Safety Data Sheet

Date of Issue: 11/10/2023

ZINC ALLOY INSERTS (WITH Cr (+VI) FINISH)

Revision #: 0

SECTION 1: Identification

1.1 GHS Product Identifier:

Product Name: **ZINC ALLOY INSERTS (WITH Cr (+VI) FINISH)**

Brand: **EZ-LOK**

1.2 Other means of identification:

E-Z HEX Part Numbers (THREADED FOR SOFT WOOD / FLUSH:

800407-10 (M4-0.7 X 10MM), 800610-13 (M6-1.0 X 13MM), 800610-20 (M6-1.0 X 20MM), 800832-10 (8-32 X 10MM), 801024-10 (10-24 X 10MM), 801024-13 (10-24 X 13MM), 801032-10 (10-32 X 10MM), 801032-13 (10-32 X 13MM), 801420-10 (1/4-20 X 10MM), 801420-13 (1/4-20 X 13MM), 801420-20 (1/4-20 X 20MM), 808125-13 (M8-1.25 X 13 MM), 808125-20 (M8-1.25 X 20MM), 851618-13 (5/16-18 X 13MM), 851618-20 (5/16-18 X 20MM), 851618-25 (5/16-18 X 25MM).

E-Z HEX Part Numbers (THREADED FOR SOFT WOOD / FLANGED:

900407-10 (M4-0.7 X 10MM), 900610-13 (M6-1.0 X 13MM), 900610-20 (M6-1.0 X 20MM), 900832-10 (8-32 X 10MM), 901024-10 (10-24 X 10MM), 901024-11 (10-24 X 11MM), 901024-13 (10-24 X 13MM), 901024-20 (10-24 X 20MM), 901032-10 (10-32 X 10MM), 901032-11 (10-32 X 11MM), 901032-13 (10-32 X 13MM), 901032-20 (10-32 X 20MM), 901050-13 (M10-1.5 X 13MM), 901050-25 (M10-1.5 X 25MM), 901420-10 (1/4-20 X 10MM), 901420-13 (1/4-20 X 13MM), 901420-20 (1/4-20 X 20MM), 901420-25 (1/4-20 X 25MM), 901420-25 (1/4-20 X 25MM), 903816-13 (3/8-16 X 13MM), 903816-20 (3/8-16 X 20MM), 903816-25 (3/8-16 X 25MM), 908125-13 (M8-1.25 X 13MM), 908125-20 (M8-1.25 X 20MM), 951618-13 (5/16-18 X 13MM), 951618-20 (5/16-18 X 20MM), 951618-25 (5/16-18 X 25MM).

1.3 Recommended use of the material and restrictions on use:

Zinc Alloy Inserts (with Cr (+VI) Finish) are manufactured for use with soft wood materials.

Cr (+VI), also known as Hexavalent Chromium, is a hazardous form of the metallic element Chromium and is typically generated through industrial processes (i.e., chromate conversion coating applied to base metals, etc.).

Chromium (+VI) is used as an anti-corrosive finish.

European RoHS 3 Directive currently bans the use of 10 substances, one of which is Cr (+VI).

1.4 Supplier's details:

Name	**E-Z LOK**
Address	**240 E. Rosecrans Avenue** **Gardena CA 90248** **USA**
Telephone	**(310) 323-5613**
Fax	**(310) 353-3919**
Website	**www.ezlok.com**

1.5 Emergency phone number (s):

EZ-LOK	**800-234-5613**
CHEMTREC (24-hrs)	**800-424-9300**

SECTION 2: Hazard Identification

2.1 Classification of the substance, compound, or mixture:

GHS classification in accordance with: US OSHA (29 CFR 1910-1200)

- Flammable solids, Cat. 1, Cat. 2 / H228
- Self heating chemicals, Cat. 1 / H251
- Chemicals which, in contact with water, emit flammable gases (Cat. 2) / H261
- Oxidizing solution / H271
- Oxidizing liquids, Cat. 3 / H272
- Corrosive to metals, Cat. 1 / H290
- Acute toxicity, oral, Cat. 3 / H301
- Acute toxicity, oral, Cat. 5 / H303
- Acute toxicity, dermal. Cat. 3 / H311
- Skin Corrosion, Cat. 1A / H314
- Skin sensitivity, Cat. 1 / H317
- Causes serious eye damage, Cat. 1 / H318
- Eye irritation, Cat. 2A / H319
- Acute toxicity, inhalation, Cat 1 / H330
- Acute toxicity, inhalation, Cat. 3 / H331
- Respiratory sensitivity, Cat. 1 / H334
- Respiratory tract irritation, Cat. 3 / H335
- Mutagenicity, Cat. 1B . H340
- Germ cell mutagenicity, Cat. 2 / H341
- Carcinogen, Cat 1B, H350
- Carcinogenicity, Cat. 2 / H351
- Reproductive toxicity, Cat. 2 / H361
- Specific target organ toxicity following repeated exposure, Cat. 1 / H372
- Aquatic, acute, Cat. 1 / H400
- Very toxic to aquatic life with long lasting effects / H410
- Toxic to aquatic life, Chronic / H412, H413

2.2 GHS label elements, including precautionary statements:

Pictograms

1. Exclamation Mark **2. Health Hazard** **3. Corrosion** **4. Environment** **5. Flammable**

Signal Word: **DANGER**

Hazard statements:

H228	Flammable solids.
H251	Self heating chemicals.
H261	Chemicals which, in contact with water, emit flammable gases.

