# Material Safety Data Sheet

## Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
<th>Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td><img src="image" alt="Eye Protection" /> <img src="image" alt="Face Protection" /> <img src="image" alt="手套" /></td>
</tr>
</tbody>
</table>

### Common Name/Trade Name
Zinc Metal, Granular 20 mesh

### Manufacturer
SPECTRUM LABORATORY PRODUCTS INC.  
14422 S. SAN PEDRO STREET  
GARDENA, CA 90248

### Commercial Name(s)
Not available.

### Synonym
Zinc Metal, Granular 20 mesh

### Chemical Name
Zinc Metal

### Chemical Family
Metal.

### Chemical Formula
Not available.

### Supplier
SPECTRUM LABORATORY PRODUCTS INC.  
14422 S. SAN PEDRO STREET  
GARDENA, CA 90248

### Catalog Number(s)
Z1015, Z1019

### CAS#
7440-66-6

### RTECS
ZG8600000

### TSCA
TSCA 8(b) inventory: Zinc Metal, Granular 20 mesh

### CI#
Not applicable.

---

**IN CASE OF EMERGENCY**  
CHEMTREC (24hr) 800-424-9300  
CALL (310) 516-8000

---

## Section 2. Composition and Information on Ingredients

### Exposure Limits

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Zinc Metal, Granular 20 mesh</td>
<td>7440-66-6</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

### Toxicological Data on Ingredients
Zinc Metal, Granular 20 mesh  
LD50: Not available.  
LC50: Not available.

## Section 3. Hazards Identification

### Potential Acute Health Effects
Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

### Potential Chronic Health Effects
**CARCINOGENIC EFFECTS:** Not available.  
**MUTAGENIC EFFECTS:** Not available.  
**TERATOGENIC EFFECTS:** Not available.  
**DEVELOPMENTAL TOXICITY:** Not available.  
Repeated or prolonged exposure is not known to aggravate medical condition.

---

Continued on Next Page
Section 4. First Aid Measures

Eye Contact  Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact  Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact  Not available.

Inhalation  If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation  Not available.

Ingestion  Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion  Not available.

Section 5. Fire and Explosion Data

Flammability of the Product  Flammable.

Auto-Ignition Temperature  480°C (896°F)

Flash Points  CLOSED CUP: Higher than 93.3°C (200°F).

Flammable Limits  Not available.

Products of Combustion  Not available.

Fire Hazards in Presence of Various Substances  Slightly flammable to flammable in presence of open flames and sparks, of heat, of oxidizing materials, of acids, of alkalis, of moisture.


Fire Fighting Media and Instructions  Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards  Zinc + NaOH causes ignition. Oxidation of zinc by potassium proceeds with incandescence. Residues from zinc dust /acetic acid reduction operations may ignite after long delay if discarded into waste bins with paper. Incandescent reaction when Zinc and Arsenic or Tellurium, or Selenium are combined. When hydrazine mononitrate is heated in contact with zinc, a flaming decomposition occurs at temperatures a little above its melting point. Contact with acids and alkali hydroxides (sodium hydroxide, postassium hydroxide, calcium hydroxide, etc.) results in evolution of hydrogen with sufficient heat of reaction to ignite the hydrogen gas. Zinc foil ignites if traces of moisture are present. It is water reactive. Produces flammable gases on contacts with water. It may ignite on contact with water or moist air.

Special Remarks on Explosion Hazards  Not available.
Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill
Flammable solid that, in contact with water, emits flammable gases. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Cover with dry earth, sand or other non-combustible material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep from any possible contact with water. Do not allow water to get into container because of violent reaction. Do not store above 23°C (73.4°F).

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Granular solid. Metal solid.)

Molecular Weight
65.39 g/mole

pH (1% soln/water)
Not applicable.

Boiling Point
907°C (1664.6°F)

Melting Point
419°C (786.2°F)

Critical Temperature
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volatility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
Not available.

Ionicity (in Water)
Not available.

Dispersion Properties
Not available.

Solubility
Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol, acetone.

Odor
Odorless.

Taste
Not available.

Color
Bluish-grey

Continued on Next Page
Section 10. Stability and Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, incompatible materials</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with oxidizing agents, acids, alkalis, moisture. The product reacts violently with water to emit flammable but non toxic gases.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Special Remarks on Reactivity
Incompatible with acids, halogenated hydrocarbons, NH4NO3, barium oxide, Ba(NO3)2, Cadmium, CS2, chlorates, Cl2, CrO3, F2, Hydroxylamine, Pb(N3)2, MnCl2, HNO3, performic acid, KClO3, KNO3, N2O2, Selenium, NaClO3, Na2O2, Sulfur, Te, water, (NH4)2S, As2O3, CS2, CaCl2, chlorinated rubber, catalytic metals, halocarbons, o-nitroanisole, nitrobenzene, nonmetals, oxidants, paint primer base, pentacarbonoyliron, transition metal halides, seleninyl bromide, HCl, H2SO4, (Mg + Ba(NO3)2 + BaO2), (ethyl acetoacetate + tribromoneopentyl alcohol.
Contact with Alkali Hydroxides (Sodium Hydroxide, Potassium Hydroxide, Calcium Hydroxide, etc) results in evolution of hydrogen.
Ammonium nitrate + zinc + water causes a violent reaction with evolution of steam and zinc oxide. Some may react vigorously or explosively on contact with water.

