

Common Name: **ZINC**

Synonyms: Blue Powder; Granular Zinc

CAS No: 7440-66-6

Molecular Formula: Zn

RTK Substance No: 2021

Description: Odorless, bluish-white, shiny metal or a gray to blue powder

### HAZARD DATA

Hazard Rating	Firefighting	Reactivity
<p><b>1 - Health</b></p> <p><b>3 - Fire</b></p> <p><b>1W - Reactivity</b></p> <p><b>DOT#:</b> UN 1436</p> <p><b>ERG Guide #:</b> 138</p> <p><b>Hazard Class:</b> 4.3 (Water Reactive)</p>	<p><b>Zinc</b> is a <b>FLAMMABLE POWDER</b>.</p> <p>Use dry chemicals appropriate for extinguishing metal fires. <b>DO NOT USE WATER or FOAM.</b></p> <p><b>POISONOUS FUMES ARE PRODUCED IN FIRE,</b> including <i>Zinc Oxides</i>.</p> <p><b>CONTAINERS MAY EXPLODE IN FIRE.</b></p> <p>Use water spray to keep fire-exposed containers cool. <b>DO NOT</b> get water into containers.</p> <p>Flow or agitation may generate electrostatic charges.</p> <p><b>Zinc powder or dust</b> may form an ignitable dust/air mixture in closed tanks or containers.</p>	<p><b>Zinc powder</b> reacts with <b>WATER; MOIST AIR; STRONG ACIDS</b> (such as <b>HYDROCHLORIC, SULFURIC and NITRIC</b>); and <b>STRONG BASES</b> (such as <b>SODIUM HYDROXIDE and POTASSIUM HYDROXIDE</b>) to form flammable and explosive <i>Hydrogen gas</i>. The heat released may be sufficient to ignite the <i>Hydrogen</i> formed.</p> <p><b>Zinc powder</b> reacts violently with <b>OXIDIZING AGENTS</b> (such as <b>PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE</b>); <b>SULFUR; CARBON DISULFIDE; AMMONIUM NITRATE; HYDROXYLAMINE</b>; and many other substances. The reactions may lead to fires and explosions.</p>

### SPILL/LEAKS

**Isolation Distance:**

**Spill:** 25 meters (75 feet)

**Fire:** 800 meters (1/2 mile)

Cover spill with dry sand, earth, or a similar material and place into sealed containers for disposal.

Metal containers involving the transfer of **Zinc powder** should be grounded and bonded.

Use only non-sparking tools and equipment.

**DO NOT USE WATER OR WET METHOD.**

**DO NOT** wash into sewer.

### PHYSICAL PROPERTIES

**Odor Threshold:** Odorless

**Auto Ignition Temp:** 860°F (460°C)

**Vapor Density:** 7.14 (air = 1)

**Vapor Pressure:** 1 mm Hg at 909°F (487°C)

**Specific Gravity:** 7.714 (water = 1)

**Water Solubility:** Reacts

**Boiling Point:** 1,665°F (907°C)

**Melting Point:** 786°F (419°C)

**Molecular Weight:** 65.41

### EXPOSURE LIMITS

No occupational exposure limits have been established for **Zinc**.

The Protective Action Criteria values are:

PAC-1 = 3 mg/m<sup>3</sup>    PAC-2 = 20 mg/m<sup>3</sup>

PAC-3 = 500 mg/m<sup>3</sup>

### PROTECTIVE EQUIPMENT

**Gloves:** Nitrile and Natural Rubber

**Coveralls:** Tyvek®  
**Use turn out gear or flash protection if ignition/fire is the greatest hazard.**

**Respirator:** Full facepiece APR with P100 filters  
>30 mg/m<sup>3</sup> or fire - SCBA

### HEALTH EFFECTS

**Eyes:** Irritation

**Skin:** Irritation

**Inhalation:** Nose and throat irritation with coughing and wheezing

Headache, fever and chills, aches, chest tightness and cough ("*metal fume fever*")

Symptoms may be delayed

### FIRST AID AND DECONTAMINATION

**Remove** the person from exposure.

**Flush** eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.

**Quickly** remove contaminated clothing and wash contaminated skin with large amounts of soap and water.

**Begin** artificial respiration if breathing has stopped and CPR if necessary.

**Transfer** promptly to a medical facility.