H271	May cause fire or explosion. Strong oxidizer.
H272	May intensify fire. Oxidizer.
H290	May be corrosive to metals.
H301, H311	Toxic if swallowed or in contact with skin.
H303	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H334	May cause allergy, asthma symptoms, or breathing difficulties.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility of the unborn child.
H372	Causes damage to organs through prolonged or repeated exposures.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412, H413	Toxic to aquatic life, Chronic.

Precautionary Statements:

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P220	Keep / store away from clothing or combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P223	Do not allow contact with water.
P231, P232	Manage under inert gas. Protect from moisture.
P234	Keep only in original container.
P235, P410	Keep cool. Protect from sunlight.
P240	Ground or bond container and receiving equipment.
P260	Do not breathe dust, fumes, gas, mist, vapor, spray.
P261	Avoid breathing machined dusts, fumes, gases, mists, vapors, or sprays.
P264	Wash hands thoroughly after managing this product.
P270	Do not eat, drink, or smoke when managing this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280, P281	Use personal protective equipment as required.
P283	Wear fireproof, flame resistant, or fire-retardant clothing as required.
P284	Wear respiratory protection.
P285	In case of inadequate ventilation, wear respiratory protection.

Response:

P301, P330, P331	**IF SWALLOWED**: Rinse mouth, do not induce vomiting.
P303, P361, P353	**IF ON SKIN**: Remove / take off immediately all contaminated clothing. Rinse or shower.
P314	**IF SWALLOWED**: Call a **POISON CENTER** or doctor / physician if you feel unwell.
P302, P352	**IF ON SKIN**: Lightly brush machined dusts from skin. Rinse the skin with soap and water.
P304, P340	**IF INHALED**: Remove worker to fresh air and keep in a position comfortable for breathing.
P305, P338, P351	**IF IN EYES**: Remove contact lens (if present). Rinse cautiously with water for 15 minutes.
P306, P360	**IF ON CLOTHING**: Rinse contaminated clothing or skin immediately.
P310	**IMMEDIATELY CALL**: Poison center or doctor / physician.
P334, P335	**IF ON SKIN**: Brush off loose particles from skin. Immerse in cool water. Wrap in wet bandages.
P337, P313	**IF EYE IRRITATION PERSISTS**: Get medical advice / attention.
P308, P313	**IF EXPOSED** (or concerned): Get medical advice / attention.
P363	**IF CLOTHING IS CONTAMINATED**: Wash before reuse.
P370, P378	**IN CASE OF FIRE**: Use dry sand, dry chemical, or alcohol resistant foam to extinguish.
P371, P380, P375	**IN CASE OF FIRE**: Evacuate area. Fight fire remotely due to risk of explosion.
P333, P313	**IF SKIN IRRITATION OR A RASH OCCURS:** Get medical advice / attention.
P341, P342, P311	**IF EXPERIENCING RESPIRATORY SYMPTOMS:** Get medical advice / attention.
P390	**IF SPILLED**: Absorb spillage to prevent material damage.
P391	**IF SPILLED, COLLECT SPILLAGE:** Use a proper disposal container.

Storage:

P402, P404	Store in a dry place. Store in a closed container.
P403, P233, P235	Store in a well-ventilated place. Keep cool.
P405	Store in a secure location.
P406	Store in a corrosive resistant container.
P407	Maintain air gap between stacks / pallets.
P420	Store away from other materials.

Disposal:

P501	Dispose of contents / container in accordance with disposal regulations.

2.3 Other hazards which do not result in classification:

Zinc Alloy Inserts (with Cr (+VI) Finish) is **INERT** in its solid form.
Zinc Alloy Inserts (with Cr (+VI) Finish) present minor inhalation, ingestion, and contact health hazards.
User-generated dust, fumes, and mists may pose a hazard if inhaled or ingested.
Avoid inhalation of metal dusts and fumes.
Dust may be irritating to the unprotected skin or eyes.
Metal dust / fumes may cause an influenza-like illness.
Avoid skin / eye contact with dusts to prevent mechanical irritation.
Section 3 (3.1) is a summary of compounds typically found in Zinc Alloy Inserts.
Section 3 (3.2) is a summary of compounds typically found in Hexavalent Rainbow Color Chromate Solutions.
Various grades of Zinc Alloy Inserts (with Cr (+VI) Finish) will contain different combinations of these compounds.
Other trace elements may also be present in minute amounts.
These small quantities (less than 0.1 %) are frequently referred to as "trace" or "residual" compounds.

