

HANDY ONE Aluminum Zinc Alloy (CsAlF Flux)

Safety Data Sheet

1. Product and Company Identification

Manufacturer

Lucas-Milhaupt, Inc.
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Emergency Phone Number

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SDS Number: 577

Product: HANDY ONE Aluminum Zinc Alloy (CsAlF Flux)

Product Codes: 30-822 (HANDY ONE AL822), 35707 (HANDY ONE AL822), A00000203
(HANDY ONE AL822), 30-823 (HANDY ONE AL822), 30-824 (HANDY ONE AL822)

Product Use(s): Brazing alloy with flux core

2. Hazards Identification

Classification(s)

Specific Target Organ Toxicity, Single Exposure: Hazard Category 3

Label Symbol(s): Exclamation Point

Label Signal Word(s): Warning

Label Hazard Statement(s)

May cause respiratory irritation.

Label Precautionary Statement(s)

Avoid breathing dust or fume.
Use only outdoors or in a well-ventilated area.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a Poison Control Center or doctor if you feel unwell.

Store locked up.

Dispose of contents and container in accordance with applicable regulations.
80-98% of the product consists of ingredients with unknown acute toxicity.



3. Composition/Information on Ingredients

Ingredient	CAS Number	%	Impurities
Aluminum	7429-90-5	2-20	None known
Cesium aluminum fluoride	138577-01-2	2-20	None known
Zinc	7440-66-6	65-85	None known

4. First Aid Measures

Eye

Not applicable.

Skin

Not applicable.

Ingestion

Not applicable.

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

The component cesium aluminum fluoride may be harmful if inhaled. Inhalation is the only plausible mode of exposure, as the component is within the core of the wire. Treat fluoride intoxication symptomatically.

5. Fire Fighting Measures

Extinguishing Media

Not applicable.

Fire and Explosion Hazards

This product is non-flammable and non-explosive. However, if present in a fire or explosion, it may emit fumes of the constituent metals or metal oxides and/or fluorides.

Fire Fighting Instructions

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

6. Accidental Release Measures

Not applicable.

7. Handling and Storage

Handling Precautions

No special handling precautions are required.

Work and Hygiene Practices

As good hygiene practice, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing or protective equipment before entering eating/drinking areas.

Storage Precautions

Store away from incompatible materials (see Section #10).

8. Exposure Controls and Personal Protection

Ingredients - Exposure Limits

Aluminum

ACGIH TLVs: 1 mg/m³ TWA (respirable fraction)

OSHA PELs: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Cesium aluminum fluoride

ACGIH TLVs: 2.5 mg/m³ (as F-) OSHA PEL: 2.5 mg/m³ (as F-)

Zinc

ACGIH TLVs (as ZnO): 2 mg/m³ TWA; 10 mg/m³ STEL (respirable fractions)

OSHA PEL: 5 mg/m³ TWA (as ZnO fume)

Ingredients - Biological Limits

Aluminum

No ACGIH BEI(s) or other biological limit(s)

Cesium aluminum fluoride

ACGIH BEIs for fluoride in urine: 2 mg/l. prior to shift
3 mg/l. end of shift

Zinc

No ACGIH BEI(s) or other biological limit(s)

Engineering Controls

Use dilution or local exhaust ventilation adequate to maintain concentrations of all components and their byproducts to within their applicable standards.

Eye/Face Protection

Wear eye protection adequate to prevent injury from the hazards of brazing. Plastic-frame spectacles with side shields and filter lenses (shade #3/#4) are recommended.

Skin Protection

Wear protective gloves and clothing to prevent skin injuries from the hazards of brazing. Avoid flammable fabrics.

8. Exposure Controls and Personal Protection (Continued)

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: Silver-gray alloy in the form of flux-cored wire

Odor: no odor

Odor threshold: not applicable

pH: not applicable

Melting point: not determined

Freezing point: not applicable

Boiling point/boiling range: not applicable

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): not determined

Solubility (H₂O): insoluble

Oil-water partition coefficient: not applicable

Autoignition Point: not applicable

Decomposition temperature: not determined

Viscosity: not applicable

10. Stability and Reactivity

Reactivity: none reasonably foreseeable

Stability: stable

Hazardous Polymerization: Some components of the products may decompose at elevated temperatures.

Incompatible Materials

Ammonium nitrate; bromates; chlorates; iodates; antimony trichloride; arsenic trichloride; halogens; peroxides; carbon disulfide; carbon tetrachloride; halogenated hydrocarbons; chromic anhydride; copper oxide; diborane; performic acid; phosgene; silver chloride; sulfates; barium dioxide; barium nitrate; chlorine trifluoride; hydrazine mononitrate; hydroxylamine; azides; manganese chloride; nitric acid; nitrates; selenium; lead oxide; phosphorus.

Potential Hazardous Decomposition Products

Aluminum oxide, zinc oxide, and/or fluorides.

11. Toxicological Information

Toxicological testing has not been performed by the manufacturer/supplier.

11. Toxicological Information (Continued)

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

Aluminum

LD50: No data available

LC50: No data available

Cesium aluminum fluoride

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

LC50: No data available

Zinc

LD50: No data available

LC50: No data available

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

Inhalation.

Eye Hazards -----

As a solid, eye contact is not a plausible mode of exposure.

Skin Hazards -----

As a solid, skin contact is not a plausible mode of exposure.

Ingestion Hazards -----

As a solid, ingestion is not a plausible mode of exposure.

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).

Symptoms Related to Overexposure -----

Overexposure by inhalation may cause irritation to the nose, throat, and respiratory tract and/or cough, nose bleeds, nausea, vomiting, chest tightness, chills, fever, pneumonitis, tearing, and pulmonary edema.

Delayed Effects from Long Term Overexposure -----

Aggravation of pre-existing diseases of the skeletal and gastrointestinal systems. Long-term overexposure via inhalation to fluorides may cause fluorosis (a disease characterized by mottled teeth, osteosclerosis, and pain and loss of mobility in joints).

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.

11. Toxicological Information (Continued)

Acute Toxicity Estimates

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

LD50 (dermal): no data available

LC50: no data available

Interactive Effects of Components: no data available

12. Ecological Information

No ecological data is available for the product. Ecological data for the components is as follows:

Aluminum

No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Cesium aluminum fluoride

Aquatic Toxicity to Fish: LC50 = 100 mg/liter for 4 d. (Cyprinus carpio)

Aquatic Toxicity to Invertebrates: EC50 = 31 mg/l. for 48 h. (Daphnia magna)

Aquatic Toxicity to Plants: EC50 = 18 mg/liter for 3 d. (Algae)

No data available for Aquatic Toxicity to Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Zinc

No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

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. Disposal of products containing fluorides may be subject to restrictions. 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: Acute Health Hazard; Chronic Health Hazard

15. Regulatory Information (Continued)

SARA Section 313 Notification: This product contains these ingredients in concentrations >1% (for carcinogens >0.1%) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372:

1. Aluminum (CASRN 7429-90-5)

Canadian Regulatory Information

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

WHMIS Class(es) and Division(s): D2B

Components on Ingredients Disclosure List:

1. Aluminum, elemental (CASRN 7429-90-5)
2. Fluoride compounds, inorganic, n.o.s.

This product has been classified according to the hazard criteria of the CPR and this SDS contains all of the information required by the CPR.

16. Other Information

HMIS Ratings (Legend)

Health - 1* (slight 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 - 1 Flammability - 1 Reactivity - 0

Preparation Information

Date of Preparation: 29 March 2016
Date of Prior SDS: 16 July 2014

Disclaimer

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Lucas-Milhaupt, Inc.