EASY-FLO 44 (BRAZE 440)

Safety Data Sheet

1. Product and Company Identification

Suppliers and Manufacturers

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Emergency Phone Number

Chemtrec: 800-424-9300

Issue Date: 10/01/2013
These Alloys Are Sold Under The BRAZE Or SILVALOY Tradenames
Product Name: EASY-FLO 44 (BRAZE 440)
SDS Number: 89
Product Code: EASY-FLO 44 (32-440)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

2. Composition/Information on Ingredients

Ingredient Name	CAS Number	%
Cadmium	7440-43-9	14-16
Copper	7440-50-8	26-28
Phosphorus	7723-14-0	0.9-1
Silver	7440-22-4	43-45
Zinc	7440-66-6	12-14

3. Hazards Identification

Primary Routes(s) of Entry

Ingestion; inhalation.

Eye Hazards

Eye contact with this product 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 this product in finely-divided forms, may cause irritation,

argyria,discoloration, and contact and/or contact dermatitis.

Ingestion Hazards

Ingestion of this product in finely-divided form may cause nausea, vomiting, and gastrointestinal irritation.

Inhalation Hazards

Inhalation of the components of this product is not known to present a significant risk to health when used according to instructions and with appropriate protective measures (see Section #8). Inhalation of component elements has been reported to cause one or more of the followingsymptoms and effects upon excessively high or prolonged exposure:

CADMIUM: Acute exposure to cadmium may cause pneumonitis, bronchitis, and pulmonary edema. Chronic exposure may cause gastrointestinal symptoms, anemia, rhinitis, kidney disease, microfractures, and cancer.

COPPER: Acute exposure may cause respiratory tract irritation, fever, muscle ache, chills, cough, weakness, and a metallic taste. Chronic exposure may damage the liver, kidney, spleen, pancreas, and brain.

PHOSPHORUS: The red form of phosphorus is stable and relatively non-toxic at room temperature. When heated in air, it is converted to phosphorus pentoxide, which is corrosive and irritating to eyes, nose, throat, and mucous membranes.

SILVER: Chronic exposure via inhalation may cause argyria.

ZINC: Acute exposure to zinc oxide may cause respiratory tract irritation and "metal fume fever", which is characterized by a metallic taste, cough, dry throat, chills, fever, tightness of chest, headache, nausea, shortness of breath, vomiting, and fatigue.

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.

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

No components are acutely toxic by ingestion, nor are they absorbed through the skin. Extensive or prolonged skin contact may cause dermatitis and/or argyria. Inhalation of cadmium fume may cause severe respiratory illness.

5. Fire Fighting Measures

Flash Point: Not Applicable (N/Appl.)
Autoignition Point: N/Appl.
Flammability Class: N/Appl.
Lower Explosive Limit: N/Appl.
Upper Explosive Limit: N/Appl.

Fire and Explosion Hazards

In finely-divided form, this product may ignite when exposed to flame or by reaction with incompatible materials (see Section #10). If present in a fire or explosion, they may emit fumes of the constituent metals or metal oxides.

Extinguishing Media

Use dry chemical. 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

If a finely-divided form of product is spilled, clean up spillage so as to minimize dispersion of dust. Wet sweeping or vacuuming using HEPA filtration are recommended.

7. Handling and Storage

Handling Precautions

No special handling precautions are required.

Storage Precautions

Do not store in proximity to incompatible materials (see Section #10).

Work and Hygiene Practices

To minimize ingestion, wash hands and face before eating, drinking, applying cosmetics, or using tobacco.

8. Exposure Controls and Personal Protection

Engineering Controls

Use appropriate local exhaust ventilation adequate to maintain concentrations of all components to within their applicable standards.

Eye/Face Protection

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

Skin Protection

Wear appropriate protective gloves and clothing to prevent skin injury from the

hazards of brazing and/or for prolonged or repeated contact with finely-divided forms of product. Avoid flammable fabrics.

Respiratory Protection

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

Ingredient(s) - Exposure Limits

Cadmium
ACGIH TLVs: Inhalable 0.01 mg/m3 TWA; Respirable 0.002 mg/m3 TWA
OSHA PEL: 5 micrograms/m3 TWA
Copper
ACGIH TLVs: 0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dusts and mists)
OSHA PELs: 0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dusts and mists)
Phosphorus
No applicable ACGIH TLVs No applicable OSHA PELs
Silver
ACGIH TLV: 0.1 mg/m3 TWA (metal) OSHA PEL: 0.01 mg/m3 TWA
Zinc
ACGIH TLVs: 5 mg/m3 TWA; 10 mg/m3 STEL (as ZnO fume)
OSHA PEL: 5 mg/m3 TWA (as ZnO fume)

9. Physical and Chemical Properties

Appearance: light yellow metals, various forms
Odor: no odor
Chemical Type: alloy
Physical State: solid
Solubility (H2O): insoluble
Melting Point: approx. 1100F./595C.
Specific Gravity: approx. 9.2

Other commonly-reported physical properties (odor threshold, evaporation rate, vapor pressure, vapor density, evaporation rate, boiling point, freezing point, pH, oil-water distribution coefficient, percent volatiles, percent VOCs) are not applicable to these products.

