

Silver-Copper-Phosphorus Alloy

Safety Data Sheet

1. Product and Company Identification

Manufacturer

Lucas-Milhaupt, Inc.
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Telephone: 414-769-6000
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Emergency Phone Number

CHEMTREC : within USA or Canada 1-800-424-9300
CHEMTREC : outside USA or Canada 1-704-741-5970

SDS Number: 77

Product: AG-CU-P

Product Codes: 26310 (SIL-FOS 1), A00000058 (SIL-FOS 1), 27953 (SIL-FOS 1), 2774 (SIL-FOS 2), 71-020 (SIL-FOS 2), A00000013 (SIL-FOS 2), 34649 (SIL-FOS 2F), 28134 (SIL-FOS 2M), A00000064 (SIL-FOS 2M), 35502 (SIL-FOS 2M), 71-017 (SIL-FOS 2M), A00000116 (SIL-FOS 2M), 35564 (SIL-FOS 2M), A00000150 (SIL-FOS 2M), 35503 (SIL-FOS 5), A00000117 (SIL-FOS 5), 25841 (SIL-FOS 5), 7054 (SIL-FOS 5), 71-050 (SIL-FOS 5), A00000025 (SIL-FOS 5), 28118 (SIL-FOS 5F), 71-052 (SIL-FOS 5F), A00000062 (SIL-FOS 5F), 34286 (SIL-FOS 5M), 17152 (HANDY-FLO 6), 71-062 (HANDY-FLO 6), A00000040 (HANDY-FLO 6), 17244 (HANDY-FLO 6), 35542 (SIL-FOS 6i), 71-063 (SIL-FOS 6i), A00000140 (SIL-FOS 6i), 28126 (SIL-FOS 6), 71-060 (SIL-FOS 6), A00000063 (SIL-FOS 6), 28704 (SIL-FOS 10), 71-100 (SIL-FOS 10), 29538 (SIL-FOS 15), A00000070 (SIL-FOS 15), 7153 (SIL-FOS 15), 71-150 (SIL-FOS 15), A00000026 (SIL-FOS 15), 26047 (SIL-FOS 15), 35528 (SIL-FOS 15), A00000131 (SIL-FOS 15), 35544 (SIL-FOS 15LP), 19422 (SIL-FOS 18W), A00000041 (SIL-FOS 18W), 31138 (SIL-FOS 18M), A00000087 (SIL-FOS 18M), 35207 (SIL-FOS 18M), 71-181 (SIL-FOS 18M), A00000096 (SIL-FOS 18M), 35216 (SIL-FOS 18), 71-180 (SIL-FOS 18), A00000097 (SIL-FOS 18)

Product Use(s): Alloys for brazing and other metallurgical processes

2. Hazards Identification

Classification(s): None applicable

Label Symbol(s): None applicable

Label Signal Word(s): None applicable

Label Hazard Statement(s): None applicable

Label Precautionary Statement(s)

The acute toxicities of 74-94% of the product's ingredients are unknown.

3. Composition/Information on Ingredients

Ingredient	CAS Number	%	Impurities
Copper	7440-50-8	74-94	None known
Phosphorus	7723-14-0	2-8	None known
Silver	7440-22-4	<1-19	None known

4. First Aid Measures

Eye

Flush affected areas with water for at least fifteen minutes. Seek medical assistance if necessary.

Skin

Remove contaminated clothing. Wash affected area with large quantities of water for at least five minutes. Seek medical attention if necessary. Launder or dry-clean clothing before reuse.

Ingestion

If subject is conscious, induce vomiting. If unconscious or convulsive, seek immediate medical assistance. Do not give anything by mouth to an unconscious or convulsive person.

Inhalation

If signs and symptoms of toxicity are observed, remove subject from area, administer oxygen, and seek medical attention. Keep the subject warm and at rest. Perform artificial respiration if breathing has stopped.

Note to Physician or Poison Control Center

None of the components are acutely toxic by ingestion, nor are they absorbed through the skin. Long-term chronic exposure may cause argyria.

5. Fire Fighting Measures

Fire and Explosion Hazards

These products are non-flammable and non-explosive. If present in a fire or explosion, they may emit fumes of the constituent metals and/or phosphorus pentoxide.

Extinguishing Media

Use dry chemical. Do not use water.

Fire Fighting Instructions

If fighting a fire in which these products are present, wear a self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

Eye/Face Protection

Wear eye protection adequate to prevent eye contact with the product and injury if the product is used with a flame. Plastic-frame spectacles with side shields are recommended.

Skin Protection

Wear protective gloves and clothing to prevent skin injuries if the product is used with a flame. Avoid flammable fabrics.

Respiratory Protection

If an exposure level to a component(s) exceeds an applicable standard, use a NIOSH-approved respirator having a configuration (facepiece, filter media, assigned protection factor, etc.) effective for the concentration of the component(s) generated. For guidance on selection and use of respirators, consult American National Standard Z88.2 (ANSI, New York, NY 10036, USA).

9. Physical and Chemical Properties

Appearance: Yellow-white metals, various forms

Odor: none

Odor threshold: not applicable

pH: not applicable

Melting Point: approx. 1,178F./637C.

