



Safety Data Sheet

Issue Date: 07-May-2006

Revision Date: 25-May-2015

Version 1

1. IDENTIFICATION

Product Identifier

Product Name Acro-Tin Tinning Compound, Dry Form with SN40/PB60

Part Number: ACROTIN406014

UN/ID No UN2331

Recommended use of the chemical and restrictions on use

Recommended Use Acid type solder powder mixture of 35- 45% solder with 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 paste

Physical State Paste

Odor Mild

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause cancer
May damage fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
 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
 Immediately call a poison center or doctor/physician
 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: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Do not induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Zinc chloride	7646-85-7	45-55
Tin	7440-31-5	20-25
Lead	7439-92-1	20-25
Ammonium chloride	12125-02-9	5-15

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures**General Advice**

Provide this SDS to medical personnel for treatment.

Eye Contact

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.

Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.
Inhalation	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.
Ingestion	IF SWALLOWED: call a poison control center or physician immediately. Rinse mouth. Do not induce vomiting.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage. Harmful in contact with skin. May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed.
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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

Not determined.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO₂). Lead oxide fumes.

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.

Environmental Precautions See Section 12 for additional Ecological Information.

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. Dispose of contents/container to an approved waste disposal plant.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling

Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Care should be taken to remove solder paste from under fingernails.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Store at or near 70°F (21DEGC).

Incompatible Materials

Strong acids. Strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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
Lead 7439-92-1	TWA: 0.05 mg/m ³ Pb	TWA: 50 µg/m ³ Pb	IDLH: 100 mg/m ³ Pb TWA: 0.050 mg/m ³ Pb
Tin 7440-31-5	TWA: 2 mg/m ³ Sn except Tin hydride	TWA: 2 mg/m ³ Sn except oxides (vacated) TWA: 2 mg/m ³ Sn except oxides	IDLH: 100 mg/m ³ Sn TWA: 2 mg/m ³ except Tin oxides Sn
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. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Safety glasses especially during soldering.

Skin and Body Protection

Plastic or rubber gloves where necessary to avoid skin contact.

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

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Paste	Odor	Mild
Appearance	Gray metallic paste	Odor Threshold	Not determined
Color	Gray		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	Not determined		
Melting Point/Freezing Point	Not determined		
Boiling Point/Boiling Range	Not determined		
Flash Point	> 232 °C / 449 °F		
Evaporation Rate	<0.1	(butyl acetate = 1)	
Flammability (Solid, Gas)	Not determined		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Specific Gravity	>1	(Water = 1) @ 24°C/75°F	
Water Solubility	<5%		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Auto-ignition Temperature	Not determined		
Decomposition Temperature	Not determined		
Kinematic Viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		
Additional Information	Volatile by volume 9%		
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. Harmful in contact with skin.
Inhalation	Do not inhale.
Ingestion	Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc chloride 7646-85-7	= 1100 mg/kg (Rat)	-	-
Tin 7440-31-5	= 700 mg/kg (Rat)	-	-
Ammonium chloride 12125-02-9	= 1650 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 The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested.

Chemical Name	ACGIH	IARC	NTP	OSHA
Lead 7439-92-1	A3	Group 2A	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

NTP (National Toxicology Program)

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity May damage fertility or the unborn child.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Lead 7439-92-1		0.44: 96 h Cyprinus carpio mg/L LC50 semi-static 1.17: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.32: 96 h Oncorhynchus mykiss mg/L LC50 static		600: 48 h water flea µg/L EC50
Ammonium chloride 12125-02-9		209: 96 h Cyprinus carpio mg/L LC50 static 725: 24 h Lepomis macrochirus mg/L LC50		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**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Lead 7439-92-1		Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K069, K086, K100, K176	5.0 mg/L regulatory level	

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Zinc chloride 7646-85-7	Toxic
Lead 7439-92-1	Toxic

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

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Zinc chloride	Present	X		Present		Present	X	Present	X	X
Tin	Present	X		Present			X	Present	X	X
Lead	Present	X		Present		Present	X	Present	X	X
Ammonium chloride	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

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
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Ammonium chloride 12125-02-9	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Zinc chloride - 7646-85-7	7646-85-7	40-45	1.0
Lead - 7439-92-1	7439-92-1	20-25	0.1
Ammonium chloride - 12125-02-9	12125-02-9	1-5	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc chloride	1000 lb	X		X
Lead		X	X	
Ammonium chloride	5000 lb			X

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Lead - 7439-92-1	Carcinogen Developmental Female Reproductive Male Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Zinc chloride 7646-85-7	X	X	X
Lead 7439-92-1	X	X	X
Tin 7440-31-5	X	X	X
Ammonium chloride 12125-02-9	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards**

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Not determined

HMIS**Health Hazards****Flammability****Physical Hazards****Personal Protection**

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X

Issue Date:

07-May-2006

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25-May-2015

Revision Note:

New format

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