SECTION 3: Composition / Information On Ingredients

3.1 Zinc Alloy Inserts - Components / Compounds:

1. Zinc Alloy
Concentration **95.0 % (weight)**
EC no. 231-175-3
CAS no. 7440-66-6

2. Aluminum
Concentration **4.0 % (weight)**
EC no. 231-072-3
CAS no. 7429-90-5

3. Copper
Concentration **0.02 % (weight)**
EC no. 231-159-6
CAS no. 7440-50-8

4. Magnesium
Concentration **0.04 % (weight)**
EC no. 231-104-6
CAS no. 7439-95-4

5. Iron
Concentration **0.003 % (weight)**
EC no. 231-096-4
CAS no. 7439-89-6

6. Lead
Concentration **0.001 % (weight)**
EC no. 231-100-4
CAS no. 7439-92-1

7. Cadmium
Concentration **0.0002 % (weight)**
EC no. 231-152-8
CAS no. 7440-43-9

8. Tin
Concentration **0.0009 % (weight)**
EC no. 231-141-0
CAS no. 7440-31-5

3.2 Hexavalent Rainbow Color Chromate Solution – Components / Compounds:

1. Chromic Acid
Concentration **12.0 % (volume / concentration)**
EC no. 231-801-5
CAS no. 7738-94-5

2. Nitric Acid
Concentration **2.5 % (volume / concentration)**
EC no. 231-714-2
CAS no. 7697-37-2

3. Sulfuric Acid
Concentration **1.5 % (volume / concentration)**
EC no. 231-639-5
CAS no. 7664-93-9

4. Distilled Water
Concentration **84.0 % (volume / concentration)**
EC no. 231-791-2
CAS no. 7732-18-5

SECTION 4: First-Aid Measures

4.1 Description of necessary first-aid measures:

General advice: In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

If inhaled: If inhaled, remove the worker to fresh air and keep in a comfortable position.
Obtain medical attention if breathing difficulty persists.
Inhalation of large amounts of particulates generated by this product during metal processing operations may result in irritation.
Inhalation of dust & fumes of Chromium (Cr), Copper (Cu), Nickel (Ni) & Cobalt (Co) (components of this product) can cause metal fume fever.

In case of skin contact: Cool skin rapidly with soap and cold water.
Remove contaminated clothing.
Wash contaminated clothing before reuse.
Obtain medical attention if irritation develops or persists.

In case of eye contact: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open.
Remove contact lenses (if worn).
Continue rinsing.
Obtain medical attention if irritation develops or persists.

If swallowed: If swallowed, do not induce vomiting.
Seek medical advice immediately.

PPE for first-aid responders: Ensure that emergency responders & medical personnel are aware of the materials involved, and they take precautions to protect themselves.

4.2 Most important symptoms / effects, acute and delayed:

ACUTE EFFECTS: Excessive exposure, elevated temperatures, or mechanical actions may form dusts and fumes which may be irritating to the eye, mucous membranes, and respiratory tract.

CHRONIC EFFECTS: Prolonged inhalation of fumes or dusts may cause a variety of adverse health effects to the respiratory system, including lesions of the mucous membrane, bronchitis, pneumonia, and cancers of the nasal cavity and respiratory tract.

POTENTIAL HEALTH EFFECTS AGGRAVATED BY EXPOSURE: Any pre-existing chronic respiratory condition (asthma, chronic bronchitis, and emphysema).

ROUTES OF ENTRY: Inhalation, Contact, Ingestion.

Compounds of Zinc Alloy Inserts (with Cr (+VI) Finish): Lead, Cadmium, and Chromium (+VI) are listed as Human Carcinogens.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Provide general supportive measures and treat symptomatically.
Keep the worker under observation and in a well-ventilated area.
Symptoms may be delayed.

SECTION 5: Fire-fighting Measures

5.1 Suitable extinguishing media:

Use extinguishing media appropriate for the surrounding fire (water spray, foam, dry chemical, or carbon dioxide).
Do not use halogenated extinguishing agents on small metal chips or fine dusts.

5.2 Specific hazards arising from the substance or mixture:

When involved in a fire, this product may decompose and produce Oxides of Carbon, Oxides of Nitrogen, Irritating Organic Vapors, Oxides of Aluminum, Oxides of Phosphorus, Oxides of Sulfur, and Acrylic Monomers.
Avoid breathing dust, fumes, gases, mist, vapors, and sprays.
If safe to do so, remove products from path of fire.
Contact with acids will release flammable hydrogen gases.
During the fire, gases hazardous to health may be formed.

5.3 Special protective actions for fire-fighters:

Incipient fire responders should obtain / wear eye protection, breathing apparatus, and protective gloves.
Keep materials / containers cool with water spray.
Do not use high pressure water jet as an extinguisher, as this may spread the fire.
If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

5.4 Further information:

Products are non-flammable, non-combustible at low temperatures, but will burn at high temperatures.
Use standard firefighting procedures and consider the hazards of other involved materials.
Move products from the immediate fire area if you can do so without personal risk.
Emergency response equipment should be thoroughly decontaminated after use.
No unusual fire or explosion hazards noted.

5.5 Emergency Response Guidebook (ERG) / Guide Numbers:

#137 (Sulfuric Acid)
#138 (Magnesium)
#151 (Lead)
#154 (Chromium, Chromic Acid, Cadmium)
#157 (Nitric Acid)

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures:

Isolate the immediate area.
Keep people away from any spill, leak, or fire.
Metal dust deposits should not be allowed to accumulate on nearby surfaces.
Wear appropriate protective equipment and clothing during clean-up.
Do not breathe dust generated during machining, grinding, or cutting operations.
Use a NIOSH / MSHA approved respirator if exposed to dusts / fumes at levels exceeding the exposure limits.
Ensure adequate ventilation in the immediate area.
Zinc Alloy Inserts in a solid form will have minimal impact if an accidental spill of products occur.