Freezing point: not applicable

Boiling point/boiling range: not determined

Flash Point: not applicable

Evaporation Rate: not applicable

Flammability Class: not applicable

Lower Explosive Limit: not applicable

Upper Explosive Limit: not applicable

Vapor pressure: not applicable

Vapor density: not applicable

Relative density (H₂O): 7.4-8.6

Solubility (H₂O): insoluble

Oil-water partition coefficient: not applicable

Autoignition Point: not applicable

Decomposition temperature: not applicable

Viscosity: not applicable

10. Stability and Reactivity

Reactivity: none reasonably foreseeable

Stability: stable

Hazardous Polymerization: will not occur

Risk of Dangerous Reactions: silver and copper can form unstable acetylides in contact with acetylene gas.

Incompatible Materials

Strong oxidizers; ammonia; azides; nitric acid; ethylene imine; sulfuric acid; chlorine trifluoride; inorganic and organic peroxides; peroxyformic acid; oxalic acid; bromates, chlorates, and iodates of alkali and alkali earth metals; tartaric acid; 1-bromo-2-propyne; permonosulfuric acid; alkaline hydroxides.

Hazardous Decomposition Products

Heating to elevated temperatures may liberate fumes of the constituent metals and/or phosphorus pentoxide.

10. Toxicological Information

----- Ingredients - Toxicological Data -----

Copper

LD50: No data available

LC50: No data available

Phosphorus

LD50: >15,000 mg/kg (oral/rat)

LC50: 4,300 mg/m³ for 1 hr (rat)

Silver

LD50: >2,000 mg/kg (oral/rat)

LC50: No data available

----- Primary Routes(s) of Entry -----

Ingestion; inhalation.

----- Eye Hazards -----

Eye contact with these products in finely-divided forms may cause irritation, conjunctivitis, ulceration of the cornea, and/or argyria, a permanent gray discoloration of the eyes, skin, mucous membranes, and respiratory tract.

----- Skin Hazards -----

Skin contact with these products in finely-divided forms may cause irritation, argyria, discoloration, and/or contact dermatitis.

----- Ingestion Hazards -----

Ingestion of these products may cause nausea, vomiting, and gastrointestinal irritation.

----- Inhalation Hazards -----

Inhalation of toxicologically-significant quantities of the components is unlikely when the product is used in accordance with instructions and specified protective measures (see Section #8). When phosphorus is overheated in air, it is converted to phosphorus pentoxide, which is corrosive and irritating to eyes, nose, throat, and mucous membranes.

----- Symptoms Related to Overexposure -----

Pre-existing pulmonary diseases (e.g., bronchitis, asthma) may be aggravated by inhalation overexposure, particularly as fume.

----- Delayed Effects from Long Term Overexposure -----

Chronic overexposure by inhalation and/or ingestion may aggravate pre-existing diseases of the liver, kidneys, and gastrointestinal system.

----- Carcinogenicity -----

The product contains no chemicals classified as potential or demonstrated carcinogens by IARC, NTP, or OSHA.

Germ Cell Mutagenicity

The product contains no chemicals determined to be germ cell mutagens.

Reproductive Effects

The product contains no chemicals determined to be damaging to fertility or to the unborn child.

Acute Toxicity Estimates

LD50 (oral): >2,000 mg/kg
LD50 (dermal): no data available
LC50: 4,300 mg/m3

Interactive Effects of Components: no data available

12. Ecological Information

No ecological data is available for the product or any of its components.

Ozone Depletion Potential: This product contains no ingredients listed in the Annexes to the Montréal Protocol on Substances that Deplete the Ozone Layer.

13. Disposal Considerations

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Consult applicable Federal, State/Provincial, and local regulations.

14. Transport Information

Transport is not regulated by USDOT, TDG (Canada), IATA, or IMO.

15. Regulatory Information

United States Regulatory Information

All components of this product are listed on the EPA's TSCA inventory.

SARA Hazard Classes: Chronic Health Hazard

SARA Section 313 Notification

This product contains these components in concentrations >1% (>0.1% for carcinogens) subject to Section 313 of the Emergency Preparedness and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR, Part 372:

1. Copper (CASRN 7440-50-8)
2. Phosphorus (CASRN 7723-14-0)
3. Silver (CASRN 7440-22-4)

Canadian Regulatory Information

All components of these products are listed on either the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).

This product has been classified in accordance with Canada's Hazardous Products Regulations (SOR/DORS/2015-17).

16. Other Information

HMIS Ratings (Legend)

Health - 2* (moderate chronic hazard)
Flammability - 1 (slight hazard)
Physical Hazard - 0 (minimal hazard)
PPE - see Note

Note: Lucas-Milhaupt Inc. recommends use of protective eyewear and gloves (Personal Protection Index "B") as standard PPE. HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

NFPA Ratings

Health - 2 Flammability - 1 Reactivity - 0

Preparation Information

Date of Preparation: 18 August 2016
Date of Prior SDS: 22 December 2015

Disclaimer

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Lucas-Milhaupt, Inc.