

SAFETY DATA SHEET

SUPERIOR AFCW SN63/PB37

DATE REVISED: August 21, 2018

SECTION 1 -- IDENTIFICATION

Product Name/Part number: Superior AFCW SN63/PB37

Recommended use: Tin-Lead-Silver Solder

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
Eye irritation (Category 2A)	H319
Specific target organ toxicity – Single exposure, Respiratory system (Category 3)	H335
Carcinogenicity (Category 2)	H351
Reproductive toxicity (Category 2)	H361
Specific target organ toxicity – Repeated exposure (Category 2)	H373
Acute aquatic toxicity (Category 1)	H400
Chronic aquatic toxicity (Category 1)	H410

GHS Label Elements, including precautionary statements

Pictogram(s):



Signal Word: Warning

Hazard Statement(s)

H302	Harmful if swallowed
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure
**H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Warning: Contains lead.

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

Precautionary statement(s)

P260	Do not breathe dust or fumes.
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.
P273	Avoid release to the environment

- P280 Wear protective gloves, protective clothing, eye protection, and face protection.
- P301+P312+P330 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
Rinse mouth.
- P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 IF exposed or concerned: Get medical advice or attention
- P337+P313 If eye irritation persists: Get medical attention
- P391 Collect spillage
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up
- 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

Components	CAS Number	%
Tin (Sn)	7440-31-5	59-65
Lead (Pb)	7439-92-1	34-45

Unlisted percentages are non-hazardous stabilizers, and water.

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.
LEAD – Prolonged exposure to vapors or fumes at higher temperatures may cause respiratory irritation and systemic lead poisoning. Symptoms of lead poisoning include headache, nausea, abdominal pain, muscle and joint pain, and damage to the nervous system, blood system and kidneys.
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.

!!! 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): 0.05 mg/m³

ACGIH Threshold Limit Value (TLV): 0.05 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 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
Odor	Odorless
Odor threshold	Not applicable
pH	Not applicable
Melting point/Freezing point	183°C / 361.4 °F
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)	8.6-9.0
Solubility(ies)	Insoluble 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): Yes

Lead and Lead compounds are listed as possible carcinogens.

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

Other:

Chronic Toxicity: Lead can cause potential harm to the developing fetus.

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

Solid metal

Not hazardous for shipping

Marine pollutant: No.

Powder form

DOT/IATA/IMDG only if it meets or exceeds the reportable quantity (RQ) in a single package.

Reportable Quantity (RQ) for Lead – 10 lbs

- If over RQ -

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Contains lead)

Identification Number: UN3077

Hazard Class(es): 9

Packing Group: III

Marine Pollutant? No

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 Lead – CAS No. 7439-92-1
Silver – CAS No. 7440-22-4

EPA Genetic Toxicology Program Lead – CAS No. 7439-92-1

California Prop. 65 Components **WARNING:** This product contains chemical(s) known to the State of California to cause cancer and/or birth defects (or other reproductive harm).
[Lead]

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

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

Ref used: Indium Corporation of America SDS for Lead-bearing alloys
