**Material Safety Data Sheet**

**Zinc Oxide**

### Section 1 - Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>MSDS Name:</th>
<th>Zinc oxide</th>
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<tbody>
<tr>
<td>Synonyms:</td>
<td></td>
</tr>
<tr>
<td>Company Identification:</td>
<td>SISCO RESEARCH LABORATORIES PVT. LTD.</td>
</tr>
<tr>
<td>2-F, Satam Industrial Estate, ‘C’ Wing, 2nd Floor, Dr. Cardinal Gracious Road, Chakala, Andheri (East), Mumbai – 400 099.</td>
<td></td>
</tr>
<tr>
<td>Tel:</td>
<td>2687 2601/2687 8163/2687 8243</td>
</tr>
<tr>
<td>Fax:</td>
<td>2687 8241</td>
</tr>
<tr>
<td>Website:</td>
<td><a href="http://www.srlchem.com">www.srlchem.com</a></td>
</tr>
</tbody>
</table>

### Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#, Chemical Name:, %, EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1314-13-2, Zinc oxide, 99.5+%, 215-222-5</td>
</tr>
</tbody>
</table>

### Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

*Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*

**Potential Health Effects**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:** May cause respiratory tract irritation. May be harmful if inhaled.

**Chronic:**

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Get medical aid. Wash mouth out with water.

**Inhalation:** Remove from exposure and move to fresh air immediately. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** Substance is noncombustible.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid ingestion and inhalation.
Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use adequate ventilation to keep airborne concentrations low.
Exposure Limits,
CAS# 1314-13-2:
United States OSHA: 5 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
Belgium - TWA: 10 mg/m3 VLE (dust); 5 mg/m3 VLE (fumes) Belgium - STEL: 10 mg/m3 VLE (fumes),
France - VME: 5 mg/m3 VME (fume); 10 mg/m3 VME (dust),
Germany: 5 mg/m3 TWA (respirable fraction, smoke),
Japan: 1 mg/m3 OEL (respirable dust); 4 mg/m3 OEL (total dust),
Malaysia: 5 mg/m3 TWA (fume); 10 mg/m3 TWA (dust),
Netherlands: 5 mg/m3 MAC (smoke),
Russia: 0.5 mg/m3 TWA (aerosol),
Spain: 5 mg/m3 VLA-ED (vapor); 10 mg/m3 VLA-ED (dust) Spain: 10 mg/m3 VLA-EC (fume),

Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder
Color: white - yellowish-white
Odor: odorless
pH: 7 (50 g/1 aq.sol.(susp))
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 1975 deg C (3,587.00°F)
Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: 1.6 mg/l (29°C)
Specific Gravity/Density: 5.600
Molecular Formula: OZn
Molecular Weight: 81.38

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.
**Conditions to Avoid:** Incompatible materials, dust generation.
**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, bases, magnesium, chlorinated rubber, zinc chloride, hydrogen fluoride.
**Hazardous Decomposition Products:** Not available
**Hazardous Polymerization:** Will not occur.

### Section 11 - Toxicological Information

**RTECS#:** CAS# 1314-13-2: ZH4810000 ZH4817000
**LD50/LC50:**

**CAS# 1314-13-2:** Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, mouse: LC50 = 2500 mg/m3;
Oral, mouse: LD50 = 7950 mg/kg;
Other:
**Carcinogenicity:** Zinc oxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
**Other:** See actual entry in RTECS for complete information. Mutagenicity: Ames-test: negative.

### Section 12 - Ecological Information

**Ecotoxicity:** Daphnia: EC50 >1000 mg/L; 48H;
Fish: Bluegill/Sunfish: LC50 >320 mg/L; 96H;
Fish: Fathead Minnow: LC50: 2246 mg/L; 96H;
Fish: Rainbow trout: LC50: 1.1 mg/L; 96H;
**Other:** Do not empty into drains.
Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

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<tr>
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<tbody>
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<td>Packing Group:</td>
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Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: N
Risk Phrases:
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases:
S 60 This material and its container must be disposed of as hazardous waste.
WGK (Water Danger/Protection)
CAS# 1314-13-2: 0
Canada
CAS# 1314-13-2 is listed on Canada's DSL List
US Federal
TSCA
CAS# 1314-13-2 is listed on the TSCA Inventory.

Section 16 - Additional Information

SISCO RESEARCH LABORATORIES provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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