

# MSDS – Zinc Metal

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)

## 1. Identification

**Product Name:** Zinc Metal

**Synonyms:** Zinc, Zn, Zinc granules, Zinc powder, Zinc sheet

**CAS Number:** 7440-66-6

**EC Number:** 231-175-3

**Recommended Use:** Metallurgical processes, galvanizing, alloy production, laboratory reagent

**Restrictions on Use:** Not for food or pharmaceutical use unless specifically certified

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## 2. Hazard Identification

**GHS Classification:**

Not classified as hazardous in solid massive form

**Zinc powder or dust:**

Flammable solid (Category 2)

Aquatic Acute (Category 1)

Aquatic Chronic (Category 1)

**GHS Label Elements (for powder/dust):**

**Signal Word:** Warning

**Hazard Statements:**

H228: Flammable solid

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long-lasting effects

**Potential Health Effects:**

**Inhalation:** Zinc fumes may cause *metal fume fever* (flu-like symptoms)

**Skin Contact:** Generally non-irritating

**Eye Contact:** Mechanical irritation possible

**Ingestion:** Low toxicity; large amounts may cause gastrointestinal discomfort

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## 3. Composition / Information on Ingredients

Component	CAS No.	Concentration
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Zinc (Zn)	7440-66-6	≥ 99%
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## 4. First-Aid Measures

**Inhalation:**

Move to fresh air

Seek medical attention if symptoms persist

**Skin Contact:**

Wash with soap and water

**Eye Contact:**

Rinse cautiously with water for several minutes

Remove contact lenses if present

**Ingestion:**

Rinse mouth

Do not induce vomiting

Seek medical attention if large quantities ingested

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## 5. Fire-Fighting Measures

**Suitable Extinguishing Media:**

Dry powder (Class D), sand  
Do NOT use water on molten zinc or zinc powder fires  
Specific Hazards:  
Zinc dust may form explosive mixtures in air  
Produces zinc oxide fumes when burning  
Protective Equipment:  
Self-contained breathing apparatus  
Full protective gear

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#### 6. Accidental Release Measures

Personal Precautions:  
Avoid dust generation  
Use appropriate PPE  
Environmental Precautions:  
Prevent entry into waterways  
Clean up Methods:  
Sweep up mechanically  
Avoid creating dust  
Dispose of according to regulations

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#### 7. Handling and Storage

Handling:  
Avoid inhalation of dust or fumes  
Use local exhaust ventilation when melting or welding  
Storage:  
Store in a cool, dry, well-ventilated area  
Keep away from acids and oxidizers

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#### 8. Exposure Controls / Personal Protection

Exposure Limits (OSHA):  
Zinc oxide fume:  
PEL: 5 mg/m<sup>3</sup> (TWA)  
STEL: 10 mg/m<sup>3</sup>  
Engineering Controls:  
Local exhaust ventilation  
Personal Protective Equipment (PPE):  
Safety glasses  
Gloves  
Respiratory protection if dust/fumes present

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#### 9. Physical and Chemical Properties

Appearance: Bluish-silver solid  
Odour: Odourless  
Melting Point: 419.5 °C  
Boiling Point: 907 °C  
Density: 7.14 g/cm<sup>3</sup>  
Solubility: Insoluble in water  
Flammability: Non-flammable solid (bulk); flammable as dust

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#### 10. Stability and Reactivity

Stability: Stable under normal conditions

**Incompatible Materials:**

**Acids (releases hydrogen gas)**

**Strong oxidizers**

**Hazardous Decomposition Products:**

**Zinc oxide fumes**

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**11. Toxicological Information**

**Acute Toxicity: Low**

**Chronic Effects: Repeated inhalation of fumes may cause metal fume fever**

**Carcinogenicity: Not classified as carcinogenic**

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**12. Ecological Information**

**Eco toxicity: Very toxic to aquatic organisms**

**Persistence: Not biodegradable**

**Bioaccumulation: Possible**

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**13. Disposal Considerations**

**Dispose of in accordance with local, regional, and national regulations**

**Recycling is preferred**

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**14. Transport Information**

**UN Number: 1436 (Zinc powder or dust)**

**Proper Shipping Name: Zinc powder**

**Hazard Class: 4.3 (when applicable)**

**Packing Group: III**

***Solid zinc articles are generally not regulated.***

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**15. Regulatory Information**

**OSHA: Not hazardous as solid metal**

**REACH: Registered substance**

**SARA 311/312: Not applicable (solid form)**

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**16. Other Information**

**Revision Date: 2<sup>nd</sup> January 2026**