



## Material Safety Data Sheet (MSDS)

### 1. PRODUCT AND COMPANY IDENTIFICATION

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#### 1.1 Product Identifiers

Product Name: **Zinc**  
Purity: 99.999%  
Product Number: NN-RSZN  
Source: Engineering Analytics Laboratories  
CAS-No.: 7440-66-6

#### 1.2 Relevant Identified Uses

Identified Uses: Equipment Calibration, Laboratory Chemicals, Synthesis of Substances  
Advised Against: None suggested

#### 1.3 Company Identification (MSDS Supplier)

Company: Engineering Analytics Laboratories  
(Accredited to ISO 17034:2016, #122465 by PJLA)  
Address: PO Box 500146, Malabar, FL 32950, USA  
Telephone: +1 321-720-6578  
E-mail: EngAnLab@gmail.com

#### 1.4 Emergency Telephone Number

Emergencies: **Dial 911 first!**  
Emergency Phone #: +1-703-527-3887 (CHEMTREC)

### 2. HAZARDS IDENTIFICATION

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#### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Combustible Dust

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram: *None*  
Signal Word: *Warning*  
Hazard Statement(s): *May form combustible dust concentrations in air.*  
Precautionary Statement(s): *None*

#### 2.3 Hazards Not Otherwise Classified (HNOC) or Not Covered by GHS

Combustible dust

### 3. COMPOSITION (INFORMATION ON INGREDIENTS)

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#### 3.1 Substances

Formula: Zn  
Molecular Weight: 7.133 g/mL  
CAS-No.: 7440-66-6  
EC-No.: 231-175-3

Hazardous components

Component	Classification	Concentration
Zn		99.999%

No components are required to be disclosed according to applicable regulations.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

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#### 4.1 Description of First Aid Measures

##### General Advice

N/A

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Never give anything by mouth to an unconscious person. Turn the individual's head and/or body to one side, and rinse the mouth with water (if safe and possible to do so). Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

*No data available*

### 5. FIREFIGHTING MEASURES

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#### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

No data available

#### 5.3 Advice for Firefighters

Wear self-contained breathing apparatus for firefighting, if necessary.

#### 5.4 Further information

*No data available*

## 6. ACCIDENTAL RELEASE MEASURES

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### 6.1 Personal Precautions, Protective Equipment (PPE), and Emergency Procedures

Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.

For personal protection see section 8.

### 6.2 Environmental Precautions

No special environmental precautions required.

### 6.3 Clean-up and Containment Methods

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Disposal

For disposal see section 13.

## 7. HANDLING AND STORAGE

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### 7.1 Precautions for Safe Handling

Processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for Safe Storage, including incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non Combustible Solids.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control Parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

#### Personal Protective Equipment (PPE)

##### *Eye/face protection*

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### *Skin protection*

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### *Full contact*

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

### *Splash contact*

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### *Body Protection*

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### *Respiratory protection*

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control environmental exposure to prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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### **9.1 Basic Physical and Chemical Properties**

- a) Appearance Form: Foil
- b) Appearance Color: Grey
- c) Odor: *No data available*
- d) Odor Threshold: *No data available*
- e) pH: *No data available*
- f) Melting/freezing point:
  - Melting point (Literature Verified): 419.527 °C (450.77 °F)<sup>1</sup>.
- g) Initial boiling point and boiling range:
  - 907 °C (1,665 °F) - lit.
- h) Flash point: *Not applicable*
- i) Evaporation rate: *No data available*
- j) Flammability (solid, gas): May form combustible dust concentrations in air.
- k) Upper/lower flammability or explosive limits: *No data available*
- l) Vapor pressure: *No data available*
- m) Vapor density: *No data available*
- n) Relative density: 7.133 g/L at 25 °C (77 °F)
- o) Water Solubility: *No data available*
- p) Partition coefficient: n-octanol/water: *No data available*
- q) Auto-ignition Temperature: *No data available*
- r) Decomposition Temperature: *No data available*
- s) Viscosity: *No data available*
- t) Explosive Properties: *No data available*
- u) Oxidizing Properties: *No data available*

### **9.2 Other safety information**

*No data available*

## 10. STABILITY AND REACTIVITY

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### 10.1 Reactivity

*No data available*

### 10.2 Chemical Stability

Stable under recommended storage conditions.

### 10.3 Possibility of Hazardous Reactions

*No data available*

### 10.4 Conditions to avoid

*No data available*

### 10.5 Incompatible Materials

Oxidizing agents

### 10.6 Hazardous Decomposition Products

Hazardous decomposition products formed under fire conditions: **Zinc/Zinc oxides**

Other decomposition products: *No data available*

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

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### 11.1 Toxicological Effects

Acute Toxicity: *No data available*

Inhalation: *No data available*

Dermal: *No data available*

Skin Corrosion/Irritation: *No data available*

Serious Eye Damage/Eye Irritation: *No data available*

Respiratory or Skin Sensitization: *No data available*

Germ Cell Mutagenicity: *No data available*

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: *No data available*

Specific Target Organ Toxicity - Single Exposure: *No data available*

Specific Target Organ Toxicity - Repeated Exposure: *No data available*

Aspiration Hazard: *No data available*

Additional Information

RTECS: *Not Available*

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

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### 12.1 Toxicity

*No data available*

### 12.2 Persistence and Degradability

*No data available*

### 12.3 Bioaccumulative Potential

*No data available*

#### 12.4 Mobility in Soil

*No data available*

#### 12.5 Results of PBT and vPvB Assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Other Adverse Effects

*No data available*

### 13. DISPOSAL CONSIDERATIONS

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#### 13.1 Waste Treatment Methods

*Product*

Offer surplus and non-recyclable solutions to a licensed disposal company.

*Packaging*

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

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DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

### 15. REGULATORY INFORMATION

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SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA 311/312 Hazards

Massachusetts Right To Know Components

Zinc

Revision Date

CAS-No.: 7440-66-6

1993-04-24

Pennsylvania Right To Know Components

Zinc

Revision Date

CAS-No.: 7440-66-6

1993-04-24

New Jersey Right To Know Components

Zinc

Revision Date

CAS-No.: 7440-66-6

1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

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### Full text of H-Statements referred to under sections 2 and 3.

HMIS Rating	
Health hazard:	0
Chronic Health Hazard:	
Flammability:	0
Physical Hazard:	0
NFPA Rating	
Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

### Further Information

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## 17. Literature Sources

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1. R. Sabbah et al., *Thermochimica Acta*, 331 (1999) pg. 123 – 126

Preparation Information

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