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MATERIAL SAFETY DATA SHEET

Acro Soder #410 w/pure tin

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SECTION 1 – PRODUCT IDENTIFICATION AND USE

PRODUCT	Acro-Tin #410 Solder Paste with Pure Tin			
PRODUCT USE:	An acid type solder paste 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:	Zinc Chloride Solution UN1840			
WHMIS:	Class D, Division 2, Subdivision B			
TDG:	Packaging Group III, Class 8			

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/m3	ACGIH TLV TWA Mg/m3
Tin	7440-31-5	80	2.0	2.0
Zinc Chloride	7646-85-7	6	NE	NE
Ammonium Chloride	12125-02-9	1	NE	NE
NON-HAZARDOUS INGREDIENTS				
Water, Binders	NA	8	NA	NA

SECTION 3 – PHYSICAL DATA

Boiling Point (760mm Hg):	NA°F/NA°C	Specific Gravity (water @ 24°C):	>1
Vapor Pressure (mm Hg at 20°C):	NA	Melting Point	NA°F NA°C
Vapor Density (air = 1):	NA	Evaporation Rate (Butyl acetate = 1):	< 0.1
Solubility in water (% by weight)::	< 5	% Volatility (by volume):	9
pH:	NA	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 (TOC):	>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	Carbon monoxide, Carbon dioxide, Lead oxide fumes		
Combustion Products:			
Explosion Sensitivity:	Impact – None Identified	Static discharge	() Yes (X) No
Special Fire Fighting 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
Incompatibility (materials to avoid):	Strong acid, 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		
HAZARDOUS POLYMERIZATION:	() May Occur	(X) Will Not Occur	
Conditions to Avoid:	NE		

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.

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

TARGET ORGANS: Flux fumes: eyes, mucous membranes and pulmonary system.

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 solder paste will pass through the body unabsorbed.

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.

MEDICAL CONDITIONS generally aggravated by exposure: Pre-existing conditions or 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:	Solder paste 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 °F (21°C) in closed containers. Wash hands after handling solder paste and before eating or smoking. Care should be taken to remove solder paste from under fingernails.

SECTION 8 – PROTECTIVE MEASURES

Respiratory Protection:	Usually not required. When ventilation is not sufficient 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 solder paste

SECTION 9 – ADDITIONAL INFORMATION

Exposure to dust or fumes may cause irritation to eyes, skin and respiratory tracts.
Ingestion may irritate stomach and intestines.
Wash hands before eating, drinking and smoking.
Use with adequate ventilation.
Keep out of reach of children.

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