Material Safety Data Sheet
Material/Trade Name: Silver Solder
Stock Number(s): 101-100, 110, 200, 701-704
MSDS Code: RGF-026

SECTION I PRODUCT/SUPPLIER INFORMATION

Material/Trade Name: Silver Solder
Synonyms: Brazing Filler Metal
Stock Numbers: 101-100, 110, 200, 701-704

SECTION II INGREDIENT/EXPOSURE LIMIT INFORMATION

Component (synonym) | % | CAS No. | TLV | PEL | REL
--- | --- | --- | --- | --- | ---
Silver | 7440-22-4 | 0.1 mg/m³ (m) | 0.01 mg/m³ | 0.01 mg/m³ | 0.01 mg/m³ (m, s)
Copper | 7440-50-8 | 0.2 mg/m³ (l) | 0.1 mg/m³ (dm) | 1 mg/m³ (dm) | 1 mg/m³ (f, hr)
Zinc | 7440-66-6 | 5 mg/m³ (l) | 15 mg/m³ (TP) | 5 mg/m³ (TP) | 15 mg/m³ (TP)

a = Short Term Exposure Limit (STEL); RF = Respirable Fraction; c = Ceiling Limit
m = Mist; s = Soluble Compounds of Silver, Copper, and Zinc; f = As Fume; d = Dust; hr = 10hTWA; TP = Total Particulate;

SECTION III PHYSICAL PROPERTIES

Vapor Pressure (mm Hg): Not Applicable
Vapor Density (Air = 1): Not Applicable
Solubility in Water: Insoluble
Appearance: White to brass yellow metal in form of rod, wire, strip, powder or preformed shapes.
Odor: None
Melting Point: 1235°-1545°F (670°-840°C)
Specific Gravity: 8.48-10.0
Boiling Point: Not Available
Evaporation Rate: Not Available
Volatility (%): Not Available
pH: Not Available

SECTION IV FIRE AND EXPLOSION DATA

Flash Point: Not Available
Auto Ignition Temperature: Not Available
Flammable Limits: LEL: Not Available
UEL: Not Available

SECTION V REACTIVITY DATA

Stable? Yes
Conditions to Avoid: None Known

Incompatibility (Materials to Avoid): Strong oxidizers; Se; Te; Mg; acetylene; NH₃; HNO₃; azides, ethanol; ethylene imine; CF₃; inorganic and organic peroxides; peroxyformic acid; chlorine and fluorine; permonosulfuric acid; chlorates; Cr₂O₃; Mn and Ca chlorides; CO₃; hydracide mononitrile; nitrobenzene; Fe(CO)₅; seleninyl bromide.

Hazardous Decomposition Products: Silver and copper fumes; Oxides of carbon and zinc

Hazardous polymerization may occur? No
Conditions to Avoid: None Known

EXTINGUISHING MEDIA: Use dry powder-Do not use water

Special Fire Fighting Procedures: Fire fighters should wear full turnout gear and pressure-demand self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: In finely divided form, this material may ignite when exposed to flame or by reaction with incompatible materials. Material may release toxic emissions of metal or metal oxide fumes.
SECTION VI HEALTH HAZARD DATA

Primary Routes of Exposure: Inhalation, eye and skin contact

Acute Signs and Symptoms of Overexposure: Irritating to the eyes, skin and respiratory tract. Health effects may include metal fume fever, (delayed effect characterized by chills, muscle aches, nausea, fever, dry throat, cough, weakness, profuse sweating, and metallic taste), discolorization of skin, ulcerations of the nasal septum, tight chest, headaches, blurred vision, back pain, and vomiting.

Chronic Signs and Symptoms of Overexposure: Argyria, a permanent condition associated with widespread bluish pigmentation of the skin and conjunctiva. Prolonged or repeated exposure may result in lung, liver, or kidney damage. One or more of the components in this product have shown reproductive effects when tested on experimental laboratory animals.

