

# Material Safety Data Sheet

## Section 1 Product and Company Identification

Product Name:

**Sweatin' Flux Paste**

Revision #: 1.1

Date Prepared: July 20, 1999

Date Revised: February 9, 2002

Manufacturer:

**LA-CO INDUSTRIES, Inc.** *Markal Co.*

1201 Pratt Blvd.

Elk Grove Village, IL, USA 60007-5746

Information Telephone: 847-956-7600

Emergency Telephone: Call CHEMTREC

USA 800-424-9300

International (Call Collect) 1-703-527-3887

**Chemical Formula:** Mixture

**CAS No.:** Not Applicable. **Derivation:** Not Applicable.

**Synonyms:** Not Applicable.

**General Use:** Soldering Flux for use with Copper,  
Galvanized Iron, Sheet Lead, Zinc, Nickel, Tin,  
Silver, Mild Steel, Terne Plate, Malleable Iron.

Supplier/Importer:

## Section 2 Composition/Information on Ingredients

### Ingredient

Zinc Chloride<sup>3,4,5,6</sup>

**CAS No.**

7646-85-7

**%**

21

ACGIH (fume): TWA = 1 mg/m<sup>3</sup>; STEL = 2 mg/m<sup>3</sup>

OSHA (fume): TWA = 1 mg/m<sup>3</sup>

LD50 (oral - rat): 350 mg/kg

EPA: CERCLA RQ = 1000 lbs.

Clean Water Act Section 311 Hazardous Substance.

Ammonium Chloride<sup>3,4,5,6</sup>

12125-02-9

3

For Fume - ACGIH: TWA = 10mg\m<sup>3</sup> STEL = 20mg\m<sup>3</sup>

EPA: CERCLA RQ = 5000 lbs.

## Section 3 Hazards Identification

**EMERGENCY OVERVIEW:** WARNING: CONTAINS ZINC CHLORIDE. Harmful or fatal if swallowed. Causes severe burns to skin, eyes and respiratory system. In case of eye contact, flush with plenty of water and call a physician. If swallowed give one or two glasses of water or milk and call a physician. Continuous use in confined unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of the respiratory tract. KEEP OUT OF REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.

### POTENTIAL HEALTH EFFECTS:

**Primary Exposure Routes:** Eyes, Skin, Ingestion, Inhalation

#### Acute Effects

**Eyes:** Can cause conjunctivitis (irritation of the membranes of the eye and eye lids) and corneal burns.

**Skin:** Can cause dermatitis (red, cracked, irritated skin) and ulceration.

**Ingestion:** Can cause stomach pains, nausea, vomiting, bloody diarrhea, edema (accumulation of fluids in the respiratory system) albuminuria (loss of protein material through the urine), blood in the urine and shock.

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**Inhalation:** Can cause irritation of the nose and throat, headache, hoarseness, coughing, chest pains, cyanosis, fever, nausea, vomiting, shortness of breath and pneumonia.

**Chronic Effects**

**Eyes:** None Known.

**Skin:** None Known.

**Ingestion:** Stomach pains, vomiting, diarrhea, edema.

**Inhalation:** Lung irritation, chest pains.

**Carcinogenicity:** Not Applicable.

**Target Organ Effects:** Not Applicable.

**Medical Conditions Aggravated by long-term Exposure:** Inhalation exposure will aggravate pre-existing respiratory ailments. Skin contact may aggravate pre-existing dermatitis.

**Other Information:** Animal studies of zinc chloride indicate that there are potentially adverse effects on the reproductive system and developing fetuses.

### **Section 4**

### **First Aid**

**Eye Contact:** Immediately flush eyes with water for at least 15 minutes while holding eye lids open. Have victim roll eyes for more thorough flushing. Get immediate medical attention.

**Skin Contact:** Remove contaminated clothing. Flush skin with water or wash with soap and water. Consult physician if irritation develops.

