**SILVER SOLDER**

<table>
<thead>
<tr>
<th>Type:</th>
<th>Paste Syringe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>High-strength silver solder free of cadmium, zinc, lead, and other impurities. Leaves bright and shiny, non-tarnishing deposits close to stainless steel in color. Soldered joints are resistant to corrosion and can readily be plated. Commonly used to join both ferrous and non-ferrous metals when higher strength are required than are normally found with conventional solders. Ideal for use on stainless steel, brass, bronze, copper, nickel, nickel alloys, and carbon steels.</td>
</tr>
<tr>
<td>Typical Applications:</td>
<td>Food and dairy equipment, instruments, oxygen lines, sanitary apparatus, and general maintenance repair. Also works great for soldering electrical connections.</td>
</tr>
<tr>
<td>Procedures:</td>
<td>Clean joint area. Pre-place before assembly. Apply solder and heat parts with a soft flame. Apply solder and continue heating until flow-out is complete. Add more solder if necessary when it is still molten. Put parts together and heat until alloy becomes liquid. Allow to cool slowly and wash flux residue off with warm water.</td>
</tr>
</tbody>
</table>
| Specs: | **Tensile Strength** up to 15,000 PSI  
**Hardness** <1 RC (15 HB)  
**Working Temperature** 430 degrees F |
| Warnings: | **DO NOT STORE OR LEAVE IN DIRECT SUNLIGHT OR HIGH-HEAT AREAS.** Fumes and gases can be dangerous to your health. Arc rays can injure eyes and burn skin. Electric shock can kill. See "American National Standard Z49.1 Safety to Welding and Cutting." |

**Manufactured by:**
Vulcan Systems, LLC  
5740 F-41  
Oscoda, MI 48750  
1-800-642-9885 FAX: 1-888-750-8482  
info@vulcan-systems.com
SECTION 1 – IDENTIFICATION

Trade Name: Vulcan 65-PSS  Manufacturer: Vulcan Systems, LLC
Emergency Telephone No.: (989)739-8050  5740 F-41, Oscoda, MI 48750

SECTION 2 – HAZARDOUS INGREDIENTS

This section covers the material from which this product is manufactured. The term “hazardous ingredients” should be interpreted as a term required and defined in OSHA hazard communication standard. This product contains toxic chemicals subject to the reporting requirements of section 313 of title III of SARA and CFR part 372.

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>%</th>
<th>CASE NO.</th>
<th>OSHA Permissible Time Exposure Limit (PEL)</th>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sn</td>
<td>35-48</td>
<td>7440-31-5</td>
<td>2</td>
<td>R20/22</td>
</tr>
<tr>
<td>Ag</td>
<td>5/-10</td>
<td>7440-22-4</td>
<td>.01</td>
<td>R20/22</td>
</tr>
<tr>
<td>Sb</td>
<td>.01-.03</td>
<td>7440-36-0</td>
<td>.02</td>
<td>R20/22</td>
</tr>
<tr>
<td>ZINC CHLORIDE</td>
<td>15-40%</td>
<td>7440-85-7</td>
<td>1.0 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>AMMONIUM CHLORIDE</td>
<td>3-7%</td>
<td>12125-02-9</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>HYDROGEN CHLORIDE</td>
<td>7-13%</td>
<td>7647-01-0</td>
<td>7 mg/m³  OSHA</td>
<td></td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>1-5%</td>
<td>67-56-1</td>
<td>262 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>BORIC ACID</td>
<td>0.1-1%</td>
<td>10043-35-3</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>WATER</td>
<td>30-60%</td>
<td>7732-15-5</td>
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<td>--</td>
</tr>
</tbody>
</table>

SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS

Gray, paste-like liquid with no characteristic odor.

SECTION 4 – FIRE AND CHEMICAL CHARACTERISTICS

Non-flammable. Welding arc and sparks can ignite combustible and flammable products. Refer to the Canadian standard “Safety in Welding and Cutting and Allied Procedures” for fire prevention and protection information during the use of welding and allied procedure. Extinguishing Media: Co2 or Dry Chemical Extinguisher.

SECTION 5 – HAZARDOUS DECOMPOSITION PRODUCTS

There are no stability considerations of conditions to avoid.
There are no hazardous polymerization conditions to avoid.
No known incompatibility materials to avoid.
Hydrogen chloride, zinc oxide are listed as hazardous combustion or decomposition products.

SECTION 6 – HEALTH HAZARD

Causes severe burns to skin, eyes, and respiratory system. May be fatal if swallowed.
Effects of chronic exposure: contact burns, dermatitis, possible liver and kidney effects.
Effects of acute overexposure:
- Swallowing: Chemical burn to digestive system. Nausea, vomiting and possible shock.
- Skin absorption: Not classified as a skin absorbent.
- Inhalation: Irritant to respiratory system. Headache, cough, or fever. Preexisting lung disorders will be aggravated.
- Skin contact: Dermatitis, possible chemical burn. Preexisting skin disorders will be aggravated.
- Eye contact: Irritation to eyes, may burn eye surfaces, tearing. May result in blindness.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Read and understand manufacturer’s instructions and the precautionary label on the product. See American National Standard z249.1 “Safety in Welding and Cutting” published by the American Welding Society. Maintain all exposure below the limits in section 5. Monitor the air to ensure that the levels are below the above mentioned limits. See AWS f1.1 “Methods for Sampling Airborne Particles Generated by Welding and Allied Procedures” and AWS f1.3 “Evaluating Constituents in the Welding Environment: A Sampling Strategy Guide.”

Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases below TLVs (threshold limit values) in the workers’ breathing zone and the general area. Train the welder to keep his head out of the fumes. Use respirable fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below the TLV.

Wear helmet or use a face shield with filter lens. Wear hand, head, and body protection, which help to prevent injury from radiation, sparks, and electrical shock. Train the welder not to touch live electrical parts and insulate himself from work and ground.

Prevent waste from contaminating the surrounding environment, discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, and local regulations.

SECTION 8 – FIRST AID PROCEDURES

Swallowing: Contains strong acid! Call a physician or poison control center.
Skin: Wash skin thoroughly with soap and water to remove all residue. If rash develops, call a physician. Burns can be caused by prolonged contact.
Eyes: Flush with water for at least 15 minutes to remove all residue. Get medical attention immediately. Blindness may result!

Vulcan Systems, LLC, believes this data to be accurate, but no warranty, expressed or implied, is made.