THE RUBY CHEMICAL COMPANY  
1741 Cleveland Avenue  
Columbus, Ohio 43211  
Emergency Phone:  
614-294-7001  
Date: 1/9/87

MATERIAL SAFETY DATA

PRODUCT IDENTIFICATION  
TRADEMARK: RUBYFLUID SOLDERING FLUX

WARNING  
MAY CAUSE EYE AND SKIN IRRITATION  
KEEP OUT OF REACH OF CHILDREN  
FOR INDUSTRIAL USE ONLY

HAZARDOUS INGREDIENTS  
COMPONENT: ZINC CHLORIDE; CAS NO.: 76471-85-7  
TWA/CEILING: > 25  
REFERENCE: 1 PPM OSHA

HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE

Eye irritation with discomfort, tearing, or blurring of vision; skin irritation with discomfort or rash; or irritation of upper respiratory passages. Higher exposures may lead to these effects: skin burns or ulceration; eye irritation with discomfort, tearing, or blurring of vision, temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath; possibly modest initial symptoms, followed in hours by severe shortness of breath, requiring prompt medical attention; or fatality from gross overexposure by fume inhalation or by significant ingestion. There are inconclusive or unverified reports of human sensitization. Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

FIRST AID

In case of eye contact, immediately irrigate with plenty of water for 15 minutes. In case of skin contact, wash affected areas of skin with soap and water. If inhaled, remove to fresh air immediately. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. If swallowed do not induce vomiting. Give large quantities of water or milk. Call a physician. Never give anything by mouth to an unconscious person.

EXPOSURE CONTROL METHODS

Engineering controls are not usually necessary, if good hygiene practices are strictly followed. Respiratory protection is generally not required during normal operations. Wear the following as necessary to prevent skin contact: work pants, long sleeve work shirt and impervious gloves. For operations where eye or face contact can occur, wear chemical splash proof goggles. Provide eyewash fountain and safety shower in close proximity to points of potential exposure.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT: Will Not Burn  
FLAMMABLE LIMITS: Not Applicable  
AUTOIGNITION TEMP: Not Applicable  
DECOMPOSITION TEMP: Not Applicable  
FIRE FIGHTING: As appropriate for combustibles in area. May release zinc oxide fumes, zinc chloride fumes, hydrogen gas in a fire. See Exposure Control Methods for special protective clothing.
### Reactivity Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will Not Occur</td>
</tr>
<tr>
<td>Incompatibility</td>
<td>Incompatible With Cyanides (may release toxic HCN gas) And Sulfide Salts (may release toxic H₂S)</td>
</tr>
<tr>
<td>Decomposition</td>
<td>Will Not Occur Except At High Temp</td>
</tr>
</tbody>
</table>

### Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance &amp; Odor</td>
<td>Red liquid, essentially odorless</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>225 Degrees F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Unknown</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.26 (air = 1)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Complete In Water</td>
</tr>
<tr>
<td>Solubility</td>
<td></td>
</tr>
</tbody>
</table>

### Spill or Leak Procedures

**Steps to be Taken in Case Material is Released or Spilled**

- Comply with Federal, State, and local regulations on reporting releases.
- Flush spill area with plenty of water to an approved chemical sewer.

### Waste Disposal

In accordance with applicable government regulations. If approved, may be transferred to a licensed contractor, or flushed to sewer to waste treatment system.

### Special Precautions

- Do not get in eyes, on skin, on clothing
- Avoid breathing fumes or mist
- Wash thoroughly after handling

This information is given without any warranty or representation. We do not assume any legal responsibility. It is offered solely for your consideration.

DLM