

15117 Washington Highway  
P. O. Box 1055 Ashland VA

Phone: (804) 227-3381

Fax: (804) 227-3404

CHEMTREC: (800) 424-9300

Poision Center: (800) 562-8236

## Safety Data Sheet

### Section 1: Product and Company Information

Product Name: Zinc

Company: Fine Metals Corporation  
15117 Washington Hwy  
Ashland, VA 23005

For more information call: 1-804-227-3381

(Monday - Friday 9-4:30)

**In case of emergency: Transportation (Chemtrec) 1-800-424-9300**

**Poison Center: 1-800-562-8236**

(24 hours/day, 7 days/week)

### Section 2: HAZARD IDENTIFICATION

#### Emergency Overview

Emergency Grey metal solid. Negligible fire or explosion hazard in bulk form. Powderd material may form explosive dust-air mixtures. May be harmful if swallowed.

Hazard Statements: H303: May be harmful if swallowed.

#### Precautionary Statements:

Prevention: Avoid contact with eyes and skin. Aboid creating and breathing airborne dust. Keep away from heat, flames and all other ignition sources. Keep dry.

Respnse: P312: Call a POISON CENTER or doctor/physician if you feel unwell.

#### Appearance/Form:

Form: solid

Color: Bluish white metal

Odor: None

Hazard Summary: Irritating and poisonous gas is produced in fire. Flammable in the form of dust when exposed to heat or flame. Bulk dust in damp state may heat spontaneously and ignite on eposure to air. Releases flammable hydrogen gas upon contact with acids or alkali hydroxides. Contact with strong oxidizers may cause fire.

#### Acute Health Effects

Skin: May cause irritation.

Eyes: May cause irritation.

Ingestion: Low risk of ingestion as sold. Extremely large oral dosages may produce gastrointestinal disturbances, due both to mechanical effects and the possibility of reaction with gastric juice to produce zinc chloride. Pain, stomach cramps and nausea could occur in aggravated cases.

Inhalation: No adverse effects expected but dust may cause mechanical irritation.

**Chronic Exposure:** Prolonged skin contact may cause dermatitis.

**Aggravated Medical Conditions:** Persons with pre-existing skin disorders or impaired respiratory fuction may be more susceptible to the effects of the substance.

**Carcinogenicity:** Not listed as carcinogen

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## Section 3: Composition/Information on Ingredients

| Chemical Name | CAS-No.   | Reach #                                 |
|---------------|-----------|---|
| Zinc          | 7440-66-6 | 01-2119467174-37-0057 231-175-3 >99 wt% |

## Section 4: FIRST AID MEASURES

**Eye Contact:** Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids. Seek medical attention immediately.

**Skin Contact:** Remove contaminated clothing. Wash contaminated skin with soap and water

**Inhalation:** Remove person from exposure. If difficulty breathing results seek medical attention immediately.

**Ingestion:** Seek medical attention. Treat symptomatically. Zinc is generally of low toxicity

## Section 5: FIRE FIGHTING MEASURES

**Suitable extinguishing Media:** Use a Class D dry powder extinguisher, dolomite, dry sand, graphite, or soda ash.

**Unsuitable extinguishing media:** Do not use water.

**Specific hazards during firefighting:** Dusts at sufficient concentrations can form explosive mixtures with air. Toxic metal fumes may be produced in

**Special protective equipment for firefighters:** As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved) or equivalent and full protective gear.

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid formation of dust. Practice good chemical hygiene. Avoid breathin (dust, vapor, mist, gas).

**Environmental Precautions:** This material is a water pollutant. Do not release to the environment.

**Methods for Cleaning Up:** If zinc is spilled, take the following steps:

Restrict persons not wearing protective equipment from area of spill until cleanup is complete.

Remove all ignition sources.

Collect powdered material in the most convenient and safe manner and deposit in sealed container.

It may be necessary to contain and dispose of Zinc as a HAZARDOUS WASTE. Contact your state environmen program for specific recommendations.

For large spills and fires immediately call your fire department.

## Section 7: HANDLING AND STORAGE

**Handling:** Wash thoroughly after using, particularly before eating or smoking. Avoid creation of dust or fumes. Avoid breathing dust or fumes. Do not ingest. Practice good chemical hygiene.

**Storage:** Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibilities.

## Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**Engineering Controls:** Use process enclosures, local exhaust ventilation or other means to maintain employee exposure as far below limits as possible

### Component Exposure Limits

| Component | Location                 | Value |
|-----------|--------------------------|-------|
| Zinc      | OSHA PEL-TWA (as total)  | 15    |
|           | ACGIH TLV-TWA (as total) | 10    |

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Respiratory Protection:** Not normally needed. If ventilation is inadequate and this material is handled at elevated temperatures or dust/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances.

**Eye/Face:** Wear safety glasses or goggles as appropriate to the task performed.

**Skin Protection:** Avoid contact with zinc dust. Wear protective gloves and clothing.

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**Work Hygienic Practices:** Practice good chemical hygiene.