SECTION VI HEALTH HAZARD DATA (Continued)

Carcinogenicity? No NTP IARC ACGIH OSHA

*No ingredients listed in this section*

Conditions That May Increase Overexposure Potential: None Known

Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory, skin, or eye conditions may be aggravated. Wilson’s disease—a genetic disorder characterized by the abnormal absorption and retention of copper. May be fatal if not treated.

FIRST AID PROCEDURES:

Eye Contact: Flush contaminated eye(s) with plenty of water for at least 15 minutes while holding eyelids open. Seek medical attention immediately if irritation persists or if injury has occurred.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Seek medical attention if irritation develops and persists.

Inhalation: Remove victim to fresh air. If breathing has stopped, properly trained personnel should begin artificial respiration or cardiopulmonary resuscitation (CPR) and medical assistance should be obtained immediately.

Ingestion: Seek medical attention immediately.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

Actions to Take For Spills: Wearing appropriate personal protective equipment, allow material to cool. Scoop or scrape up and place into a suitable container.

Waste Disposal: Dispose of in accordance with all federal, state, and local regulations. Waste material may have reclaimation value due to precious metal content.

Precautions to be Taken in Handling and Storage: Store in a cool, dry area.

Community Right-to-Know Requirements: SARA 302: Silver, RQ = 1000lbs; Copper, RQ = 5000lbs; Zinc, RQ = 1000lbs (see 40 CFR 355).

SARA 313: Annual release reporting requirements for Silver, Copper, and Zinc (see 40 CFR 372.65).

SECTION VIII EMPLOYEE PROTECTION MEASURES

Ventilation: Local ventilation is preferred to meet TLV requirements. General ventilation is acceptable, if exposure is maintained below TLV.

Respiratory Protection: When airborne concentrations exceed the TLV or are unknown wear a NIOSH/MSHA approved respirator for dust, mist, and metal fumes used in accordance with OSHA respiratory requirements (29 CFR 11910.134).
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MSDS Code: RGF-026
DATE PREPARED: 11/08/94

Label Wording and DOT Information

Product Name: Silver Solder

Ingredients: Silver
Copper
Zinc

Signal Word: Warning

Hazard Description: Fumes or dust generated from this product may irritate eyes, skin and respiratory tract. Inhalation of fumes may cause lung, liver, or kidney damage. Refer to MSDS for other potential health effects. Store in a cool, dry location.

First Aid Required on Label: No

First Aid Measures:

Eye Contact: Flush contaminated eye(s) with plenty of water for at least 15 minutes while holding eyelids open. Seek medical attention immediately if irritation persists or if injury has occurred.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Seek medical attention if irritation develops and persists.

Inhalation: Remove victim to fresh air. If breathing has stopped, properly trained personnel should begin artificial respiration or cardiopulmonary resuscitation (CPR) and medical assistance should be obtained immediately.

Ingestion: Seek medical attention immediately.

Leak/Spill Procedures: Refer to Material Safety Data Sheet for proper procedures. Dispose of according to local, state, and federal regulations.

Original Manufacturer: Lucas-Milhaupt, Inc.

Manufacturers's Product Name: Silver-Copper-Zinc Brazing Alloys

Manufacturer's Emergency Number: (800) 424-9300

DOT Regulated: No

Proper Shipping Name:

Hazard Class: Packaging Authorizations:

Subsidiary Risk: Packaging Exceptions:

I.D. Number: Non-bulk Packaging:

Label: Bulk Packaging:

Packaging Group: Quantity Limitations:

Packaging Group:

Passenger Aircraft:
Cargo Only Aircraft:
Eye Protection: Safety glasses

Other Protective Equipment: Leather apron

Work/Hygiene Practices: Eyewash station and safety shower should be available in areas of use. Wash thoroughly after handling product.

The information herein is given in good faith, but no warranty, express or implied, is made.