

SAFETY DATA SHEET

SUPERIOR AL261-193-75

DATE REVISED: September 28, 2018

SECTION 1 -- IDENTIFICATION

Product Name/Part number: Superior AL261-193-75

Recommended use: Aluminum 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)

| | |
|---------------------------------------|------|
| Flammable liquid (Category 4) | H227 |
| Corrosive to metals (Category 1) | H290 |
| Skin corrosion (Category 1) | H314 |
| Skin sensitization (Category 1) | H317 |
| Serious eye damage (Category 1) | H318 |
| Reproductive toxicity (Category 1B) | H360 |
| 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)

| | |
|--------|--|
| H227 | Combustible liquid |
| H290 | May be corrosive to metals |
| H314 | Causes severe skin burns and eye damage |
| H317 | May cause an allergic skin reaction |
| **H318 | Causes serious eye damage |
| H360 | May damage fertility or the unborn child |
| **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/more specific hazard statement.*

Precautionary statement(s)

| | |
|---------------------|--|
| P210 | Keep away from heat, sparks, open flames, and hot surfaces. No smoking |
| P260 | Do not breathe dust or fumes |
| P264 | Wash skin thoroughly after handling |
| P272 | Contaminated work clothing should not be allowed out of the workplace |
| P273 | Avoid release to the environment |
| P280 | Wear protective gloves, protective clothing and face protection |
| P301+P310+P330+P331 | IF SWALLOWED: Immediately call a doctor. Rinse mouth. Do NOT induce vomiting |

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.

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 or doctor.

P308+P313 If exposed or concerned: Get medical advice

P333+P313 If skin irritation or rash occurs: Get medical advice or attention

P337+P313 If eye irritation persists: Get medical advice or attention

P363 Wash contaminated clothing before reuse

P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

P390 Absorb spillage to prevent material damage

P391 Collect spillage

P403+P235 Store in a well-ventilated place. Keep cool

P405 Store locked up

P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified or not covered by GHS: None

SECTION 3 – COMPOSITION INFORMATION

| Component (CAS No.) | % | Classification according to Regulation (EC) 1272/2008 | |
|---|-----------|---|------------------------------|
| | | | |
| Aminoethylethanolamine 111-41-1 | 1-10 | Skin corrosion (Category 1B) Serious eye damage (Category 1) Skin sensitization (Category 1) Reproductive toxicity (Category 1B) | H314 H317 H318 H360 |
| Ammonium tetrafluoroborate 13826-83-0 | 1-10 | Corrosive to metals (Category 1) Skin corrosion (Category 1B) Serious eye damage (Category 1) | H290 H314 H318 |
| Tetrahydrofurfuryl alcohol 97-99-4 | 1-10 | Flammable liquids (Category 4) Eye irritation (Category 2A) Reproductive toxicity (Category 1B) | H227 H318 H360 |
| Alkyl polyglycol ether C18-20 68439-49-6 | 1-10 | Acute aquatic toxicity (Category 1) | H400 |
| Zinc oxide 1314-13-2 | 1-5 | Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1) | H400 H410 |
| Tin 7440-31-5 | 31.4-31.6 | Serious eye damage (Category 2A) | H318 |
| Bismuth 7440-69-9 | 35.2-35.4 | N/A | N/A |
| Silver 7440-22-4 | 0.7-0.8 | Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1) | H400 H410 |

Unlisted percentages are non-hazardous stabilizers, and/or water. See Section II for full description of hazard statement(s)

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.

Potential Health Effects:

- Eye contact:** Contact with powdered metal alloy or fumes from molten metal may cause irritation. Severe eye damage may result from hot molten metal being splashed into the eyes. Wear safety glasses and face shield when working with molten metal.
- Ingestion:** May cause irritation. May be harmful
- Inhalation:** Inhalation of fumes or dust may cause local irritation to the respiratory system. Inhalation of dust or fumes may be harmful.
- Skin contact:** Normal handling should not cause any adverse health effects. May cause skin irritation. Hot molten metal may cause burns to the skin. Wear protective equipment when handling molten metal.
- Chronic:** TIN – Has been shown to increase incidence of sarcoma in animal tests.
SILVER – Chronic skin contact or ingestion of silver dusts, salts or fumes can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes.

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. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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. If dust, wear recommended personal protective equipment. DO NOT SWEEP. Use a

vacuum, place in barrels and return to process if applicable. Otherwise, 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. *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

| Component | TWA on the basis of ACGIH Threshold Limit Value (TLV) |
|----------------------------|---|
| Ammonium tetrafluoroborate | 2.5 mg/m ³ |
| Tetrahydrofurfuryl alcohol | 0.5 ppm |
| Zinc oxide | 2.0 mg/m ³ |
| Tin (as flakes) | 2.0 mg/m ³ |
| Silver (as flakes) | 0.1 mg/m ³ |

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 and 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: 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

| | |
|--|---------------------------------------|
| Appearance | Silver grey metal paste |
| Odor | Mild |
| Odor threshold | Not applicable |
| pH | Not applicable |
| Melting point/Freezing point | No data available |
| Initial boiling point and boiling range | No data available |
| Flash point | Not applicable |
| Evaporation rate | Not applicable |
| Flammability (Solid, gas) | Not applicable |
| Upper flammability or explosive limits | Upper explosion limit: Not applicable |
| Lower flammability or explosive limits | Lower explosion limit: Not applicable |
| Vapor pressure | No data available |
| Vapor density | No data available |
| Relative density (Water = 1) | No data available |
| Solubility(ies) | Mildly soluble in water |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | No data available |
| Viscosity | Not applicable |

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 organic fumes and toxic oxide fumes may form at elevated temperatures.

In the event of fire: See Section 5

SECTION 11 - TOXICOLOGICAL INFORMATION

Carcinogenicity

National Toxicity Program (NTP): No

Occupational Safety & Health Administration (OSHA): No

U.N. International Agency for Research on Cancer (IARC): No

Lead and Lead compounds are listed as possible carcinogens.

LD50: Not established **LC50:** Not established

Other: No data available

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 commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State, and Local environmental regulations. In Europe follow the Special Waste Regulations. 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) 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 Silver – CAS No. 7440-22-4

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.

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Preparation information

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