ITW CHEMTRONICS

SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Company Address: 8125 Cobb Center Drive
Kennesaw, GA 30152

Product Information: 800-TECH-401 Emergency: (Chemtrec) 800-424-9300
Customer Service: 800-645-5244 Revision Date: February 17, 2010

Product Identification

ITW CHEMTRONICS

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CIRCUITWORKS® LEAD-FREE POCKET SOLDER

Product Code: S200

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Wt. % Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>7440-31-5</td>
<td>95.0-97.0</td>
</tr>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
<td>2.5-3.5</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>0.1-0.9</td>
</tr>
<tr>
<td>Rosin</td>
<td>8050-09-7</td>
<td>2.0-4.0</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARD IDENTIFICATION

Emergency Overview: Silver, metallic solid.

Potential Health Effects:

Eyes: Molten solder can cause severe burns. Soldering fumes may be irritating to the eyes.

Skin: Molten solder can cause severe burns. Prolonged contact may cause skin irritation and/or sensitization.

Ingestion: Dust ingestion may be harmful and result in irritation to mouth, throat and stomach.

Inhalation: Vapors from soldering processes may cause irritation of the nose and throat. Respiratory sensitization may result from inhalation of rosin fumes.

Pre-Existing Medical Conditions Aggravated by Exposure: Lung, skin, eye.

SECTION 4: FIRST AID MEASURES

Eyes: Seek immediate medical attention for burns. If eye irritation occurs immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined by medical personnel if irritation develops or persists. For treatment of burns seek immediate medical attention.

Skin: If burned by molten solder, seek immediate medical attention. If skin irritation occurs, wash skin with soap and water. Remove contaminated clothing and wash clothing separately before reuse. Get medical attention if irritation develops or persists.

Ingestion: For ingestion of dust, seek immediate medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: Not applicable

Extinguishing media: The use of carbon dioxide or dry chemical is compatible when fighting fires involving this material.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus (pressure-demand, OSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Large and Small Spills: Wear appropriate personal protective equipment. Let spilled molten solder cool to room temperature, then place in a waste container for proper disposal. Dust generation should be avoided. Do not discard in general trash.

SECTION 7: HANDLING AND STORAGE

Avoid prolonged or repeated contact of fumes with eyes, skin, and clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing fumes given off by the molten product. KEEP OUT OF REACH OF CHILDREN.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>2.0 mg/m³</td>
<td>2.0 mg/m³</td>
<td>NA</td>
</tr>
<tr>
<td>Silver</td>
<td>0.1 mg/m³</td>
<td>0.01 mg/m³</td>
<td>NA</td>
</tr>
<tr>
<td>Copper</td>
<td>1.0 mg/m³</td>
<td>1.0 mg/m³</td>
<td>NA</td>
</tr>
</tbody>
</table>

Work/Hygienic Practices: Ventilation is recommended to control airborne levels of soldering process vapors. Wear safety glasses with side shields or goggles when using this product.

NFPA and HMIS Codes:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Silver, metallic solid

Odor: Slight rosin odor

pH: NA

Vapor Pressure: Negligible

Vapor Density: NA (Air =1)

Percent Volatile: NA

Boiling Point: >1700°F (>927°C)

Solubility in Water: Negligible

Specific Gravity: (Water =1) 7.9

Evaporation Rate: (Butyl acetate=1)

Viscosity: NA

Melting Point: 420°F (216°C)
SECTION 10: STABILITY AND REACTIVITY
Stability: This product is stable.
Conditions to Avoid: None known
Incompatibility: Do not mix with acids, bases or strong oxidizing materials. Molten solder may react violently with water.
Products of Decomposition: At high temperatures molten solder may emit toxic fumes.
Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
Inhalation: Not available
Cancer Information: No ingredients listed as human carcinogens by NTP or IARC
Reproductive effects: none
Teratogenic effects: none
Mutagenic effects: none

SECTION 12: ECOLOGICAL INFORMATION
Environmental Impact Information
Avoid runoff into storm sewers and ditches, which lead to waterways. Water runoff can cause environmental damage.

REPORTING
US regulations require reporting spills of this material that could reach any surface waters. The toll-free number for the US Coast Guard National Response Center is: 1-800-424-8802

SECTION 13: DISPOSAL CONSIDERATIONS
Dispose of in accordance with all federal, state and local regulations. Metals may be reclaimed from waste material.

SECTION 14: TRANSPORTATION INFORMATION
Proper Shipping Name
Air: Solder Not regulated
Ground: Solder Not regulated

SECTION 15: REGULATORY INFORMATION
SECTION 313 SUPPLIER NOTIFICATION
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#WL</th>
<th>% Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
<td>2.5-3.5</td>
</tr>
</tbody>
</table>

This information should be included on all MSDSs copied and distributed for this material.

TOXIC SUBSTANCES CONTROL ACT (TSCA)
All ingredients of this product are listed on the TSCA Inventory.

WHMIS: Class D2B
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16: OTHER INFORMATION
Product should be used only with adequate ventilation. Mechanical ventilation is recommended on all soldering stations. If such ventilation is not available, personnel should wear NIOSH approved organic vapor respirators equipped with particulate dust filters specified for use during welding or soldering.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.