6.2 Environmental precautions:

Do not allow spills or machined dusts to discharge into drains, water courses, or onto nearby exposed soils.
Use good hygiene practices.
Wash hands before eating, drinking, smoking, or using toilet facilities.
Promptly remove soiled clothing and wash them thoroughly before reuse.

6.3 Methods and materials for containment and cleaning up:

Products can be contained by shovels and brooms (solid products).
Eliminate all ignition sources (no smoking, flares, sparks, or open flames in the immediate area).
Avoid dispersal of metallic dust in the air (i.e., cleaning dust surfaces with compressed air).
Collect dust using a HEPA filtered vacuum device.
Recover and recycle product machining material (if practical).

Large Spills:

Wet down immediate area with water and dike/contain the water / dust debris for later disposal.
Following product recovery, flush affected area with rinse water.
Place cleaned up products into properly labeled & secured DOT storage containers.

Small Spills:

Sweep up or vacuum spillage and collect in suitable, covered, and labeled containers for later disposal.

SECTION 7: Handling And Storage

7.1 Precautions for safe handling:

Obtain special handling instructions before use.
Minimize activities which may generate dust, mist, or fumes.
Routine housekeeping should be instituted to ensure that dust does not accumulate on nearby work surfaces.
Periodically wipe-down immediate work areas to prevent the accumulation of dust.
Keep away from heat, sparks, open flames, or other hot surfaces.
Do not eat, drink, smoke, or apply cosmetics while managing this product.
Do not breathe dust generated from machining operations.
Avoid prolonged contact with eyes, skin, and clothing.
Wear appropriate personal protective equipment.
Wash hands thoroughly after handling.
Observe good industrial hygiene practices.
Provide adequate ventilation.
Handling and processing operations should be conducted in accordance with best management procedures.

7.2 Conditions for safe storage, including any incompatibilities:

Keep material containers tightly closed in a dry, cool, and well-ventilated location.
All employees who manage this product should be trained to handle it safely.
Handle containers carefully to prevent damage and spillage.
Packages of this material must be properly labeled.
Store with other metal products.
Store away from incompatibles.

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters / Exposure Data:

1. Zinc Alloy (CAS: 7440-66-6 / EC: 232-175-3)

US / OSHA:	None Established
ACGIH:	**TWA 10 mg/m3 (8 Hours) / Particulates (Insoluble)**
NIOSH:	None Established

2. Aluminum (CAS: 7429-90-5 / EC: 231-072-3)

US / OSHA:	**TWA 10 mg/m3 (Total) TWA 5 mg/m3 (Respirable)**
ACGIH:	**TWA 2.0 mg/m3 (Soluble Salts)**
NIOSH:	**TWA 10 mg/m3 (Dust) TWA 5 mg/m3 (Fume)**

3. Copper (CAS: 7440-50-8 / EC: 231-159-6)

US / OSHA:	None Established
ACGIH:	**TWA 1.0 mg/m3 (Dust & Mist) / 0.2 mg/m3 (Fume)**
NIOSH:	None Established

4. Magnesium (CAS: 7439-95-4 / EC: 231-104-6)

US / OSHA:	None Established
ACGIH:	None Established
NIOSH:	None Established

5. Iron (CAS: 7439-89-6 / EC: 231-096-4)

US / OSHA:	None Established
ACGIH:	None Established
NIOSH:	None Established

6. Lead (CAS: 7439-92-1 / EC: 231-100-4)

US / OSHA:	**TWA 50 ug/m3**
ACGIH:	**TWA 0.5 mg/m3**
NIOSH:	**TWA 0.050 mg/m3**

7. Cadmium (CAS: 7440-43-9 / EC: 231-152-8)

US / OSHA:	**TWA 0.2 mg/m3**
ACGIH:	**TLV 0.01 mg/m3**
NIOSH:	**IDLH 9 mg/m3**

8. Tin (CAS: 7440-31-5 / EC: 231-141-0)

US / OSHA:	**TWA 2 mg/m3**
ACGIH:	**TWA 2 mg/m3**
NIOSH:	**TWA 2 mg/m3**

9. Chromic Acid (CAS: 1333-82-0 / EC: 231-801-5)

US / OSHA:	**TWA 0.005 mg/m3**
ACGIH:	**TWA 0.05 mg/m3**
NIOSH:	None Established

10. Nitric Acid (CAS: 7697-37-2 / EC: 231-714-2)

US / OSHA:	**TWA 5 mg/m3 (2 ppm)**
ACGIH:	**TWA 5 mg/m3 (2 ppm)**
NIOSH:	**TWA 5 mg/m3 (2 ppm)**

11. Sulfuric Acid (CAS: 7664-93-9 / EC: 231-639-5)

US / OSHA:	**TWA 1 mg/m3**
ACGIH:	**TWA 0.2 mg/m3**
NIOSH:	**TWA 1 mg/m3**

Carcinogen Data:

1. Zinc Alloy (CAS: 7440-66-6 / EC: 232-175-3)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

2. Aluminum (CAS: 7429-90-5 / EC: 231-072-3)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

3. Copper (CAS: 7440-50-8 / EC: 231-159-6)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

4. Magnesium (CAS: 7439-95-4 / EC: 231-104-6)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

5. Iron (CAS: 7439-89-6 / EC: 231-096-4)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

6. Lead (CAS: 7439-92-1 / EC: 231-100-4)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / **Suspected: YES**
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, **Group 2b: YES**, Group 3: NO, Group 4: NO

