

SAFETY DATA SHEET

Section 2: Hazards Identification (continued)

Eye: Fumes and smoke generated during soldering may cause irritation.

CHRONIC (long term): see Section 11 for additional toxicological data

Chronic toxic effects from repeated or prolonged over-exposure by inhalation of fumes are reported to include irritation to the respiratory system, abdominal pain, loss of appetite, pneumonitis and adverse effects to the heart and lungs. Over-exposure to tin fume by inhalation can cause stannosis (a benign pneumoconiosis), dyspnea, and irritation to the respiratory system.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate an existing dermatitis.

Interactions With Other Chemicals: Not available

Potential Environmental Effects: Antimony compounds are dangerous for the environment; prevent release of this material into the environment.

Section 3: Composition / Information on Ingredients

Hazardous/Dangerous Ingredients:

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt. %</u>	<u>EINECS</u>	<u>Symbol</u>	<u>Risk Phrases</u>
2-hydroxyethylammonium chloride	2002-24-6	5 - 10	217-900-6	Not classified	Not classified
Ammonium Chloride	12125-02-9	1 - 5	235-186-4	Xn, Xi	R22, R36
Tin	7440-31-5	60 - 75	231-141-8	None*	None*
Antimony	7440-36-0	1 - 5	231-146-5	Xn; N	R20/22; R51/53

* This substance is not classified in the Annex I of Directive 67/548/EEC.

Note: See Section 16 for the full text of the R-phrases above.

Section 4: First Aid Measures

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air and obtain medical advice.

Eye Contact: If material becomes lodged in the eye, do not allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. Have victim look right and left, then up and down. If particle does not dislodge, flush with lukewarm, gently flowing water for 5 minutes or until removed, while holding eyelid(s) open. If irritation occurs, obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye.

Skin Contact: Quickly and gently, blot or brush away excess paste. Wash gently and thoroughly with lukewarm, non-abrasive soap and plenty of water for 5 minutes. If irritation develops, obtain medical advice.

Ingestion: If swallowed obtain medical advice or contact a Poison Control Centre immediately.

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Section 5: Fire Fighting Measures

Flammable Properties:	The paste may burn if involved in a fire but does not ignite readily.
Suitable extinguishing Media:	Use extinguishing media appropriate for the surrounding fire (e.g. water spray, dry chemical, carbon dioxide or foam)
Unsuitable extinguishing Media:	Not available
Explosion Data:	
Sensitivity to Mechanical Impact:	Not applicable
Sensitivity to Static Discharge:	Not applicable
Specific Hazards arising from the Chemical:	During a fire, products of combustion may include carbon dioxide, carbon monoxide, hydrogen chloride fumes, ammonia, smoke and other irritating and toxic fumes. When heated in air or if involved in a fire, product may form toxic antimony compound fumes.
Protective Equipment and precautions for firefighters:	Thermal decomposition products are harmful. Do not enter without wearing specialized protective equipment suitable for the situation. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. A full-body encapsulating chemical resistant suit with an approved positive pressure self-contained breathing apparatus may be necessary.
NFPA	
Health:	1
Flammability:	1
Instability:	0

Section 6: Accidental Release Measures

Personal Precautions:	Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear adequate personal protective equipment as indicated in Section 8.
Environmental Precautions:	Minimize entry of material into sewers and drainage systems.
Methods for Containment:	Stop the spill immediately.
Methods for Clean-up:	Scrape or scoop product for re-use or place in a secure labeled container for disposal. Clean up spills immediately. Flush the spill area with water. Prevent water runoff from entering drains, sewers and natural water streams.

Section 7: Handling and Storage

Handling:	Avoid contact with eyes and skin; do not breathe in fumes. Wash thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet. Remove contaminated clothing and wash before reuse. Keep out of reach of children.
Storage:	Store in a cool, dry area, out of direct sunlight and away from heat, flames and ignition sources. Keep containers closed when not in use. Do not store above 37.5°C (100°F).

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Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Consult local authorities for acceptable exposure limits.

<u>Ingredient</u>	<u>ACGIH TLV</u> <u>(8-hr. TWA)</u> <u>mg/m³</u>	<u>U.S. OSHA PEL</u> <u>(8-hr. TWA)</u> <u>mg/m³</u>	<u>Ontario (Canada)</u> <u>TWAEV</u> <u>mg/m³</u>	<u>UK OEL</u> <u>(8-hr. TWA)</u> <u>mg/m³</u>
Ammonium Chloride	10 (fume); 20 STEL	10 (fume); 20 STEL	10; 20 STEV	10 (fume); 20 STEL
Tin	2	2	2	2; 4 STEL
Antimony	0.5	0.5	0.5	0.5
Other exposure limits: NIOSH Recommended Exposure Limits (REL): TWA 0.5 mg/m ³ , IDLH Concentration 50 mg/m ³				

Exposure Controls

Engineering Controls: When operating conditions generate fume or dusts of this material, provide adequate ventilation (e.g. local exhaust) to keep vapor concentrations below the exposure limits listed above.

Personal Protection:

Eye/Face Protection: If fumes are generated during use, wear chemical safety glasses or goggles. Wear eye/face protection (e.g. goggles/face shield) appropriate for the workplace where this material is handled and the conditions of use.

Skin Protection: Wear appropriate protective gloves and clean, body-covering clothing, when workplace conditions warrant their use. Wear appropriate gloves to protect the skin from thermal burns when necessary.

