SAFETY DATA SHEET
SUPERIOR No. 3033-85
DATE REVISED: August 6, 2018

SECTION 1 -- IDENTIFICATION
Product Name/Part number: Superior No. 3033-85
Recommended use: Tin-Silver Solder Paste
Manufacturer: Superior Flux & Mfg. Co.
6615 Parkland Blvd
Cleveland OH, 44139
Emergency Contact: CHEMTREC
Emergency Phone: 1-800-424-9300
For other info: (440) 349-3000

SECTION 2 – HAZARD(S) IDENTIFICATION
Classification of the substance or mixture
GHS Classification in accordance with OSHA HCS (29 CFR 1910)

- Acute toxicity, Oral (Category 4) H302
- Aspiration toxicant (Category 1) H304
- Serious eye damage (Category 1) H318
- Acute aquatic toxicity (Category 1) H400
- Chronic aquatic toxicity (Category 1) H410

GHS Label Elements, including precautionary statements
Pictogram(s):

Signal Word: Danger

Hazard Statement(s)
**H302 Harmful if swallowed
H304 May be fatal if swallowed and enters airways
H318 Causes serious eye damage
**H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

**May be omitted from label due to presence of stricter or more specific hazard statement.

Precautionary statement(s)
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment
P280 Wear protective gloves, eye protection, protective clothing and face protection
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water or shower
P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse
P391 Collect spillage
P403 Store in a well-ventilated place.
P501 Dispose of contents and/or container to an approved waste disposal plant.

Hazards not otherwise classified or not covered by GHS: None
SECTION 3 – COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin</td>
<td>7440-31-5</td>
<td>80-84</td>
</tr>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
<td>2-4</td>
</tr>
<tr>
<td>Polypropylene glycol</td>
<td>25322-69-4</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Isoparaffinic hydrocarbon</td>
<td>64742-46-7</td>
<td>&lt;2</td>
</tr>
<tr>
<td>Pentyl acetate</td>
<td>628-63-7</td>
<td>&lt;2</td>
</tr>
<tr>
<td>Hydroxybenzoic acid</td>
<td>69-72-7</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Carboxylic acid</td>
<td>98-98-6</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

SECTION 4 – FIRST AID MEASURES

Description of first aid measures

General advice: Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention

Eyes: Flush with water for at least 15 minutes to remove irritant. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if irritation persists.

Skin: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

Ingestion: If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

SECTION 5 – FIREFIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.

Advice for firefighters: Use NIOSH/MSHA – approved self-contained breathing apparatus and full protective clothing if involved in fire.

Further information DO NOT USE WATER ON MOLTEN METAL. LARGE FIRES MAY BE FLOODED WITH WATER FROM A DISTANCE.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment and emergency procedures: Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.

See section 8 for personal protection.

Methods and materials for containment and cleaning up Contain spill. If molten, cool to allow metal to solidify. If a solid metal, wear gloves, pick up and return to process. Dispose of alloy following all Federal, State, and local regulations. In the EU refer to the Special Waste Regulations. Metal may have reclaim value.

For disposal, see section 13.
SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Only dry metals should be added to molten bath. If working with molten metals, or exposed to fume or dust, use appropriate personal protective equipment.

!!! WET OR MOIST INGOT(S) WILL PRESENT AN EXPLOSION HAZARD WHEN SUBMERGED IN MOLTEN SOLDER. AVOID FIRE/EXPLOSION RISKS – ALWAYS PREHEAT INGOT BEFORE CHARGING INTO FURNACE. !!

For precautions, see section 2.

Conditions for safe storage, including any incompatibilities Store product in a cool, dry area away from incompatible materials.

For full precaution statements see Section 2

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA Permissible Exposure Limit (PEL): 1 mg/m³
ACGIH Threshold Limit Value (TLV): 1 mg/m³

General Precautions: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

Engineering Controls: Use local exhaust ventilation to maintain air concentrations of dust, vapors and fumes below occupational exposure standards.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use an authority approved or compliant marked air-purifying respirator with a fume/dust chemical cartridge is recommended under circumstances where airborne concentrations are expected to be elevated. Use respirators and components tested an approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protective Gloves: Handle with leather or vinyl gloves

Eye Protection: Chemical safety glasses or goggles, and face shield with molten metal. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (USA) or EN 166 (EU)

Body Protection: Impervious clothing and leather or vinyl gloves. Heat resistant gloves if handling hot metal. Safety boots. Personal protective equipment is recommended when working with molten metal to avoid burns.

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
SECTION 9 - PHYSICAL AND CHEMICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Silver grey paste</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>Upper explosion limit: Not applicable</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>Lower explosion limit: Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density (Water = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: No data available  
Stability: Product is stable under recommended storage conditions  
Possibility of hazardous reactions: No data available  
Conditions to Avoid: Excessive heat, exposure to moisture  
Incompatible Material: Avoid contact with mineral acids.  
Hazardous Decomposition Products Harmful metal oxide fumes may form at elevated temperatures.

In the event of fire: See Section 5

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogenicity

<table>
<thead>
<tr>
<th>Source</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Toxicity Program (NTP):</td>
<td>No</td>
</tr>
<tr>
<td>Occupational Safety &amp; Health Administration (OSHA):</td>
<td>No</td>
</tr>
<tr>
<td>U.N. International Agency for Research on Cancer (IARC):</td>
<td>No</td>
</tr>
</tbody>
</table>

LD50: Not established  
LC50: Not established  
Other: None
SECTION 12 - ECOLOGICAL INFORMATION
Toxicity No data available
Persistence and degradability No data available
Bioaccumulative potential No data available
Mobility in soil No data available
Other adverse effects Avoid release to environment
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS
Waste treatment methods
Product Scrap metal alloy usually has value. Contact a commercialclaimer for recycling. Otherwise, dispose of in accordance with local through federal environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Metal may have reclaim value.
Contaminated packaging Dispose of as unused product.

SECTION 14- TRANSPORTATION
D.O.T. (USA) Not regulated

SECTION 15 - REGULATORY INFORMATION
SARA 302 Components No Chemicals in this material are subject to the reporting requirement of SARA Title III, Section 302.
SARA 313 Components No chemicals in this material are subject to the reporting requirement of SARA Title III, Section 313.
SARA 311/312 Hazards Hazardous to the environment, Acute health hazard
California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 - OTHER INFORMATION
Further information:
Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. The above information does not represent any guarantee of the properties of the product. It is believed to be correct, but does not purport to be all inclusive and should be used only as a guide. Reasonable care has been taken in the preparation of this material, and is based on the present state of our knowledge.

Superior Flux & Mfg. Co. shall not be held liable for any damage resulting from handling or from contact with the above product. There are NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.

Preparation information
Superior Flux & Mfg. Co.
440-349-3000