7. Cadmium (CAS: 7440-43-9 / EC: 231-152-8)

US / OSHA:	**Select Carcinogen: YES**
NTP:	**Known: YES** / Suspected: NO
ACGIH:	**Confirmed As A Human Carcinogen**
IARC:	**Group 1: YES**, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

8. Tin (CAS: 7440-31-5 / EC: 231-141-0)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

9. Chromic Acid (CAS: 7438-94-5 / EC: 231-801-5)

US / OSHA:	**Select Carcinogen: YES**
NTP:	**Known: YES** / Suspected: NO
ACGIH:	**Confirmed As A Human Carcinogen**
IARC:	**Group 1: YES**, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

10. Nitric Acid (CAS: 7697-37-2 / EC: 231-714-2)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

11. Sulfuric Acid (CAS: 7664-93-9 / EC: 231-639-5)

US / OSHA:	Select Carcinogen: NO
NTP:	Known: NO / Suspected: NO
ACGIH:	Not Classifiable As A Human Carcinogen
IARC:	Group 1: NO, Group 2a: NO, Group 2b: NO, Group 3: NO, Group 4: NO

8.2 Appropriate engineering controls:

Use local exhaust ventilation.
Ventilation rates should be matched to exposure conditions.
If exposure limits have not been established, maintain airborne dust levels to an acceptable limit.
If exposure limits are known, maintain dust levels below those that cause suspected, or adverse effects.

8.3 Individual protection measures, such as personal protective equipment (PPE):

Pictograms:

Eye / Face protection:

Safety glasses with side shields are required (refer to OSHA 29 CFR 1910.133).
Contact lens may present a special hazard where soft contact lens may absorb and concentrate irritants.
A written policy document, describing the wearing of lens, or the restrictions on use, should be created for each workplace/task where Zinc Alloy Inserts (with Cr (+VI) Finish) products are machined, managed, or stored.
Unvented, tight-fitting goggles should be worn in dusty areas.
Use of safety glasses or goggles is required for welding, burning, sawing, brazing, grinding, or machining operations.
When welding, safety glasses, goggles, or face-shield shall be fitted with filter lens of appropriate shade number.
Ensure that an eye wash station is located within 60 feet, or 10 walking seconds, of the work areas where Zinc Alloy Inserts (with Cr (+VI) Finish) are machined, managed, or stored.

Skin protection:

Wear suitable gloves to prevent cuts, abrasions, and skin contact exposures.
When Zinc Alloy Inserts (with Cr (+VI) Finish) materials are heated, wear gloves to protect against thermal burns.
Wear clothing overgarments if available (i.e., chemical resistant clothing, impervious work apron, etc.).

Body protection:

Body protection is required when the product is being machined, cut, welded, or heated to a temperature where metallic vapors are developed.

Personal Protective Equipment recommended includes the use of safety glasses, goggles, or a face shield, rubber, cotton, or leather gloves, a lab coat, smock, or TYVEK type body suit, and a respirator that is selected by the hazards that the worker is exposed to.

When using or managing the product in its final form, no special personal protective equipment is required.

Respiratory protection:

Not required when handling Zinc Alloy Inserts (with Cr (+VI) Finish) in a solid form.
When workers are facing concentrations above the specified exposure limits, they must use certified respirators.
Dust masks / half-face air purifying respirators with inorganic dust cartridges can be used in areas when Zinc Alloy Inserts (with Cr (+VI) Finish materials are machined or re-surfaced during grinding operations.
Half-face / full-face air purifying respirators with organic fume cartridges are required when Zinc Alloy Inserts (with Cr (+VI) Finish) materials are welded, burned, or heated.
Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH / MSHA approved respirators that have been selected after worker fit testing procedures have been completed.
Oxygen levels below 19.5% are considered IDLH by OSHA.
In such atmospheres, use of a full-face pressure demand SCBA or a full-face, supplied air respirator is required.

Thermal hazards:

Wear appropriate thermal protective clothing, when necessary.

Control banding approach:

Not Applicable

Environmental exposure controls:

Not Applicable

SECTION 9: Physical And Chemical Properties

Appearance	**Solid / Rainbow Colored Finish**
Odor	**Odorless**
pH	**NA**
Melting point/freezing point	**2550 F.**
Initial boiling point and boiling range	**NA**
Flash point	**NA**
Evaporation rate	**NA**
Flammability (solid, dusts, gas)	**NA**
Upper/lower flammability or explosive limits	**NA**
Vapor pressure	**Solid**
Vapor density	**Solid**
Relative density	**NA**
Solubility	**Insoluble**
Partition coefficient: n-octanol/water	**NA**
Auto-ignition temperature	**NA**
Decomposition temperature	**NA**
Viscosity	**NA**
Specific Gravity	**7.0 – 8.0**

Additional properties:

Physical state	**Solid**
Color	**Rainbow Colored Finish**
Explosive properties	**None**
Oxidizing properties	**None**
Particle characteristics	**NA**

Supplemental information regarding physical hazard classes:

Zinc Alloy Inserts (with Cr (+VI) Finish will not mix with water (insoluble).

Zinc Alloy Inserts (with Cr (+VI) Finish will sink in water.