**Ingestion:** Call physician or poison control center for Zinc Chloride. Do not induce vomiting.

**Inhalation:** Remove victim to fresh air. Give artificial respiration if needed. Get medical attention.

**Other Information:** All first aid measures pertain to Zinc Chloride exposure.

### **Section 5**

### **Fire Fighting Measures**

**Flash Point (method):** Not Applicable.

**Autoignition Temperature:** Not Applicable.

**LEL:** Not Applicable. **UEL:** Not Applicable.

**Flammability Classification:** Not Applicable.

**Extinguishing Media:** Water fog, alcohol foam, dry chemical.

**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide, ammonium chloride, hydrogen chloride, chloride compounds, and zinc oxide.

**Unusual Fire or Explosion Hazards:** Not Applicable.

**Fire-Fighting Instructions/Equipment:** Keep personnel removed and upwind of any fire. Wear full fire-fighting turn-out gear (full Bunker gear), eye and respiratory protection (SCBA).

### **Section 6**

### **Accidental Release Measures**

Use recommended personal protective equipment (see Section 8).

**Small Spill:** Scrape or wipe up. Flush remainder with water.

**Large Spill:** Contain spill. Scrape up for reuse or soak up with absorbent material. Flush remainder with water.

### **Section 7**

### **Handling and Storage**

**Handling Precautions:** Use recommended personal protective equipment (see Section 8). Wash thoroughly after handling.

**Storage Requirements:** Store in a cool, dry area.

### **Section 8**

### **Exposure Controls/Personal Protection**

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**Eye/Face Protection:** Chemical safety goggles and, when heated, full face shield in case of spattering.

**Skin Protection:** Rubber gloves recommended to protect from burns when soldering..

**Respiratory Protection:** Acid gas respirator in confined areas.

**Other Protective Equipment:** Eye wash and safety shower.

**Engineering Controls:** Normal room ventilation. Local exhaust in confined areas.

**Administrative Controls:** Users of this product must be properly trained and qualified in its use.

**Other Information:** None.

### **Section 9 Physical and Chemical Properties**

**Appearance/Physical State:** Dark paste.

**Odor:** Petrolatum

**Odor Threshold (ppm):** Not Determined.

**Specific Gravity (H<sub>2</sub>O = 1):** 0.85 to 0.90

**Solubility in Water:** Insoluble.

**Coefficient of Water/Oil Solubility:** <<1

**pH:** 3

**Melting Point:** 100°F to 140°F (38°C to 60°C)

**Boiling Point:** Not Determined.

**Vapor Pressure (mm Hg at 20°C):** Not Applicable.

**Vapor Density (Air = 1):** Not Applicable.

**Evaporation Rate (n-BuAc=1):** <<1

**V.O.C.:** 0%(w/w), 0%(v/v), 0 lbs./gal.(U.S.), 0 kg/l

### **Section 10 Stability and Reactivity**

**Chemical Stability:** Stable.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None Known.

**Chemicals to Avoid:** Oxidizers, cyanides, sulfides.

**Hazardous Decomposition Products (non-thermal):** Not Determined.

### **Section 11 Toxicological Information**

**Sensitization to Product:** Not Applicable.

**Irritancy of Product:** Irritating to eyes, skin, respiratory and digestive tracts.

**Reproductive Toxicity:** Animal studies of zinc chloride indicate that there are potentially adverse effects on the reproductive system and developing fetuses.

**Teratogenicity:** Animal studies of zinc chloride indicate that there are potentially adverse effects on the reproductive system and developing fetuses.

**Mutagenicity:** Not Applicable.

Toxicological information regarding individual ingredients, if applicable, may be found in Section 2.

### **Section 12 Ecological Information**

High concentrations of zinc have been shown to be detrimental to aquatic life.

### **Section 13 Disposal Considerations**

Dispose of in accordance with applicable federal, state, and local regulations.

