

Flux-Cored Aluminum Brazing Alloy

Safety Data Sheet

1. Product and Company Identification

Supplier and Manufacturer

Lucas Milhaupt, Inc.
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Emergency Phone Number

Chemtrec: 800-424-9300

SDS Number: 503

Product Codes: 30-802, 30-815

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

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.
The acute toxicities of 97-99 of the product's ingredients are unknown.

3. Composition/Information on Ingredients

Ingredient	CAS Number	%	Impurities
Aluminum	7429-90-5	2-15	None known
Cesium aluminum fluoride	138577-01-2	1-5	None known
Zinc	7440-66-6	83 -95	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

None of the components are acutely toxic by ingestion, nor are they absorbed through the skin.

5. Fire Fighting Measures

Fire and Explosion Hazards

This product is non-flammable and non-explosive. If present in a fire or explosion, it may emit fumes of the constituent metals or their oxides.

Extinguishing Media

Use dry chemical, foam, or carbon dioxide. Do not use water.

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

Methods and Materials

None applicable.

Personal Precautions

None applicable.

Environmental Precautions

None 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 TLV: 1 mg/m³ TWA (respirable fraction)

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

Cesium aluminum fluoride

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

Zinc

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

OSHA PEL: 5 mg/m³ TWA (as respirable fraction of ZnO dust or 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 eye injury if the product is used with a flame. 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 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: gray wire, flux-cored
Odor: none
Odor threshold: not applicable
pH: not applicable
Melting Point: >790F./420C.
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): not determined
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: contact with incompatible materials

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; carbon disulfide; chlorine trifluoride; hydrazine mononitrate; hydroxylamine; azides; manganese chloride; nitric acid; nitrates; selenium; lead oxide; phosphorus.

Hazardous Decomposition Products

Heating to elevated temperatures may liberate metal/metal oxide fumes and/or fluorides.

11. Toxicological Information

This product has not been subject to toxicological testing by the supplier/manufacturer.

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

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 may aggravate pre-existing diseases of the respiratory system. Long-term overexposure via inhalation may also 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 of the unborn child.

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. Available ecological data for the components is as follows:

Aluminum

Acute Toxicity to Fish: NOEC >100 mg/l. for 4 d. (freshwater fish)
Acute Toxicity to Invertebrates: NOEC >100 mg/l. for 48 h. (Daphnia)
Acute Toxicity to Plants: NOEC >100 mg/l. for 3 d. (Algae)

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

Cesium aluminum fluoride

Aquatic Toxicity: LC50 = 100 mg/liter for 4 d. (Cyprinus carpio)
Aquatic Toxicity: EC50 = 31 mg/liter for 48 h. (Daphnia magna)
Aquatic Toxicity: EC50 = 18 mg/liter for 3 d. (Algae)
No data available for Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Zinc

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

These products contain these components at 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. Aluminum (CASRN 7429-90-5)

Canadian Regulatory Information

All components of these products 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.

These products have 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

Health - 1* (slight chronic hazard)
Flammability - 1 (slight hazard)
Physical Hazard - 0 (slight 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: 15 July 2014
Date of Prior SDS: 17 June 2013

Disclaimer

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Lucas-Milhaupt, Inc.