

Zinc Oxide

SECTION 1. IDENTIFICATION

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| Product Identifier | Zinc Oxide |
| Other Means of Identification | Calamine, Zinc monoxide |
| Product Code(s) | ZI3210, ZI3220 |
| Product Family | Inorganic Solid |
| Recommended Use | Laboratory and industrial use. |
| Restrictions on Use | None known. |
| Supplier Identifier | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| Emergency Phone No. | CANUTEC CANADA, 613-996-6666, 24 Hours |
| SDS No. | 0278 |

SECTION 2. HAZARD IDENTIFICATION

Classification

Not classified under any hazard class.

Label Elements

Not applicable

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | % | Other Identifiers |
|---------------|-----------|-----|-------------------------|
| Zinc oxide | 1314-13-2 | >99 | Calamine, Zinc monoxide |

SECTION 4. FIRST-AID MEASURES

First-aid Measures**Inhalation**

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. NOTE: Metal fume fever may develop 4-8 hours after exposure. If symptoms of metal fume fever (flu-like symptoms) develop, immediately obtain medical attention.

Skin Contact

Quickly and gently blot or brush away excess chemical. Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn. Closed containers may rupture violently when heated releasing contents.

Toxic zinc oxides.

Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Prevent accidental contact with incompatible chemicals. Avoid generating dusts. Avoid generating vapours or mists. Only use where there is adequate ventilation. Do not get in eyes, on skin or on clothing. Prevent accidental contact with acidic conditions. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in the original, labelled, shipping container. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Prevent dust build-up on ALL surfaces. Clean frequently. Avoid dry-sweeping. Use vacuum cleaner equipped with high efficiency filter. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Control Parameters

| Chemical Name | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|---------------|------------|----------|----------|---------|-----------|-----|
| | TWA | STEL | TWA | Ceiling | 8-hr TWA | TWA |
| Zinc oxide | 2 mg/m3 | 10 mg/m3 | 5 mg/m3 | | | |

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Not required, if used as directed.

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

Respiratory Protection

Wear a NIOSH approved particulate respiratory equipped with an N95, R95, or P95 filter, wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

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|--|---|
| Appearance | White - yellow powder. |
| Odour | Odourless |
| Odour Threshold | Not available |
| pH | 6.95 |
| Melting Point/Freezing Point | 1975 °C (3587 °F) (melting); Not available (freezing) |
| Initial Boiling Point/Range | Not available |
| Flash Point | Not applicable |
| Evaporation Rate | Not applicable |
| Flammability (solid, gas) | Will not burn. |
| Upper/Lower Flammability or Explosive Limit | Not applicable (upper); Not applicable (lower) |
| Vapour Pressure | Not applicable |
| Vapour Density (air = 1) | Not applicable |
| Relative Density (water = 1) | 5.607 at 20 °C |
| Solubility | Practically insoluble in water; Insoluble in alcohols (e.g. ethanol). |
| Partition Coefficient, n-Octanol/Water (Log Kow) | 1.53 (estimated) |
| Auto-ignition Temperature | Not applicable |
| Decomposition Temperature | Not available |
| Viscosity | Not available (kinematic); Not applicable (dynamic) |
| Other Information | |
| Physical State | Solid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

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None known.

Conditions to Avoid

Generation of dust.

Incompatible Materials

Strong acids (e.g. hydrochloric acid), metals (e.g. aluminum).

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---------------|--------------------|--------------------|---------------|
| Zinc oxide | 2500 mg/m3 (mouse) | 7950 mg/kg (mouse) | |

Skin Corrosion/Irritation

Animal tests show very mild irritation.

Serious Eye Damage/Irritation

May cause very mild irritation based on information for closely related chemicals.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Metal fume fever. This flu-like illness occurs 3-10 hours after exposure. Symptoms may include chest tightness, cough, headache, fever, muscle aches and runny nose. Symptoms usually disappear within 48 hours after exposure.

Skin Absorption

No information was located.

Ingestion

Symptoms may include nausea, vomiting, stomach cramps and diarrhea. Irritation of the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Conclusions cannot be drawn from the limited studies available.

Respiratory and/or Skin Sensitization

No information was located. Not known to be a skin sensitizer.

Carcinogenicity

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|---------------|---------------|----------------|------------|------|
| Zinc oxide | Not evaluated | Not designated | Not Listed | |

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child. No information was located.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility. No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Conclusions cannot be drawn from the limited studies available.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

SECTION 16. OTHER INFORMATION

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|------------------------------|--|
| SDS Prepared By | Alphachem Limited |
| Phone No. | (905)-821-2995 |
| Date of Preparation | December 18, 2015 |
| Date of Last Revision | December 30, 2015 |
| Revision Indicators | The following SDS content was changed on December 30, 2015: |
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