**Section 14****Transport Information****D.O.T. (U.S.):**

If < 30 kg (66.14 lbs.) per package:

Proper Shipping Name: Consumer Commodity

Hazard Class or Division: ORM-D

Hazard Label: (Not Applicable)

I.D. Number: (Not Applicable)

If ≥ 30 kg (66.14 lbs.) per package:

Proper Shipping Name: Zinc Chloride Solution

Hazard Class or Division: 8

Hazard Label: Corrosive

I.D. Number: UN1840

**TDG (Canada):** Not Determined.

**IATA:** Not Determined.

**ICAO:** Not Determined.

**IMO:** Not Determined.

**Australian Code for the Transport of Dangerous Goods**

**Dangerous Goods Class and Subsidiary Risk:** Not Determined.

**Section 15****Regulatory Information****Footnotes for Section 2:**

- 1 Subject to the reporting requirements of SARA Title III, Section 313.
- 2 Appears on the California Safe Drinking Water and Toxic Enforcement Act Substances List.
- 3 Appears on the Massachusetts Substances List.
- 4 Appears on the New Jersey Right-To-Know Hazardous Substances List.
- 5 Appears on the Pennsylvania Hazardous Substances List.
- 6 Appears on the Canadian WHMIS Ingredient Disclosure List.

U.S.A.

**OSHA Hazard Status:** This product is considered to be hazardous as defined by the U.S. OSHA HCS (29 CFR 1910.1200).

**EPA SARA sec. 311/312 Hazard Categories:** Immediate (Acute) Health Hazard.

**Toxic Substances Control Act (TSCA):** All ingredients contained in this product are listed on the U.S. EPA TSCA Chemical Substance Inventory.

**HMIS Rating:** Health 3, Flammability 1, Reactivity 0

**NFPA Rating:** Health 3, Flammability 1, Reactivity 0

CANADA

**WHMIS Status:** This product is considered to be hazardous as defined by Canadian WHMIS Controlled Products Regulations.

**WHMIS Rating:** D-1B.

**WHMIS Risk Phrases:** WARNING: CONTAINS ZINC CHLORIDE. Harmful or fatal if swallowed. Causes severe burns to skin, eyes and respiratory system. KEEP OUT OF REACH OF CHILDREN.

**WHMIS Precautionary Statements:** Continuous use in confined unventilated areas may result in sufficient inhalation of solder and flux fumes to cause lung damage and irritation of the respiratory tract. KEEP OUT OF REACH OF CHILDREN. FOR INDUSTRIAL USE ONLY.

**Domestic Substances List (DSL):** All ingredients contained in this product are listed on the Canadian EPA (CEPA) Domestic Substances List (DSL).

E.U.

**European Inventory of Existing Chemical Substances (EINECS):** All ingredients contained in this product are listed on the European Inventory of Existing Chemical Substances (EINECS).

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**Categories of Danger (Labeling Information):** Harmful (Xn), Irritant (Xi).

**Risk (R) Phrases:** Harmful if swallowed (R22), Irritating to eyes, respiratory system and skin (R36/37/38)

**Safety (S) Phrases:** Keep out of reach of children (S2), Keep away from food, drink and animal feedingstuffs (S13), Do not breath fumes (S23), Avoid contact with skin and eyes (S24/25), In case of contact with eyes, rinse immediately with plenty of water and seek medical advise (S26), Wear suitable gloves and eye/face protection (S37/39), If swallowed, seek medical advice and show this container, label or Safety Data Sheet (S46), Use only in well-ventilated areas (S51)

### AUSTRALIA

**Worksafe Australia Status:** This product is classified as hazardous according to criteria of Worksafe Australia.

**HAZCHEM Code (Australia):** Not Determined.

**Poisons Schedule Number (Australia):** Not Determined.

Further regulatory information regarding individual ingredients, if applicable, may be found in Section 2.

This product has been classified in accordance with the hazard criteria of the U.S. OSHA Hazard Communication Standard, the Canadian WHMIS Controlled Products Regulations, and the Australian NMRCWHS. This MSDS contains the information required by the above regulations and conforms to ANSI Z400.1-1993.

## **Section 16**

## **Other Information**

**MSDS Prepared By:** Director of Chemical Safety

**The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.**