Special Remarks on Corrosivity | Not available. |

Polymerization | Will not occur. |

Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Inhalation. Ingestion.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to Animals</td>
<td>LD50: Not available.</td>
</tr>
<tr>
<td>Chronic Effects on Humans</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Toxic Effects on Humans</td>
<td>Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).</td>
</tr>
</tbody>
</table>

Special Remarks on Toxicity to Animals | Not available. |

Special Remarks on Chronic Effects on Humans | Not available. |

Special Remarks on other Toxic Effects on Humans
Acute Potential Health Effects:
Skin: May cause skin irritation.
Eyes: May cause eye irritation. Dermal exposure to zinc may produce leg pains, fatigue, anorexia, and weight loss.
Ingestion: May be harmful if swallowed. May cause digestive tract irritation with tightness in throat, nausea, vomiting, diarrhea, malaise, loss of appetite, abdominal pain, fever, and chills. May affect behavior/central nervous system and autonomic nervous system with ataxia, lethargy, staggering gait, mild derrangement in cerebellar function, lightheadness, dizziness, irritability, muscular stiffness, and pain. May also affect blood.
Inhalation: Inhalation of zinc dust or fumes may cause respiratory tract and mucous membrane irritation with cough and chest pain. It can also cause “metal fume fever”, a flu-like condition characterized appearance of chills, headached fever, malaise, fatigue, sweating, extreme thirst, aches in the legs and chest, and difficulty in breathing. A sweet taste may also be present in metal fume fever, as well as a dry throat, aches, nausea, and vomiting, and pale grey cyanosis.
### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecotoxicity</td>
<td>Not available.</td>
</tr>
<tr>
<td>BOD5 and COD</td>
<td>Not available.</td>
</tr>
<tr>
<td>Products of Biodegradation</td>
<td>Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.</td>
</tr>
<tr>
<td>Toxicity of the Products of Biodegradation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on the Products of Biodegradation</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 13. Disposal Considerations

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Disposal</td>
<td>Waste must be disposed of in accordance with federal, state and local environmental control regulations.</td>
</tr>
</tbody>
</table>

### Section 14. Transport Information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not a DOT controlled material (United States).</td>
</tr>
<tr>
<td>Identification</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special Provisions for Transport</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>DOT (Pictograms)</td>
<td>![No DOT Pictogram]</td>
</tr>
</tbody>
</table>

### Section 15. Other Regulatory Information and Pictograms

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information</th>
</tr>
</thead>
</table>
| Federal and State Regulations | New York release reporting list: Zinc Metal, Ganular 20 mesh  
Rhode Island RTK hazardous substances: Zinc Metal, Ganular 20 mesh  
Pennsylvania RTK: Zinc Metal, Ganular 20 mesh  
Florida: Zinc Metal, Ganular 20 mesh  
Michigan critical material: Zinc Metal, Ganular 20 mesh  
Massachusetts RTK: Zinc Metal, Ganular 20 mesh  
New Jersey: Zinc Metal, Ganular 20 mesh  
California Director's List of Hazardous Substances: Zinc Metal, Ganular 20 mesh  
TSCA 8(b) inventory: Zinc Metal, Ganular 20 mesh  
TSCA 12(b) one time export: Zinc Metal, Ganular 20 mesh  
SARA 313 toxic chemical notification and release reporting: Zinc Metal, Ganular 20 mesh  
CERCLA: Hazardous substances.: Zinc Metal, Ganular 20 mesh: 1000 lbs. (453.6 kg) |
| California Proposition 65 | |
|Warnings | EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. |
|Other Regulations | |
|Other Classifications | WHMIS (Canada) | Not controlled under WHMIS (Canada). |
| | DSCL (EEC) | R15- Contact with water liberates extremely flammable gases.  
S7/8- Keep container tightly closed and dry.  
R17- Spontaneously flammable in air. |

Continued on Next Page
<table>
<thead>
<tr>
<th>HMIS (U.S.A.)</th>
<th>National Fire Protection Association (U.S.A.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>Health</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>Flammability</td>
</tr>
<tr>
<td>Reactivity</td>
<td>Reactivity</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>Specific hazard</td>
</tr>
</tbody>
</table>

**WHMIS (Canada) (Pictograms)**

![No Entry Pictogram](image1)

**DSCL (Europe) (Pictograms)**

![Flammable Pictogram](image2)

**TDG (Canada) (Pictograms)**

![No Entry Pictogram](image3)

**ADR (Europe) (Pictograms)**

![No Entry Pictogram](image4)

**Protective Equipment**

- Gloves.
- Lab coat.
- Dust respirator. Be sure to use an approved/certified respirator or equivalent.
- Safety glasses.

*Continued on Next Page*
### Section 16. Other Information

<table>
<thead>
<tr>
<th><strong>MSDS Code</strong></th>
<th>Z3022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>References</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Other Special</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Considerations</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Validated by Sonia Owen on 1/20/2003.</strong></td>
<td><strong>Verified by Sonia Owen.</strong></td>
</tr>
<tr>
<td><strong>CALL (310) 516-8000</strong></td>
<td><strong>Printed 1/22/2003.</strong></td>
</tr>
</tbody>
</table>

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user’s responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.