



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

1. Identification of the substance or mixture and of the Supplier

- **Identification of the substance or preparation:**
Product name: Zinc Alloys for Galvanizing and Galvanizing Brighteners
Product Codes: 2XXX, 95XX, 96XX, 97xx, 99XX, ZNXX,
Synonyms: Brightener, 95/5, 92/8, 90/10, 85/15, Galfan, 5% Galfan, 10% Galfan, 15% Galfan, 18% Galfan, 20% Galfan, 28% Galfan, 30% Galfan, G5, G10, G15, zinc alloy for hot dip galvanizing
- **Use of the substance/preparation:**
Metal industry: hot dip galvanizing
- **Company/undertaking identification:**
Eastern Alloys, Inc.
PO Box 317
Henry Henning Drive
Maybrook, NY, 12543
Tel: 845 427 - 2151
Fax: 845 427 – 5185
jmalmgreen@eazall.com
- **Emergency telephone:**
24h: 845 427 – 2151

2. Hazards identification

- **GHS-US classification**
Not classified. This product is considered an article in its final form and not subject to the requirements for classification or labeling under 29 CFR 1910.1200.
- **EC Classification**
Not classified as dangerous according to the criteria of directive(s) 67/548/EEC and/or 1999/45/EC
- **Other hazards**
The melting down of moist metal leads to explosion risk
Heated product causes burns
Caution! This substance is subject to exposure limits
Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008
The melting down of moist metal leads to explosion risk
Heated product causes burns

3. Composition/information on ingredients

Substance/preparation: Preparation

Ingredient name	CAS number	%	EC number	Classification
Zinc	7440-66-6	69 – 100	231-175-3	Not classified
Aluminum	7429-90-5	0 - 30	231-072-3	Not classified
Cerium	7440-45-1	0 – 0.15	231-154-9	Not classified
Lanthanum	7439-91-0	0 – 0.15	231-099-0	Not classified



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

4. First aid measures

- **After inhalation:** After inhalation of fume: Remove the victim into fresh air: Respiratory problems: consult a doctor/medical service
- **Skin contact:** In case of burns: Wash immediately with lots of water (15 minutes)/shower; Remove clothing while washing; Do not tear off solidified product from the skin; Do not remove clothing if it sticks to the skin; Cover wounds with sterile bandage
Consult a doctor/medical service
If burned surface > 10%: take victim to hospital
- **Eye contact:** Rinse immediately with plenty of water for 15 minutes
Take victim to an ophthalmologist
- **After ingestion:** Not applicable

5. Fire-fighting measures

- **Suitable extinguishing media:** Use an extinguishing agent suitable for the surrounding fire. Typically, apply dry chemical, dry sand, or special powder extinguishing (Class D) media. Do NOT use water, carbon dioxide or foam on molten metals. Water may be ineffective for extinguishing a fire but should be used to keep fire exposed billets, ingots and castings cool.
- **Unsuitable extinguishing media:** If molten: no water
- **Special exposure hazards:** On burning formation of metallic fumes (zinc oxide)
In molten state: violent to explosive reaction with water (moisture)
- **Instructions:** Dilute toxic gases with water spray
In case of metal bath fire: add metal blocks
When cooling/extinguishing: no water in the substance
- **Special protective equipment for fire-fighters:** Gloves; Protective clothing
Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

- **Personal precautions:**
Personal protective equipment:
 - Respiratory protection from dust production: dust mask
 - Hand protection: gloves
 - Eye protection: safety eyewear
 - Skin protection: protective clothing
- **Environmental precautions:** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.
- **Methods for cleaning up:** If melted: allow liquid to solidify before taking it up
Pick-up the material; Wash clothing and equipment after handling

7. Handling and storage



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

- **Handling:** Avoid raising dust; Observe strict hygiene; Keep away from naked flames/heat
On (re)melting down: dry and preheat before use
Add only dry material to the metal bath
- **Safe storage requirements:** Store in a dry area; Keep at temperature above dew point
Keep away from: (strong) acids

8. Exposure controls/personal protection

- **Exposure limit values:**

Occupational exposure: If limit values are applicable and available these will be listed below.

Ingredient name	Occupational exposure limits
Zinc	ACGIH TLV (United States, 1/2005). TWA: 10 mg/m ³ 8 hour/hours. Form: Particulates (Insoluble) Not Otherwise Specified (PNOS)
Aluminum	ACGIH TLV (United States, 2003). Notes: TWA: 5 mg/m ³ 8 hour/hours. TWA: 10 mg/m ³ 8 hour/hours. Form: Dust TWA: 5 mg/m ³ 8 hour/hours. Form: Fume
Cerium	No TLV's exist for the individual rare earth elements
Lanthanum	No TLV's exist for the individual rare earth elements

- **Exposure controls:**

Carry out operations in well ventilated areas or with respiratory protection

Personal protective equipment:

- Respiratory protection from dust production: dust mask
- Hand protection: gloves; on heating: insulated gloves
- Eye protection: safety eyewear; on (re)melting: face shield & goggles/safety glasses
- Skin protection: protective clothing; on (re)melting: heat resistant clothing, safety footwear

9. Physical and chemical properties

- **General information:**

Physical form	Solid (ingots); Metal
Odor	Odorless
Color	Gray

- **Important health, safety and environmental information**

Boiling point	900 – 910 °C (1652 – 1670 °F)
Melting point	375 – 487 °C (714 – 903 °F)
Density	4.9 – 6.6 g/cm ³
Solubility	Insoluble in water; soluble in acids
Flash point	Not Applicable
Explosive properties	Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

10. Stability and reactivity

- **Conditions to avoid:**
Possible fire hazard: heat sources
Stability: Stable under normal conditions
Reactions: In molten state: violent to explosive reaction with water (moisture)
Oxidizes slowly in moist air
- **Materials to avoid:**
Strong acids
- **Hazardous decomposition products:**
Reacts with some acids: release of highly flammable gases/vapors (hydrogen)
On burning formation of metallic fumes (zinc oxide)

11. Toxicological information

- **Acute toxicity:** No (test)data on the mixture available.