SECTION 10: Stability And Reactivity

10.1 Reactivity:

This product is stable and non-reactive under normal conditions of use, storage, and transport.
Hazardous polymerization will not occur (Zinc Alloy (with Cr (+VI) Finish).

10.2 Chemical stability:

Zinc Alloy Inserts (with Cr (+VI) Finish) are stable under recommended handling, use, and storage conditions.

10.3 Possibility of hazardous reactions:

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.
Keep away from strong acids.

10.4 Conditions to avoid:

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.
Prevent Zinc Alloy Inserts (with Cr (+VI) Finish) from contacting incompatible materials.
Minimize dust & fume generation and accumulation.

10.5 Incompatible materials:

Zinc Alloy Inserts (with Cr (+VI) Finish): Strong acids (Sulfuric, Hydrochloric, Nitric)

10.6 Hazardous decomposition products:

Zinc Alloy Inserts (with Cr (+VI) Finish): Metal Fumes.
Hazardous decomposition is not expected under normal conditions of use and storage.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects: Zinc Alloy Inserts (with Cr (+VI) Finish)

Acute toxicity:

Category 5 / acutely toxic / oral / may be harmful if swallowed.
Category 3 / acutely toxic / oral / toxic if swallowed.
Category 3 / acutely toxic / dermal / toxic in contact with skin.
Category 3 / acutely toxic / inhalation / may be toxic if inhaled.
Category 1 / acutely toxic / inhalation / may be fatal if inhaled.

Skin corrosion / irritation:

Category 1A / causes severe skin burns.
Category 1 / may cause an allergic skin reaction.
Hot Zinc Alloy materials may produce thermal burns to exposed skin.

Serious eye damage / irritation:

Category 2A / causes serious eye irritation.
Category 1 / causes serious eye damage.
Elevated material temperatures or mechanical actions may form dust and fumes which may be irritating to the eyes.

Respiratory or skin sensitization:

Category 1 / may cause breathing difficulties if inhaled.
Category 3 / may cause respiratory irritation.
Is a respiratory sensitizer.
Zinc Alloy Inserts (with Cr (+VI) Finish dusts may cause discomfort or irritant to the respiratory / gastro-intestinal tract.

Germ cell mutagenicity:

Category 2 / suspected of causing genetic defects.
Category 1B / may cause genetic defects.

Carcinogenicity: Suspected of causing cancer in humans:

Category 1B / may cause cancer.
Category 2 / suspected of causing cancer.
Lead (CAS: 7439-92-1), Cadmium (CAS: 7440-43-9), Chromic Acid (CAS: 1333-82-0).

Reproductive toxicity:

Not applicable.

Specific target organ toxicity (STOT) - single exposure:

Not applicable.

Specific target organ toxicity (STOT) - repeated exposure:

Category 1 / Causes damage to organs (blood, CNS, kidneys, lungs, liver) through prolonged or repeated exposure.

Aspiration hazard:

Accidental swallowing / aspiration is possible due to the size and shape of the final Zinc Allow Insert (with Cr (+VI) Finish product.

Aquatic:

Category 1 / very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.
Toxic to aquatic life / chronic.

SECTION 12: Ecological Information

12.1 Information on Ecological effects:

Toxicity:

This product has compounds which are toxic to aquatic life (Cr+VI, Aluminum, Zinc, Copper, Lead, Chromic Acid).
The components are metal and are expected to persist in the environment for extended periods of time.
Zinc Alloy Inserts (with Cr (+VI) Finish), in its final form, present a limited hazard for the environment.

Persistence and degradability:

Zinc Alloy Inserts (with Cr (+VI) Finish) consists of inorganic & organic compounds which are biodegradable.

Bioaccumulative potential:

Not measured.

Mobility in soil:

Zinc Alloy Inserts (with Cr (+VI) Finish), in its final form, is not mobile in the environment.

Results of PBT and vPvB assessment:

PBT and vPvB Assessment is not required due to less than 10 tons of this product being manufactured and / or exported per year.
This product contains no PBT / vPvB chemical compounds.
This product is not considered to be a biocidal active substance.

Other adverse effects:

No other adverse environmental effects are expected from this product.
Avoid release into sewers or the environment.

SECTION 13: Disposal Considerations

13.1 Information on disposal requirements:

Product disposal:

Dispose of Zinc Alloy Inserts (with Chromium (+VI) Finish) and any residues in accordance with federal, state, and local regulations.
Recover and recycle Zinc Alloy Inserts (with Cr (+VI) Finish) and any residues wherever possible.
Consult State Land Waste Management Authority for disposal instructions.
Bury products / residues in an authorized landfill (if metal material is not recovered or recycled).

Packaging disposal:

Emptied packaging may retain product residue.
Follow label warnings even after the packaging is emptied.
Contaminated packaging should be transported to an approved waste handling site for recycling or disposal.

Waste treatment:

Transport Zinc Alloy Inserts (with Cr (+VI) Finish) and any residues to a licensed Treatment Storage Disposal Facility (TSDF) to allow for recycling, treatment, or disposal activities.

Sewage disposal:

This product and its residues are not suited for disposal in the sewer system.
Dispose in accordance with applicable regulations.

