



MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**
Leonid Chemicals Pvt Ltd
62/A-2 1st Stage, Yeshwanthpur Industrial Suburb
Ashokpuram School Road
Bangalore-560 022, Karnataka, INDIA
Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

Zinc oxide 25490

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Zinc oxide

Catalog Numbers:

Z/1300, Z/1350

Synonyms:

Zinc white, chinese white, flowers of zinc

Company Identification: Fisher Scientific UK

Bishop Meadow Road

Loughborough, Leicestershire

LE11 5RG, UK

For information, call: 01509 231166

For emergencies, call: 01509 231166

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	1314-13-2
Chemical Name	:	Zinc oxide
%	:	100
EINECS#	:	215-222-5
Hazard Symbols	:	None Listed
Risk Phrases	:	None Listed

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Not available.

Potential Health Effects

Eye:

Dust may cause mechanical irritation.

Skin:

May cause skin irritation.

Ingestion:

Moderately toxic to humans by ingestion.

Inhalation:

Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.

Chronic:

No information found.

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:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

SECTION 5 - FIRE FIGHTING MEASURES

General Information:

Material will not burn. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

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.

SECTION 7 - HANDLING and STORAGE

Handling:

Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing.

Storage:

Store in a dry area.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Color: White or yellowish white powder

Odor: Odorless

pH: Not available.

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 3272 deg F

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: Not available.

Solubility in water: Negligible in water

Specific Gravity/Density: 5.68

Molecular Formula: ZnO

Molecular Weight: 81.3794

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Reacts explosively with magnesium when heated. Mixtures of chlorinated rubber and zinc oxide can explode violently when heated to 419F.

Hazardous Decomposition Products:

Toxic fumes of zinc oxide.

Hazardous Polymerization: Has not been reported.

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.

Carcinogenicity:

Zinc oxide -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

No information found.

SECTION 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

SECTION 14 - TRANSPORT INFORMATION

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

SECTION 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

S 22 Do not breathe dust.

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 1314-13-2: 0

United Kingdom Occupational Exposure Limits

CAS# 1314-13-2: OES-United Kingdom, TWA 5 mg/m³ TWA (fume)

CAS# 1314-13-2: OES-United Kingdom, STEL 10 mg/m³ STEL (fume)

United Kingdom Maximum Exposure Limits**Canada**

CAS# 1314-13-2 is listed on Canada's DSL List.

CAS# 1314-13-2 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 1314-13-2: OEL-ARAB Republic of Egypt:TWA 5 mg/m3
OEL-AUSTRALIA:TWA 10 mg/m3
OEL-AUSTRALIA:TWA 5 mg/m3;STEL 10 mg/m3 (fume)
OEL-BELGIUM:TWA 10 mg/m3
OEL-BELGIUM:TWA 5 mg/m3;STEL 10 mg/m3 (fume) JAN9
OEL-CZECHOSLOVAKIA:TWA 5 mg/m3;STEL 15 mg/m3 JAN9
OEL-DENMARK:TWA 4 mg/m3 (fume)
OEL-DENMARK:TWA 4 mg/m3 (dust)
OEL-FINLAND:TWA 5 mg/m3 (fume)
OEL-FRANCE:TWA 10 mg/m3
OEL-FRANCE:TWA 5 mg/m3 (fume)
OEL-GERMANY:TWA 5 mg/m3 (fume)
OEL-HUNGARY:TWA 5 mg/m3
OEL-JAPAN:TWA 5 mg/m3 (fume)
OEL-THE NETHERLANDS:TWA 5 mg/m3
OEL-THE PHILIPPINES:TWA 1 mg/m3
OEL-POLAND:TWA 5 mg/m3 (fume)
OEL-SWEDEN:TWA 5 mg/m3
OEL-SWITZERLAND:TWA 5 mg/m3
OEL-SWITZERLAND:TWA 5 mg/m3 (fume)
OEL-THAILAND:TWA 5 mg/m3 (fume)
OEL-TURKEY:TWA 5 mg/m3
OEL-UNITED KINGDOM:TWA 5 mg/m3;STEL 10 mg/m3 JAN9
OEL-UNITED KINGDOM:TWA 5 mg/m3;STEL 10 mg/m3 (fume)
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 1314-13-2 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 12/27/1994 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.