



**MATERIAL  
SAFETY  
INFORMATION  
SERVICE**

Hercules Chemical Company Inc.  
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NFPA	HMIS	PPE	Transport Symbol						
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HEALTH	2								
FLAMMABILITY	1								
REACTIVITY	1								

Preparation Date May 4, 2011

Revision Date May 4, 2011

Revision Number 0

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identity:** HERCULES CLIMATE SMOOTH SOLDERING PASTE

**Intended Use:** Soldering Flux

**Manufacturer:** Hercules Chemical Company, Inc.  
111 South Street  
Passaic, New Jersey 07055-7398

**Information Telephone:** (800) 221-9330

**Internet:** <http://www.herchem.com>

**Emergency Phone:** CHEMTREC: (800) 424-9300

**MSDS Date of Preparation** 05/04/2011

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

This product is amber to brown color paste. It contains Zinc Chloride and is classified as hazardous in accordance with OSHA 1910:1200. Ingestion of large quantities of this product could cause severe damage to internal organs. Skin and eye contact should be avoided.

#### Potential Health Effects..

Individuals with pre-existing diseases of lungs may have increased susceptibility to the toxicity of excessive exposure to zinc chloride.

**Inhalation:** Not applicable

**Ingestion:** Severe damage to internal organs (esophagus and pylorus) if swallowed in large quantities.

**Eye:** Will cause eye irritation with discomfort, tearing or blurring of vision.

**Skin:** Prolonged contact causes burns, skin irritation with discomfort with rash.

HMIS Hazard Rating: 2 1 1 C

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	Wt/Wt %
Zinc Chloride	7646-85-7	20-30
Petroleum Based lubricating Oil	64742-58-1, 64742-57-0, 64741-62-7	20-30
Petrolatum	8009-03-8	30-50
Sorbitan Sesquioleate	8007-43-0	0.1-3.0

**4. EMERGENCY AND FIRST AID PROCEDURES.**

**Eye:** Flush eyes with water for 15 minutes, lifting eye lids occasionally. Get medical attention if condition worsens or if irritation persists.

**Skin:** Wipe away excess material with a towel. Wash affected area with soap and water. Remove contaminated clothing.

**Ingestion:** Treat symptomatically. Do not induce vomiting. If conscious, dilute by giving large quantities of water or milk. Call a physician immediately.

**Inhalation:** Not Applicable

**Note:** Never give anything by mouth to an unconscious person.

**5. FIRE FIGHTING MEASURES**

**Flashpoint:** 580°F

**Boiling Point:** N/A

**Flammable Limits:** N/A

**Melting Point:** 120°F-140°F

**Extinguishing Media:** Carbon dioxide (CO2), water fog or dry chemical

**Unusual Fire or Explosion Hazards:** When heated above its flash point, this material will release flammable vapors which can burn or be explosive in confined areas. Keep away from extreme heat and open flame.

**Special Fire-Fighting Instructions:** Do not use a direct stream of water. Product will float and can be reignited on surface of water. Do not enter confined space without proper protective equipment.

**Hazardous Combustion Products:** Will not occur except at high temperatures.

**6. ACCIDENTAL RELEASE MEASURES****Spills/Leak Control:**

Contain and absorb with non-flammable absorbent material such as vermiculite. Pick up with a shovel and place in a suitable container. Wash contaminated area thoroughly with soap and water. Prevent material from entering surface water, or sewer drains.

**7. HANDLING AND STORAGE**

**Handling:** Keep containers tightly closed. If handling large quantities, wear rubber gloves and safety glasses.

**Storage:** Store in original containers in a dry and cool place. Keep containers closed when not in use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	CAS Number	OSHA PEL	ACGIH TLV	Other Limits	Upper bound limit if SARA Reportable
Zinc Chloride	7646-85-7	1.0 mg/M3	1.0 mg/M3	N/A	5%
Petroleum Based Lubricating Oil	Mixture	5 mg/m3 (for oil msit)	5 mg/m3 (for oil msit)	N/A	N/A

**Respiratory Protection:** In confined spaces or other circumstances where adequate ventilation cannot be assured, use either a NIOSH-Approved self contained breathing respirator or a positive pressure airline mask.

**Engineering Controls:** Use an exhaust fan

**Skin Protection:** Wear rubber gloves

**Eye Protection:** Wear safety glasses if there is potential for eye contact.

**General Hygiene:** Wash thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance And Odor:</b> Amber to brown paste with no odor	<b>Boiling Point:</b> N/A
<b>Physical State:</b> Paste	<b>Vapor Pressure:</b> N/A
<b>Vapor Density:</b> >N/A	<b>Evaporation Rate:</b> (Butyl Acetate=1) <1
<b>Solubility In Water:</b> very-slightly soluble	<b>Volatile Components:</b> 14 g/L
<b>Specific Gravity:</b> 0.95	
<b>Melting Point:</b> 120-140°F	

## 10. STABILITY AND REACTIVITY

**Stability:** Stable.

**Conditions to avoid:** Avoid contact with concentrated alkalies.

**Incompatibility:** Zinc Chloride is incompatible with cyanide. (May release toxic HCN gas) and sulfide salts (may release toxic H2S gas)

**Hazardous Decomposition Products:** None. **Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### HEALTH HAZARDS:

Individuals with pre-existing diseases of lung may have increased susceptibility to the toxicity of excessive exposure to Zinc Chloride.

**Sensitization:** None.

**Chronic:** yes

**Carcinogenicity:** Not listed as a carcinogen by NTP, IARC or OSHA.

**Mutagenicity:** Not mutagenic.

**Medical Conditions Aggravated by Exposure:** None

**Reproductive Toxicity:** None

**Acute Toxicity Values:** Zinc Chloride: Oral LD50 350 mg/kg (rat),

## 12. ECOLOGICAL INFORMATION

**Environmental Toxicity:** None expected

**Environmental Transport:** Unknown.

**Environmental Degradation:** N/A

**Environmental Absorption/Mobility:** Unknown

**13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with Federal, State, and Local regulations.

**14. TRANSPORT INFORMATION**

Not Regulated for Transportation by DOT or IMDG or IATA.

**15. REGULATORY INFORMATION****EPA Regulation:****TITLE 311/312 Hazard Classification**

ACUTE: No

CHRONIC: No

FIRE: No, REACTIVITY: No, PRESSURE: No

Extremely Hazardous substance. No

**SARA Title 313**

This product contains a chemical which is subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. Zinc Chloride cas # 7646-85-7

**California Proposition 65:** This product does not contain any chemicals known to State of California to cause cancer, birth defect, or any other reproductive defects.

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania
Zinc Chloride Cas# 7646-85-7	x	x	x

TSCA Inventory: All the components in this product are listed on the TSCA inventory.

Canada DSL: Listed.

**WHMIS Hazard Class.** D2B This MSDS has been prepared according to the hazard criteria of the controlled Products regulation (CPR). And the MSDS contains all of the information required by the CPR

**16. OTHER INFORMATION****DISCLAIMER:**

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Hercules cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.