Other disposal recommendations:

This product (if unaltered by use) may be disposed of by treatment at a permitted facility or as advised by local solid waste regulatory authorities.
Zinc Alloy Inserts (with Cr (+VI) Finish) and any residual wastes should be analyzed for Toxicity Characteristic Leaching Procedure (TCLP) to determine if levels of **Zinc, Chromium (+VI), Copper, Lead, and Cadmium** exceed regulatory limitations and need to be disposed of as hazardous wastes.

SECTION 14: Transport Information

14.1 Transport data:

DOT (US): Domestic Surface Transportation

UN Number:	Not Applicable
UN Shipping Name:	**Zinc Alloy**
Transport Class:	Not Applicable
Packing Group:	Not Applicable
Environmental Hazards:	**Marine Pollutant**

UN Number:	Not Applicable
UN Shipping Name:	**Aluminum**
Transport Class:	Not Applicable
Packing Group:	Not Applicable
Environmental Hazards:	**Marine Pollutant**

UN Number:	Not Applicable
UN Shipping Name:	**Copper**
Transport Class:	Not Applicable
Packing Group:	Not Applicable
Environmental Hazards:	**Marine Pollutant**

UN Number:	**UN1869**
UN Shipping Name:	**Magnesium**
Transport Class:	**4.1**
Packing Group:	**III**
Environmental Hazards:	Not Applicable

UN Number:	**UN3089**
UN Shipping Name:	**Iron, Metal Powder**
Transport Class:	**4.1**
Packing Group:	**III**
Environmental Hazards:	Not Applicable

UN Number:	**UN3077**
UN Shipping Name:	**Lead, Environmentally Hazardous Substance, Solid, N.O.S.**
Transport Class:	**9**
Packing Group:	III
Environmental Hazards:	**Marine Pollutant**

UN Number:	**UN2930**
UN Shipping Name:	**Cadmium, Toxic Solid, Flammable, Organic, N.O.S.**
Transport Class:	**6.1 / 4.1**
Packing Group:	**I**
Environmental Hazards:	**Marine Pollutant**

UN Number:	Not Applicable
UN Shipping Name:	**Tin**
Transport Class:	Not Applicable
Packing Group:	Not Applicable
Environmental Hazards:	Not Applicable

UN Number:	**UN1463**
UN Shipping Name:	**Chromic Acid, Chromium Trioxide, Anhydrous**
Transport Class:	**5.1 / 6.1 / 8**
Packing Group:	**II**
Environmental Hazards:	**Marine Pollutant**

UN Number:	**UN2031**
UN Shipping Name:	**Nitric Acid**
Transport Class:	**8 / 5.1**
Packing Group:	**II**
Environmental Hazards:	**Marine Pollutant**

UN Number:	**UN1830**
UN Shipping Name:	**Sulfuric Acid**
Transport Class:	**8**
Packing Group:	**II**
Environmental Hazards:	**Marine Pollutant**

IMO / IMDG: Ocean Transportation

Proper Shipping Name:	**Zinc Alloy**
Hazard Class Or Division:	**Marine Pollutant (IMDG)**
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Aluminum**
Hazard Class Or Division:	**Marine Pollutant (IMDG)**
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Copper**
Hazard Class Or Division:	**Marine Pollutant (IMDG)**
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Magnesium**
Hazard Class Or Division:	**4.1**
Identification Number:	**UN1869**
Packing Group:	**III**

Proper Shipping Name:	**Iron, Metal Powder**
Hazard Class Or Division:	**4.1**
Identification Number:	**UN3089**
Packing Group:	Not Regulated

Proper Shipping Name:	**Lead**
Hazard Class Or Division:	**9**
Identification Number:	**UN3077**
Packing Group:	**III**

Proper Shipping Name:	**Cadmium**
Hazard Class Or Division:	**6.1 / 4.1**
Identification Number:	**UN2930**
Packing Group:	**I**

Proper Shipping Name:	**Tin**
Hazard Class Or Division:	Not Regulated
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Chromic Acid, Chromium Trioxide, Anhydrous**
Hazard Class Or Division:	**5.1 / 6.1**
Identification Number:	**UN1463**
Packing Group:	**II**

Proper Shipping Name:	**Nitric Acid**
Hazard Class Or Division:	**8 / 5.1**
Identification Number:	**UN2031**
Packing Group:	**II**

Proper Shipping Name:	**Sulfuric Acid**
Hazard Class Or Division:	**8**
Identification Number:	**UN1830**
Packing Group:	**II**

ICOA / IATA: Air Transportation

Proper Shipping Name:	**Zinc Alloy**
Hazard Class Or Division:	Not Regulated
Identification number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Aluminum**
Hazard Class Or Division:	Not Regulated
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Copper**
Hazard Class Or Division:	Not Regulated
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Magnesium**
Hazard Class Or Division:	**4.1**
Identification Number:	**UN1869**
Packing Group:	**III**

Proper Shipping Name:	**Iron, Metal Powder**
Hazard Class Or Division:	**4.1**
Identification Number:	**UN3089**
Packing Group:	**III**

Proper Shipping Name:	**Lead**
Hazard Class Or Division:	**9**
Identification Number:	**UN3077**
Packing Group:	**III**

Proper Shipping Name:	**Cadmium**
Hazard Class Or Division:	**6.1 / 4.1**
Identification Number:	**UN2930**
Packing Group:	**I**

Proper Shipping Name:	**Tin**
Hazard Class Or Division:	Not Regulated
Identification Number:	Not Regulated
Packing Group:	Not Regulated