Respiratory Protection: Not required for normal use.
 If ventilation and other engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protective equipment (RPE). Where occupational exposure limits are exceeded, workers must wear an approved respirator. In workplaces where respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. Consult with respirator manufacturer to determine respirator selection, use and limitations.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements, European Standard EN529 or Canadian Standards Association (CSA) Standard Z94.4-2002 must be followed whenever workplace conditions warrant a respirator's use.

General Hygiene Measures: Avoid breathing fumes generated from heated product. Do not eat, drink or smoke in work areas. Wash hands after handling this product. Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Discard or launder before re-wearing. Inform laundry personnel of contaminant's hazards. When handling on a large scale, do not wear work clothing home. A double locker-shower setup is usually required.

Section 9: Physical and Chemical Properties

Physical State:	Paste	Flash Point & method:	Not applicable
Appearance, Color and Odor:	Viscous paste; gray; odorless	Autoignition Temperature:	Not applicable
Odor Threshold:	Not applicable	Flammability Limits in Air:	Not applicable
pH:	Not applicable	Vapor Pressure:	Not applicable
Relative density:	Not available	Vapor Density:	Not applicable
Partition coefficient:	Not available	Evaporation Rate:	Not applicable
Solubility:	Partly soluble in water.	Boiling Point/Range:	Not available
Viscosity:	Not available	Melting Point:	Not available
Decomposition Temperature:	Not available	VOC Content:	0% w/w

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Section 10: Stability and Reactivity

Chemical Stability:	Stable at normal room temperature.
Conditions to Avoid:	Avoid extreme heat and open flames.
Incompatible Materials:	Incompatible with Oxidizers, Hydrogen peroxide, sodium, potassium, chlorine, turpentine, strong acids.
Hazardous Decomposition Products:	Fumes of antimony at temperatures exceeding 425°C (800°F).
Possibility of Hazardous Reactions:	Not available

Section 11: Toxicological Information

Acute Toxicity Data

<u>Ingredient</u>	<u>LD₅₀ Oral</u> (mg/kg)	<u>LD₅₀ Dermal</u> (mg/kg)	<u>LC₅₀ Inhalation</u> (4 hrs.)
Ammonium Chloride	1 300 (mouse) 1 650 (rat)	Not available	Not available
Tin	Not available	Not available	Not available
Antimony	7 000 (rat)	Not available	Not available

Chronic Toxicity Data

Carcinogenicity:	Normal use of this product will not result in exposure to any component that is considered a human carcinogen by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists, OSHA or NTP (National Toxicology Program).
Irritation:	Under expected conditions of use, this preparation is not expected to cause irritation to eyes, respiratory system or skin. Overexposure to fumes may cause irritation to the eyes and respiratory system.
Corrosivity:	Not available for the preparation.
Sensitization:	Skin and respiratory sensitization reactions are possible from exposure to antimony compounds.
Neurological Effects:	Not available for the mixture.
Genetic Effects:	Not available for the mixture.
Reproductive Effects:	Not available for the mixture.
Developmental Effects:	Not available for the mixture.
Target Organ Effects:	For exposures to Antimony: Eyes, skin, respiratory system, cardiovascular system

Section 12: Ecological Information

Ecotoxicity:	Processing or extended exposure in aquatic environments and soil may result in the release of antimony and tin compounds. Antimony is toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Persistence:	Not available for this product.
Bioaccumulation:	Not available
Mobility:	Not available

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Section 13: Disposal Considerations

Waste Disposal Method: Do NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.
 Refer to disposal requirements for preparations containing tin and antimony.
 The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, LA-CO Industries, Inc. does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

USA: Dispose of in accordance with local, state and federal laws and regulations.

Canada: Dispose of in accordance with local, provincial and federal laws and regulations.

EC: Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Section 14: Transport Information

U.S. Hazardous Materials Regulation (DOT 49CFR): Not regulated, this product conforms to small quantity exception of DOT 49CFR173.4. RQ of antimony 10 lb (4.54 kg).

Canadian Transportation of Dangerous Goods (TDG): Not regulated

ADR/RID: Not regulated

IMDG: Not regulated

Marine Pollutants: Antimony compound, soluble, N.O.S.

ICAO/IATA: Not regulated

Section 15: Regulatory Information

USA

TSCA Status: All ingredients in the product are listed on the TSCA inventory.

SARA Title III
 Sec. 302/304: None
 Sec. 311/312: Not applicable
 Sec. 313: Antimony 1% de minimis
 CERCLA RQ: Antimony 5 000 lb (2 270 kg); Ammonium Chloride 5 000 lbs (2 270 kg)

California Prop 65: Not applicable

State Right-to-Know Lists : Antimony, Tin, and Ammonium chloride can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: Not controlled
 (for workplace exposures)

New Substance Notification Regulations: All ingredients in the product are listed, as required, on Canada's Domestic Substances List (DSL).

NPRI Substances: Antimony, Part 1 Group 1 substance (2008).

SAFETY DATA SHEET**Section 15: Regulatory Information, continued****EC Classification for the Substance/Preparation**

Symbol: Not classified as dangerous
R Phrases: Not applicable
S Phrases: S2: Keep out of reach of children.

Section 16: Other Information

Full Text of R-phrases appearing in Section 2: R20/22: Harmful by inhalation and if swallowed.
R22: Harmful if swallowed.
R36: Irritating to eyes
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Preparation Information:

Revision Date: October 4, 2011

Revision Summary: Revised Section 3, 8, 11

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