrochloric Acid (Concentrated Solutions):
This material may be toxic to aquatic life. LC50 Shrimp: 100-300 ppm/48-hr/salt water; LC100 trout: 10 mg/l/24-hr; TLm mosquito fish: 282 ppm/96-hr.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

CONTAMINATED MATERIALS: Wash contaminated clothing before reuse. CONTAINER DISPOSAL: Clean out containers prior to disposal.

14. TRANSPORTATION INFORMATION

Domestic (Land, D.O.T.), International (Water, I.M.O.), International (Air, I.C.A.O.)

PRODUCT LABEL: Stannous Chloride Solution UN NUMBER: 3264

PACKING GROUP: II

D.O.T. HAZARD CLASS: 8

D.O.T. SHIPPING NAME: Corrosive Liquid, Acidic, Inorganic, N.O.S. (contains stannous chloride and hydrochloric acid)

PRODUCT RQ (LBS): N/A

15. REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

OSHA Classification: Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

STATE REGULATIONS: None

Chemical Inventory Status - Part 1

| Ingredient | TSCA | EC | Japan | SARA 302 | SARA 313 |
|-------------------------------|------|-----|-------|----------|----------|
| Stannous Chloride (7772-99-8) | Yes | Yes | Yes | No | No |
| Hydrogen Chloride (7647-01-0) | Yes | Yes | Yes | Yes | Yes |

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes (HCl) SARA 311/312:
Acute: YES Chronic: YES Fire: No Pressure: No Reactivity: No (Pure / Liquid)
Australian Hazchem Code: None Allocated.

Poison Schedule: None allocated.

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998).

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WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA). This material or all of its components are listed on the Canadian Domestic Substances List (DSL). This material or all of its components are listed (or considered as having been notified) on the European Inventory of Existing Chemical Substances (EINECS). Other inventory lists: ENCS (Japan), Korea, Australia, China (Draft), PICCS (Philippines), Japan (ENCS).

16. OTHER INFORMATION

Label Hazard Warning:

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions:

Do not get in eyes, on skin, or on clothing. Do not breathe dust, mist or vapor. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Label First Aid:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.

Prepared By : Richard Miller

END OF MSDS