Proper Shipping Name:	**Chromic Acid**
Hazard Class Or Division:	**5.1 / 6.1 / 8**
Identification Number:	**UN1463**
Packing Group:	II

Proper Shipping Name:	**Nitric Acid**
Hazard Class Or Division:	**8 / 5.1**
Identification Number:	**UN2031**
Packing Group:	**II**

Proper Shipping Name:	**Sulfuric Acid**
Hazard Class Or Division:	**8**
Identification Number:	**UN1830**
Packing Group:	**II**

SECTION 15: Regulatory Information

15.1 Safety, health, and environmental regulations specific for the products in question:

California Prop. 65 Components:

Lead (CAS 7439-92-1) Carcinogen, Developmental Toxicity, Reproductive Toxicity (Male / Female), **Cadmium** (CAS 7440-43-9) Carcinogen, Developmental Toxicity, Reproductive Toxicity (Male), **Chromic Acid** (7738-94-5) Carcinogen, **Sulfuric Acid** (CAS 7664-93-9) Carcinogen.

CERCLA Hazardous Substance List (40 CFR 302.4):

Zinc (CAS 7440-66-6).

Massachusetts Right To Know Components:

Copper (CAS 7440-50-8), **Lead** (CAS 7439-92-1), **Cadmium** (CAS 7440-43-9), **Sulfuric Acid** (CAS 7664-93-9), **Zinc** (CAS 7440-66-6).

New Jersey Right To Know Components:

Copper (CAS 7440-50-8), **Lead** (CAS 7439-92-1) Hazardous Substance, **Cadmium** (CAS 7440-43-9), **Zinc** (CAS 7440-66-6).

Pennsylvania Right To Know Components:

Copper (CAS 7440-50-8), **Lead** (CAS 7439-92-1) Environmental Hazard, **Cadmium** (CAS 7440-43-9), **Sulfuric Acid** (CAS 7664-93-9), **Zinc** (CAS 7440-66-6).

Illinois Right To Know Components:

Cadmium (CAS 7440-43-9).

Rhode Island Right To Know Components:

Cadmium (CAS 7440-43-9), **Zinc** (CAS 7440-66-6).

SARA 311/312 Hazards:

Magnesium (7439-95-4) Fire Hazard, Reactivity Hazard, Chronic Health Hazard, **Copper** (CAS 7440-50-8) Flammable Solid, Toxic to Aquatic Life, Eye & Respiratory Irritation, **Lead** (7439-92-1), Delayed (Chronic) Health Hazard, **Cadmium** (CAS 7440-43-9) Toxic Pollutant, **Tin** (7440-31-5) Acute Health Hazard, **Chromic Acid** (7738-94-5) Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard, **Nitric Acid** (CAS 7697-37-2) Reactivity Hazard, Chronic Health Hazard, **Sulfuric Acid** (CAS 7664-93-9) Acute Health Hazard, Chronic health Hazard.

Chromium (5,000 lbs., **Copper** (5,000 lbs.).

SARA 313 Components:

Zinc (Fume or Dust) (CAS 7440-66-6), **Copper** (CAS 7440-50-8), **Lead** (7439-92-1), **Cadmium** (CAS 7440-43-9), **Chromic Acid** (CAS 7738-94-5), **Nitric Acid** (CAS 7697-37-2), **Sulfuric Acid** (CAS 7664-93-9).

Toxic Substances Control Act (TSCA) Inventory:

Zinc (CAS 7440-66-6), **Aluminum** (CAS 7429-90-5), **Copper** (CAS 7440-50-8), **Chromium** (CAS 7440-47-3), **Magnesium** (CAS 7439-95-4), **Iron** (CAS 7439-89-6), **Cadmium** (CAS 7440-43-9), **Tin** (CAS 7440-31-5), **Chromic Acid** (CAS 7738-94-5), **Nitric Acid** (CAS 7697-37-2).

15.2 Chemical Safety Assessment:

A chemical safety assessment was not conducted for this product by the manufacturer or material supplier.

HMIS Rating:

Zinc Alloy Inserts (with Cr (+VI) Finish	
HEALTH	4
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	A

NFPA Rating:

Health: 4, Flammability: 1, Instability: 1

SECTION 16: Other Information

16.1 Further information/disclaimer:

E-Z LOK cannot anticipate all conditions under which this information and its products, or the products of other manufacturers in combination with its products, may be used.

The information included herein is not intended to be all-inclusive as to the appropriate manner and/or conditions of use, handling, and/or storage.

It is the user's responsibility to ensure safe conditions for handling, storage, and disposal of the product, and to assume liability for loss, damage, or expense due to improper use.

The information in this safety data sheet was written based upon knowledge and experience available at the time of authoring.

EZ-LOK makes no representation or warranty, express or implied, including the warranties of merchantability and fitness, for a purpose with respect to the information contained herein.

OSHA Standard 29 CFR 1910.1200 requires that information be provided to workers regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training, and access to written records.

It is EZ-LOK's legal duty to make all information in this safety data sheet available to workers, visitors, vendors, contractors, and/or end users of the product.

16.2 Preparation information:

Prepared by: Ray E. Fletcher / SYTECH Environmental Services, Inc. / sytechservices@outlook.com

Date Prepared (Initial Version): November 10, 2023