

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Auralloy 500 Liquid Soldering Flux
AURALLOY PART NUMBER: 8787
PRODUCT TYPE: Liquid Soldering Flux
CHEMICAL FAMILY: N/A

DATE PREPARED: January 2000

CHROMATE INDUSTRIAL CORPORATION
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2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	% BY WEIGHT	OSHA PEL	ACGIH TLV	STEL	CAS #
Zinc Chloride	<35	1 mg/m ³ 8H	1 mg/m ³	N/D	7646-85-7
Ammonium Chloride	<5	N/D	N/D	N/D	12125-02-9
Hydrogen Chloride	<5	N/D	N/D	N/D	7647-01-0
Tin (II) Chloride	<5	2 mg/m ³	2 mg/m ³	N/D	7772-99-8
Water	>50	N/D	N/D	N/D	

* An asterisk (*) indicates the toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372.

3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Inhalation of welding fumes

EFFECTS OF OVEREXPOSURE:

INHALATION: Flux fumes emitted during reflow of wire can be harmful if inhaled. Chronic exposure to flux fumes is harmful. Fumes during soldering may irritate mucous membranes and respiratory system. High concentrations can cause headache, dizziness, narcosis and nausea. Burning sensation in the sinuses, nose and throat.

INGESTION: Moderately toxic and may be harmful if swallowed. Burns of tissue in mouth, throat and stomach.

SKIN CONTACT: Substance may cause slight skin irritation. Prolonged contact may cause caustic burn on skin. Redness of the skin and in severe cases blisters. Prolonged or repeated skin contact can result in a rash.

EYE CONTACT: Irritating and may injure eye tissue if not removed promptly. Burning and/or itching of eyes.

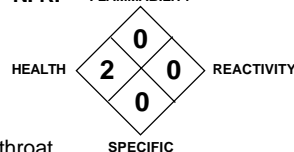
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Severe short term overexposure may lead to central nervous system disorders, characterized by fever, body ache and chills. It should be recognized that exposure of this magnitude in an industrial environment is unlikely.

HAZARD RATINGS

NFR: FLAMMABILITY

HMS:

2	HEALTH
0	FLAMMABILITY
0	REACTIVITY
B	PROTECTION

4. FIRST AID MEASURES

EMERGENCY FIRST AID PROCEDURES:

INHALATION: Immediately removed from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

INGESTION: If swallowed, do not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Perform mouth-to-mouth resuscitation if victim is not breathing.

SKIN CONTACT: For burns: treat according to severity. For irritation: wash thoroughly, seek medical advice for proper skin cream.

EYE CONTACT: Immediately flush eyes with plenty of water and continue washing for at least 15 minutes. Do not remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USE): Nonflammable

FLAMMABLE LIMITS: LEL N/A

UEL N/A

EXTINGUISHING MEDIA: N/A

FIRE FIGHTING PROCEDURES: No special precautions needed. Material is non-flammable (>80% water). Vapors from overheated flux may emit ammonia smell.

UNUSUAL AND EXPLOSION HAZARDS: No data available

PHYSICAL HAZARDS: Material is corrosive and will corrode surrounding metals that are exposed to flux vapors.

6. ACCIDENTIAL RELEASE MEASURES

SPILLS OR LEAKS: For spills under 1 pint, dilute with water and absorb liquid using normal spill cleaning equipment. For large spills, neutralize with sodium bicarbonate and dilute with water. For water spill, check with local authority about zinc chloride solutions. Some jurisdictions do not permit zinc chloride in water systems.

7. HANDLING AND STORAGE

SPECIAL PRECAUTIONS: Keep container closed when not in use. Wear protective gloves. Clean skin with soap and water. General storage conditions. Unopened container has an indefinite shelf life. Opened containers have a one year shelf life.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN: Material is corrosive and will corrode surrounding metals that are exposed to flux vapors.

RESPIRATORY: None expected to be needed.

SKIN PROTECTION: Chemical resistant gloves that are resistant to corrosive chemicals. Wear suitable protective clothing.

EYE PROTECTION: Wear safety glasses with side shields (or goggles).

EXPOSURE GUIDELINES: Provide general and/or local exhaust ventilation.

ENGINEERING CONTROLS: No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 215°F 102°F

VAPOR DENSITY (AIR = 1): N/A

SOLUBILITY IN WATER: Complete

PERCENT VOLATILE BY VOLUME: N/A

VOLATILE WEIGHT: N/A

APPEARANCE & ODOR: Clear/White Liquid - Slight Acid Odor

PRODUCT WEIGHT: N/D

SPECIFIC GRAVITY (H₂O = 1): 1.35 to 1.40

MELTING POINT: N/D

pH: 2 to 4

EVAPORATION RATE: N/A

FORM: Solid **VOLATILE COMPONENTS:** N/A

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid strong bases. Could generate heat.

HAZARDOUS POLYMERIZATION: N/A

INCOMPATIBILITY (MATERIALS TO AVOID): Do not store in metal containers of any kind – will corrode.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Zinc chloride fume, ammonia and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

EYE: No data available.

SKIN: No data available.

INGESTION: No data available.

INHALATION: No data available.

SUBCHRONIC: No data available.

CHRONIC CARCINOGENICITY: NTP: Not Listed **IARC MONOGRAPH:** Not Listed **OSHA REGULATED:** Not Regulated

TERATOLOGY: No data available.

REPRODUCTION: No data available.

MUTAGENICITY: No data available.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data available.

CHEMICAL FATE INFORMATION: No data available.

13. DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS: No data available

WASTE DISPOSAL METHOD: Dispose of any unused portion of the product in a chemical landfill in compliance with local, state and federal regulations. For large spills, neutralize spills and dispose of material using an approved waste handler. Empty container can be rinsed clean.

14. TRANSPORT INFORMATION

TRANSPORTATION REQUIREMENTS (49CFR172-101)

D.O.T. CLASSIFICATION: Not regulated

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

EXPOSURE LIMITS: No data available.

16. OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in this MSDS. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

N/D — NOT DETERMINED N/A — NOT APPLICABLE N/R — NOT REGULATED

Conforms to 29 CFR 1910.1200, OSHA

ANSI Z129.1 - 1988 American National Standard for Hazardous Industrial Chemicals