10. Stability and Reactivity

Stability: stable
Hazardous Polymerization: will not occur

Conditions to Avoid

Silver and copper can form unstable acetylides in contact with acetylene gas.

Incompatible Materials

Strong oxidizers; ammonia; azides; nitric acid; ethylene imine; peroxyformic acid; chlorine trifluoride; sulfuric acid; peroxides; oxalic acid; tartaric acid; 1-bromo-2-propyne; permonosulfuric acid; ammonium nitrate; hydrazoic acid; chlorates, barium dioxide; carbon disulfide; halogens; hydroxylamine; hydrazine mononitrate; manganese chloride; performic acid; tellurium; bromates, chlorates, and iodates of alkali and alkali earth metals.

Hazardous Decomposition Products

Heating to elevated temperatures may liberate metal/metal oxide fumes.

11. Toxicological Information

Reproductive Effects

In experimental studies, cadmium has been found to cause reproductive abnormalities, including reduced birth weights, reduced viability, and behavioral alterations, among offspring of female rodents. Male rodents exposed to cadmium have been found to have testicular damage, reduction in sperm counts, and reduced fertility.

Mutagenicity

Cadmium has produced mutagenic responses in mammalian cell cultures.

Conditions Aggravated by Overexposure

Pre-existing pulmonary diseases (e.g., bronchitis, asthma) may be aggravated by inhalation overexposure, particularly as fume. Chronic overexposure by inhalation and/or ingestion may aggravate pre-existing diseases of the liver, kidneys, gastrointestinal system, musculoskeletal system, and nervous system.

Ingredient(s) - Carcinogenicity

Cadmium
- OSHA Regulated Carcinogen
- NTP - Listed on the National Toxicology Program
- IARC - Listed in the IARC Monographs

Ingredient(s) - Toxicological Data

Cadmium	LD50: 2,330 mg/kg (oral/rat)	LC50: 25 mg/m3/30 min. (rat)
Copper	LD50: No data available	LC50: No data available
Phosphorus	LD50: 15,000 mg/kg (oral/rat)	LC50: 4,300 mg/m3/1 hour (rat)
Silver	LD50: >2,000 mg/kg (oral/rat)	LC50: No data available
Zinc	LD50: No data available	LC50: No data available

12. Ecological Information

In its intended manner of use, this product should not be released into the environment, and adverse effects on ecosystems are not anticipated under recommended conditions of use, storage, and disposal.

13. Disposal Considerations

Dispose of unused or unusable product in accordance with applicable Federal,

State/Provincial,and local regulations.

14. Transport Information

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

15. Regulatory Information

TSCA Information

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

SARA Hazard Classes

Acute Health Hazard; Chronic Health Hazard

Ingredient(s) - U.S. Regulatory Information

This product contains the following ingredients in concentrations greater than 1% (forcarcinogens 0.1%) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

1. Cadmium (CASRN 7440-43-9)
2. Copper (CASRN 7440-50-8)
3. Phosphorus (CASRN 7723-14-0)
3. Silver (CASRN 7440-22-4)

Ingredient(s) - State Regulations

Cadmium - California Proposition 65

OSHA Precautionary Label

DANGER
CONTAINS CADMIUM
CANCER HAZARD
AVOID CREATING DUST
CAN CAUSE LUNG AND KIDNEY DISEASE

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): D1A, D2A, D2B
Component(s) on Ingredients Disclosure List:

1. Cadmium, elemental (CASRN 7440-43-9)
2. Copper, elemental (CASRN 7440-50-8)
3. Phosphorus (CASRN 7723-14-0)
3. Silver, elemental (CASRN 7440-22-4)

16. Other Information

HMIS Ratings

Health - 3* Flammability - 1 Physical Hazard - 0 PPE - see Note

Note: Lucas-Milhaupt, Inc. and Lucas-Milhaupt Toronto recommend 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 responsibilityto evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

NFPA Ratings

Health - 3 Flammability - 1 Reactivity - 0

Revision Information

This SDS supersedes a previous SDS dated 10/01/2010.

Disclaimer

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