Ingredient name	Test	Result	Route	Species
Zinc	LD50	2000 mg/kg	Oral	Rat
Zinc	LDLo	388 mg/kg	Oral	Duck

- **Potential chronic health effects**

Inhalation:

AFTER INHALATION OF DUST: Irritation of the nasal mucous membranes, dry/sore throat, coughing

AFTER INHALATION OF FUMES: Inhalation of fumes or very fine dust may lead to metal fever, a flu-like syndrome with symptoms of fever, chills, malaise and cough. The syndrome is benign and symptoms usually disappear after a few hours. Symptoms include: Feeling of weakness, vomiting, and nausea

Skin contact: In molten state: Burns

Eye contact: In molten state: Burns

Ingestion: No data available

12. Ecological information

- **Ecotoxicity:** No test data on the mixture available.

Ingredient name	Species	Period (hours)	Result
Zinc	Daphnia magna (EC50)	48	2.8 mg/l
	Pimephales promelas (LC50)	96	0.238 mg/l
	Oncorhynchus mykiss (LC50)	96	0.24 mg/l
	Oncorhynchus mykiss (LC50)	96	0.41 mg/l
	Oncorhynchus mykiss (LC50)	96	0.56 mg/l
	Daphnia magna (LC50)	96	0.57 mg/l
Aluminum	Oncorhynchus mykiss (LC50)	96	0.12 mg/l
	Oncorhynchus mykiss (LC50)	96	0.16 mg/l
	Oncorhynchus mykiss (LC50)	96	0.31 mg/l



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

- **Mobility:**
Volatile organic compounds (VOC) Not applicable
Solubility in/reaction with water Literature reports: insoluble in water
Substance sinks in water
- **Persistence and degradability:**
BOD20: Not applicable
Biodegradability: not applicable
- **Bioaccumulative potential:**
No bioaccumulation data available
- **Results of PBT assessment:**
Not applicable, based on available data
- **Other adverse effects:**
Not dangerous for the ozone layer (1999/45/EC)

13. Disposal considerations

- **Provisions relating to waste:**
Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.
Waste material code (Directive 2008/98/EC, decision 2001/118/EC) 11 01 99: wastes not otherwise specified
Can be considered as non-hazardous waste according to Directive 2008/98/EC
- **Disposal methods:**
The generation of waste should be avoided or minimized wherever possible.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Recycle/reuse. Remove waste in accordance with local and/or national regulations
- **Packaging/Container:** No available data.

14. Transportation information

- **US / Canada regulations**
U.S. DOT and Transport Canada Hazard Classification Not applicable
U.S. DOT and Transport Canada Product Identification Number Not applicable
Marine Pollutant No
IMO Classification Not regulated
- **International transport regulations**
ADR/RID: Not regulated
ADNR: Not regulated
IMO/IMDG: Not regulated
IATA Class: Not regulated



SAFETY DATA SHEET

In accordance with the requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

Zinc and Zinc Aluminum Alloys for Galvanizing

15. Regulatory information

- **U.S.**
 Ingredients Listed on TSCA Inventory Yes
 Hazardous Under Hazard Communication Standard No Ingredients Qualify
 CERCLA Section 103 Hazardous Substances Zinc Yes RQ: 1,000 lbs. (454 kg.)*
 * reporting not required when diameter of the pieces of solid metal released is equal to or exceeds 100 micrometers (0.004 inches).
 EPCRA Section 302 Extremely Hazardous Substance: No Ingredients Qualify
 EPCRA Section 311/312 Hazard Categories: No Hazard Categories Apply
 EPCRA Section 313 Toxic Release Inventory: This product does not contain any toxic chemicals
 subject to the Toxic Release reporting requirements. However, potential by-products from working with this product, "Zinc (Fume or Dust)" CAS 7440-66-6 and "Aluminum (Fume or Dust)" CAS 7429-90-5 are reportable.
- **CANADIAN:**
 Ingredients Listed on DSL: Yes
 WHMIS Classification: In ingot form, this product is not a Controlled Product under the CPR.
- **EUROPEAN UNION:**
 Ingredients Listed on the European Inventory of Existing Commercial Chemical Substances (EINECS): Yes
- **EU GHS CLP Classification:** Neither zinc nor aluminum is classified.

16. Other information

History

Date of issue: 10/1/13

Revision date: 12/5/14

Version: 002

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Each of the products covered by this document is considered an article in its final form and not subject to the requirements for classification or labeling under 29 CFR 1910.1200.

Notice to Reader

To the best of our knowledge, the information contained in this Safety Data Sheet is accurate and reliable and reasonable precautions have been taken in the preparation of the data contained herein. It is offered solely for your information, consideration and investigation. Eastern Alloys, Inc. and its subsidiaries extend no warranty and assume no responsibility for the accuracy of the content and expressly disclaims all liability for reliance thereon. This safety data sheet provides guidelines for the safe handling and processing of this product; it does not and cannot advise on all possible situations. Therefore, your specific use of this product should be evaluated to determine if additional precautions are required. This Safety Data Sheet shall not constitute a guarantee for any specific product features. Determination of suitability of this material is the sole responsibility of the user. All materials may present unknown hazards and should be used and handled with caution and following reasonable safety procedures. Consequently the buyer assumes all risks in connection with the use and handling of this material.