Material Safety Data Sheet

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MSDS ACRO-TIN
#420 Tinning Compound

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SECTION 1 - PRODUCT IDENTIFICATION AND USE

Acro-Tin #420 Dry Form Tinning Compound

Product Name And Number As Used On Label

PRODUCT USE: An acid type solderpaste mixture of 85-90% solder powder with flux for soldering and tinning.

NFPA Rating:	**Health:**	2	**Flammability**	1	**Reactivity:**	0	**Special:**	
HMIS Rating:	**Health:**	2	**Flammability**	1	**Reactivity:**	0	**Personal Protection:**	X

DOT: Not Regulated.

WHMIS: Class D, Division 2, Subdivision B

TDG: Packaging Group III, Class 9.2

NA = Not Applicable *NE = Not Established* *UN = Unknown*

SECTION 2 - INGREDIENTS AND HAZARDS

HAZARDOUS INGREDIENTS 1% or greater CARCINOGENS 0.1% or greater	C.A.S. Number	WT. %	OSHA PEL mg/m^3	ACGIH TLV TWA mg/m^3
Lead	7439-92-1	25	0.05	0.15
Tin	7440-31-5	25	2.0	2.0
Silver	7440-22-4		0.01	0.1
Bismuth	7440-69-9		NE	NE
Antimony	7440-36-0		0.5	0.5
Zinc Chloride	7646-85-7	45	NE	NE
Ammonium Chloride	12125-02-9	5	NE	NE
NON-HAZARDOUS INGREDIENTS				
Water, binders	NA		NA	NA

SECTION 3 - PHYSICAL DATA

Boiling Point (760 mm Hg): NA°F NA°C
Vapor Pressure (mm Hg at 20 °C): NA
Vapor Density (air=1): NA
Solubility in Water (% by weight): <5
pH: NA

Specific Gravity (water = 1 at 25 °C): >1
Melting Point: NA°F . NA°C
Evaporation Rate (butyl acetate=1): <0.1
% Volatile(by volume): 9
Volatile Organic Compound (VOC): 70 g/liter
Odor Threshold: NE

Appearance and Odor: Gray metallic paste with mild odor.

SECTION 4- FIRE AND EXPLOSION HAZARD DATA

Flash Point (T.O.C.): >450 °F >232 °C Auto-Ignition Temperature: NE °F NE °C
Flammability Limits % by volume in air LEL:NE UEL: NE
Extinguishing Media: ( ) WATER (X) CARBON DIOXIDE ( ) ALCOHOL FOAM (X) DRY CHEMICAL
Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lead oxide fumes.

Explosion Sensitivity: Impact - None Identified Static discharge - ( ) Yes (X) No

Special Firefighting Procedures: Use NIOSH approved self-contained breathing apparatus in case of toxic lead fumes.

Unusual Fire and Explosion Hazards: None.

SECTION 5 - REACTIVITY HAZARD DATA

STABILITY (X) Stable ( ) Unstable Conditions to Avoid: None

Incompatability(materials to avoid): 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 deg. F(537 deg. C).

HAZARDOUS POLYMERIZATION:
( ) May Occur Conditions To Avoid: NE
(X) Will Not Occur

SECTION 6 - HEALTH HAZARD DATA

EXPOSURE LIMITS: Ingested LD(50): NE g/Kg Inhaled LC(50): NE g/Kg

Primary exposure during soldering is to zinc chloride carried up in water vapor. At temperatures above 1000 deg.F (537 deg.C) lead chloride may be in the fumes.

PRIMARY ROUTES OF ENTRY: ( ) Skin (X) Eyes (X) Inhalation (X) Ingestion

TARGET ORGANS: Flux fumes: eyes, mucous membranes and pulmonary system. Ingestion of lead metal can affect kidneys, gastrointestinal, reproductive and neurological systems.

EFFECTS OF ACUTE (severe short-term) EXPOSURE:

INHALATION: Flux fumes during soldering may cause irritation and damage of mucous membranes and pulmonary system.

SKIN CONTACT: Possible local irritation.

SKIN ABSORPTION: None

EYE CONTACT: Irritation from contact with smoke from soldering.

INGESTION: Most of the solderpaste will pass through the body unabsorbed. Lead that is absorbed is caught by the liver and, in part, excreted in the bile.

EFFECTS OF CHRONIC (prolonged) EXPOSURE: Repeated contact with skin can cause a rash. Breathing fumes during soldering may cause pulmonary irritation, headache and irritation of mucous membranes. Repeated ingestion of lead can result in systemic poisoning.

Medical Conditions Generally Aggravated by Exposure: Pre-existing conditions of the lungs, diseases of the blood and blood-forming organs, kidneys, nerves and possibly reproductive system.

CARCINOGEN ( ) NTP ( ) OSHA ( ) IARC (X) Not Listed

EMERGENCY FIRST AID Seek medical assistance for further treatment, observation and support if needed

EYE CONTACT: Flush eyes with plenty of water.

SKIN CONTACT: Wash thoroughly with soap and water.

INHALATION: Remove victim to fresh air.

INGESTION: Stomach must be cleared, preferably by pumping. Get prompt medical attention.

SECTION 7 - PROCEDURES FOR MATERIAL CONTROL

Steps to be Taken If Material Is Spilled Or Released: Scoop up paste and deposit in appropriate containers. Clean up residual with isopropanol or detergent water.

Waste Disposal Methods: Solderpaste can be melted to reclaim the solder metal. Containers and extracted flux are hazardous waste.

CAUTION : Empty containers may contain product residue. Observe all label precautions.

Precautions to be Taken in Handling and Storage: Store at or near 70 deg. F(21 deg. C) in closed containers. Wash hands after handling solderpaste and before eating or smoking. Care should be taken to remove solderpaste from under fingernails.

SECTION 8 - PROTECTIVE MEASURES

Respiratory Protection: Not usually required. When ventilation is not adequate to remove smoke from the breathing zone, a cartridge type respirator should be worn.

Protective Gloves: Plastic or rubber gloves where necessary to avoid skin contact.

Eye Protection: Safety glasses especially during soldering.

VENTILATION TO BE USED: Provide adequate exhaust ventilation (general and / or local) to meet TLV requirements

Other Protective Clothing and Equipment: Do not wear contaminated clothing or shoes home.

Hygienic Work Practices: Wash hands thoroughly after handling solderpaste.

SECTION 9 - ADDITIONAL INFORMATION

Lead and its compounds have tentatively been found to be a class B-2 Carcinogen by the USEPA Carcinogen Assessment Group. IARC lists lead and its compounds as teratogens.
California Proposition 65 requires a posted warning that lead can cause birth defects or other reproductive harm.