**Comments:**

## **Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Solid

**Odor:** None

**Color:** Bluish white metal

**Melting Point:** 419.58° C

**Boiling Point:** 907° C

**Vapor Pressure:** 1 @ 487°C

**Vapor Density (air = 1):** N/A

**Evaporation Rate:** N/A

**Solubility In Water:** Insoluble

**Specific Gravity (water = 1):** 7.14

**Atomic Weight:** 65.39

**% Volatility By Volume:** Zinc powder can react violently with water, sulfur and halogens. Dangerous or potentially dangerous with strong oxidizing agents, lower molecular weight chlorinated hydrocarbons, strong acids and alkalis.

**Density:** 7.14

## **Section 10: STABILITY AND REACTIVITY**

**Stability:** Stable under normal conditions and usage.

**Incompatible Materials:** Strong acids, strong bases, oxidizing materials, halogens, halocarbons, selenium, sulphur compounds, peroxides, cadmium. Powder is incompatible with water.

**Hazardous Decomposition Products:** Hydrogen in moist air, zinc oxide with oxygen at high temperature. Zinc metal, when melted, produces zinc vapor which oxidizes and condenses in air to form zinc fume. Toxic metal fumes.

**Possibility of Hazardous Reactions:** Zinc powder can react violently with water, sulfur and halogens. Dangerous or potentially dangerous with strong oxidizing agents, lower molecular weight chlorinated hydrocarbons, strong acids and alkalis.

## **Section 11: TOXICOLOGICAL INFORMATION**

**Acute Toxicity:** Zinc is generally of low toxicity. Heated metal may evolve zinc fume and oxide causing "zinc shakes".

**Chronic Toxicity:** No known effect.

**Reproductive Toxicity:** No known effect.

**Mutagenicity:** No known effect.

**Carcinogenicity:** No known effect.

**Other:**

## **Section 12: ECOLOGICAL INFORMATION**

**Ecotoxicity:** Zinc is one of the most commonly used metals in the world. Insufficient data are available to evaluate or predict the short-term effects of zinc and its compounds to plants, birds or land animals. Chronic or long term effects may include shortened lifespan, reproductive problems, lower fertility, and changes in appearance or behavior. Chronic effects can be seen long after first exposure to a toxic chemical. Zinc and its salts have high chronic toxicity to aquatic life. The toxicity of zinc to aquatic life is related to water hardness, with increased toxicity occurring in softer waters. Acute toxic effects may include the death of animals, birds, or fish, and death or low growth rate in plants. 96 hour LC50: 2.72µ/L (*Oncorhynchus mykiss*) 48-hour EC50: 155 µ/L (*Daphnia magna*)

**Persistence/Degradability:** Zinc and its salts are highly persistent in water, with half-lives greater than 200 days.

**Bioaccumulation/Accumulation:** The concentration of zinc found in fish tissues is expected to be considerably higher than the average concentration of zinc in the water from which the fish was taken due to bioaccumulation. 9 day Bioconcentration Factor (BCF) = 1100 (*Asteria rubens*)

**Mobility in Environment:** No information available

## **Section 13: DISPOSAL CONSIDERATIONS**

**Waste Classification:** Recycling should be disposal method of choice.

All disposal activities must comply with federal, state, provincial and local regulations.

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## Section 14: TRANSPORT INFORMATION

US DOT (ground): Not regulated.

ICAO/IATA (air): Not regulated.

IMO/IMDG (water): Not regulated.

Special Provisions:

## Section 15: REGULATORY INFORMATION

### UNITED STATES

SARA Title III (Superfund Amendments and Reauthorization Act) 313 Reportable Ingredients: No

TSCA (Toxic Substance Control Act) status: All components of this product are included in inventory, exempt, or notified.

### STATE REGULATIONS

The following components appear in one or more of the following states hazardous substances

| Component | CAS #     | CA | MA  | MN  | NJ  |
|-----------|-----------|----|-----|-----|-----|
| Zinc      | 7440-66-6 | No | Yes | Yes | Yes |

California Proposition 65: This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

### CANADA

WHMIS (Workplace Hazardous Materials Information System): All components of this product are included in inventory, exempt, or notified.

Domestic Substance List (Inventory): All components of this product are included in inventory, exempt, or notified.

### GENERAL COMMENTS

None

## Section 16: OTHER INFORMATION

Information Contact: [sds@finemetalscorp.com](mailto:sds@finemetalscorp.com)

Issue Date: 1/7/1995

Revision Date: 1/1/2015

|               | HMIS®(II) | NFPA |
|---------------|-----------|------|
| Health:       | 1         |      |
| Flammability: | 1         | 1    |
| Reactivity:   | 0         | 1 0  |
| PPE:          | B         |      |

Ratings range from 0 (no hazard) to 4 (severe hazard)

The information contained in this SDS is believed to be correct, but is not all inclusive and shall be used only as a guide. Fine Metals Corporation shall not be liable for any damage resulting from handling or from contact with the product listed in the SDS. Any comments or questions should be directed to:

Safety Manager  
Fine Metals Corporation  
15117 Washington Highway  
P O Box 1055  
Ashland VA 23005  
(804) 227-3381