



Safety Data Sheet

Issue Date: 25-May-2005

Revision Date: 07-Mar-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Acro-Tin Tinning Compound, Dry Form with Pure Tin

Part Number: ACROTINPURETIN1

UN/ID No UN2331

Recommended use of the chemical and restrictions on use

Recommended Use Tin powder mixture with Acid type flux for soldering and tinning.

Details of the supplier of the safety data sheet

Supplier Address

Acro Sales & Engineering, Inc.
N57 W13366 Carmen Avenue
Menomonee Falls, WI 53051-6101

Emergency Telephone Number

Company Phone Number Phone: 262-781-8940
Fax: 262-781-8964
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Gray metallic powder

Physical State Solid

Odor Mild

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation. May cause drowsiness or dizziness



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a poison center or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth
 Do not induce vomiting

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

Unknown Acute Toxicity

50% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Chemical Name	CAS No	Weight-%
Tin	7440-31-5	38 -42
Zinc chloride	7646-85-7	48-52
Ammonium chloride	12125-02-9	8-12

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Seek immediate medical attention/advice.
Skin Contact	Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air. Call a physician immediately.
Ingestion	Rinse mouth. Stomach must be cleared, preferably by pumping. Get prompt medical attention.

Most important symptoms and effects

Symptoms	Flux fumes during soldering may cause irritation and damage of mucous membranes and pulmonary system. Contact will cause irritation and redness to exposed areas. Repeated ingestion can lead to systemic poisoning.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO₂). Dry chemical.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon oxides. Lead oxide fumes.

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Scoop up paste and deposit in appropriate containers. Clean up residual with isopropanol or detergent water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Wash thoroughly after handling. Care should be taken to remove solder paste from under fingernails. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Emptied container retains product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store at or near 70°F (21DEGC). Keep out of the reach of children.

Incompatible Materials

Strong acids. Strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tin 7440-31-5	TWA: 2 mg/m ³ TWA: 2 mg/m ³ Sn except Tin hydride	TWA: 2 mg/m ³ Sn except oxides (vacated) TWA: 2 mg/m ³ (vacated) TWA: 2 mg/m ³ Sn except oxides	IDLH: 100 mg/m ³ IDLH: 100 mg/m ³ Sn TWA: 2 mg/m ³ TWA: 2 mg/m ³ except Tin oxides Sn
Zinc chloride 7646-85-7	STEL: 2 mg/m ³ fume TWA: 1 mg/m ³ fume	TWA: 1 mg/m ³ fume (vacated) TWA: 1 mg/m ³ fume (vacated) STEL: 2 mg/m ³ fume	IDLH: 50 mg/m ³ fume TWA: 1 mg/m ³ fume STEL: 2 mg/m ³ fume
Ammonium chloride 12125-02-9	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume	(vacated) TWA: 10 mg/m ³ fume (vacated) STEL: 20 mg/m ³ fume	TWA: 10 mg/m ³ fume STEL: 20 mg/m ³ fume

Appropriate engineering controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Safety glasses.

Skin and Body Protection

Wear rubber or plastic gloves.

Respiratory Protection

Respiratory protection is usually not required. When ventilation is not sufficient to remove smoke from the breathing zone, a cartridge type respirator should be worn.

General Hygiene Considerations

Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid	Odor	Mild
Appearance	Gray metallic powder	Odor Threshold	Not Established
Color	Gray metallic		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not available	
Flash Point	> 65 °C / > 150 °F	TOC
Evaporation Rate	< 0.1	(butyl acetate = 1)
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not established	
Lower Flammability Limit	Not established	
Vapor Pressure	Not applicable	
Vapor Density	Not applicable	
Specific Gravity	>1	(1=Water)
Water Solubility	<5%	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not established	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
VOC Content	70 g/L	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Strong acids. Strong oxidizers.

Hazardous Decomposition Products

When heated to soldering temperatures, the solvents are evaporated and thermal degradation products may include aliphatic aldehydes and acids. No lead is detected in fumes from soldering below 1000°F (537°C).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Avoid breathing fumes.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc chloride 7646-85-7	= 350 mg/kg (Rat)	-	-
Ammonium chloride 12125-02-9	= 1410 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity 50% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ammonium chloride 12125-02-9		725: 24 h Lepomis macrochirus mg/L LC50 209: 96 h Cyprinus carpio mg/L LC50 static		202: 24 h Daphnia magna mg/L LC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Dispose of in accordance with federal, state and local regulations. Solder powder can be melted to reclaim the solder metal. Containers and extracted flux are hazardous waste.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Zinc chloride 7646-85-7	Toxic Corrosive

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

- UN/ID No** UN2331
- Proper Shipping Name** Zinc chloride, anhydrous
- Hazard Class** 8
- Packing Group** III

IATA

- UN/ID No** UN2331
- Proper Shipping Name** Zinc chloride, anhydrous
- Hazard Class** 8
- Packing Group** III

IMDG

- UN/ID No** UN2331
- Proper Shipping Name** Zinc chloride, anhydrous
- Hazard Class** 8
- Packing Group** III
- Marine Pollutant** This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Not determined

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc chloride 7646-85-7	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Ammonium chloride 12125-02-9	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Zinc chloride - 7646-85-7	7646-85-7	45	1.0
Ammonium chloride - 12125-02-9	12125-02-9	5	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc chloride 7646-85-7 (45)	1000 lb	X		X
Ammonium chloride 12125-02-9 (5)	5000 lb			X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Tin 7440-31-5	X	X	X
Zinc chloride 7646-85-7	X	X	X
Ammonium chloride 12125-02-9	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	3	1	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	3	1	0	Not determined

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet