SAFETY DATA SHEET
SUPERIOR SuperShine

DATE REVISED: January 31, 2018

SECTION 1 -- IDENTIFICATION
Product Name/Part number: Superior SuperShine
Recommended use: Soft Soldering Flux
6615 Parkland Blvd Emergency Phone No. 1-800-424-9300 (CHEMTREC)
Cleveland OH, 44139

SECTION 2 – HAZARD(S) IDENTIFICATION
Classification of the substance or mixture

GHS Classification in accordance with OSHA HCS (29 CFR 1910)
Flammable liquids (Category 2) H225
Acute toxicity, Oral (Category 4) H302
Skin irritation (Category 2) H315
Eye irritation (Category 2) H319
Specific target organ toxicity after – Single exposure, respiratory system
(Category 3) H335
Specific target organ toxicity – Single exposure, central nervous system
(Category 3) H336
Specific target organ toxicity – Single exposure, central nervous system, optic
nerve, respiratory system (Category 1) H370
Specific target organ toxicity – Repeated exposure, kidney, liver, spleen, blood
(Category 1) H372
Acute aquatic toxicity (Category 1) H400
Chronic aquatic toxicity (Category 1) H410

See below for full text of H-Statement

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

Signal Word: Danger

Hazard Statement(s)
H225 Highly flammable liquid and vapor
H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H370 Causes damage to organs
H372 Causes damage to organs through prolonged or repeated exposure
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 and/or stronger statement.
Precautionary statement(s)
P210 Keep away from heat, sparks, hot surfaces, and open flames. No smoking.
P233 Keep container tightly closed.
P240 Ground container and receiving equipment.
P241 Use explosion-proof electrical, lighting and ventilation equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust, fumes, mist, vapors, or spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective clothing and face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice.
P337+P313 If eye irritation persists: Get medical advice or attention.
P362 Take off contaminated clothing and wash before reuse.
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents to an approved waste disposal plant.

Hazard 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>Ethanolamine hydrochloride</td>
<td>2002-24-6</td>
<td>10-55</td>
</tr>
<tr>
<td>Ammonium chloride</td>
<td>12125-02-9</td>
<td>1-15</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>1-15</td>
</tr>
</tbody>
</table>
SECTION 4 – FIRST AID MEASURES

Description of first aid measures

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

Inhalation: If breathed in, move to fresh air. If not breathing, give artificial respiration. Consult a physician.

Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Skin: Wash off with soap and plenty of water. Consult a physician.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2 (labeling)

SECTION 5 – FIREFIGHTING MEASURES

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Hazards: No data available

Special protective actions for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. See section 8 for personal protection.

Environmental Precautions: Prevent further leakage or spillage if safe to do so.

In Case Material is spilled: Contain spillage, absorb with sawdust, then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapors, fumes, or mist. Use explosion-proof equipment. Keep away from sources of ignition and oxidizing agents – No smoking. Take measures to prevent the build up for electrostatic charge.

For full precaution statements see Section 2

Storage Requirements: Store in plastic containers, tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

OSHA Permissible Exposure Limit (PEL): 10 mg/m$^3$
ACGIH Threshold Limit Value (TLV): 10 mg/m$^3$

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

Special Engineering Control Needs: Explosion Proof, non-sparking equipment

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (USA) or ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested an approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protective Gloves: Handle with gloves. (Nitrile Rubber recommended) Gloves must be inspected prior to use. Use proper glove removal techniques (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good lab practices. Wash and dry hands after handling.

Eye Protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (USA) or EN 166 (EU)

Body Protection: Impervious clothing, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear to light yellow liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Alcohol</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>No data available</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>No data available</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density (Air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density (Water = 1)</td>
<td>1.090 @ 20-25°C</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Miscible 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>No data available</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:** Vapors may form explosive mixture with air
- **Conditions to Avoid:** Heat, sparks and flames
- **Incompatibility:** Oxidizing agents, strong acids

**Hazardous Decomposition Products** Carbon oxides (Under fire conditions)

*In the event of fire: See Section 5*
SECTION 11 - TOXICOLOGICAL INFORMATION
Likely Route(s) of Exposure: Inhalation, ingestion, skin and eye contact

Symptoms (Immediate and Chronic) from
- Acute Exposure: No data available
- Prolonged or Repeated Exposure: No data available

Measure(s) of toxicity
No data available

Is this chemical listed in the National Toxicology Program (NTP) Report on Carcinogens?
No data available

Is this chemical found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs or by the Occupational Safety and Health Administration (OSHA)?
No data available

Additional information
Central nervous system depression, prolonged or repeated exposure can cause: nausea, headache, vomiting, narcosis, drowsiness. Overexposure may cause mild, reversible liver effects. Aspiration may lead to: lung edema, pneumonia.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 - ECOLOGICAL INFORMATION
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Hazard to ozone layer: No data available

SECTION 13 - DISPOSAL CONSIDERATIONS
Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

SECTION 14- TRANSPORTATION
D.O.T. (USA)
Proper Shipping Name: Ethanol solutions
Identification Number: UN1170
Packing Group: III
Hazard Class(es): 3
D.O.T. Label Required Information:
Flammable Liquid
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  The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>01-01-1987</td>
</tr>
</tbody>
</table>

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.

Reference(s):
Sigma-Aldrich – SDS for Isopropanol

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