



ZINC OXIDE

Material Safety Data Sheet

Mallinckrodt, Inc.
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Emergency Telephone Number
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Effective Date: 07-29-85

PRODUCT IDENTIFICATION:

Synonyms: Chinese white; zinc white; flowers of zinc

Formula CAS No.: 1314-13-2

Molecular Weight: 81.38

Hazardous Ingredients:

Chemical Formula: ZnO

Zinc oxide -ACGIH Listed as a nuisance dust.

PRECAUTIONARY MEASURES

CAUTION! NUISANCE DUST.

Use with adequate ventilation.

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and insure prompt removal from skin, eyes and clothing.

SEE SECTION 5.

DOT Hazard Class: Not Regulated

Physical DataSECTION 1

Appearance: White to yellowish-white amorphous powder.

Odor: Odorless.

Solubility: Insoluble in water, alcohol; soluble in dilute acids.

Boiling Point: Sublimes

Vapor Density (Air=1): No information found.

Melting Point: 1975°C (3587°F)

Vapor Pressure (mm Hg): No information found.

Specific Gravity: 5.67

Evaporation Rate: No information found.

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Fire and Explosion InformationSECTION 2

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity DataSECTION 3

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

When heated to very high temperatures, zinc oxide sublimes to produce toxic fumes.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Has exploded when mixed with chlorinated rubber. Reacts violently with magnesium, linseed oil. Zinc oxide and magnesium can react explosively when heated.

Leak/Spill Disposal InformationSECTION 4

Clean-up personnel may require respiratory protection from dust.

Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

Disposal: Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility.

Ensure compliance with local, state and federal regulations.

Health Hazard Information

SECTION 5

A. Exposure/Health Effects

Inhalation: May irritate the respiratory tract. Excessive concentrations of a nuisance dust may cause unpleasant deposits in the nasal passages. At high air concentrations 'zinc chills' can occur, with symptoms of weakness, fatigue, nausea, and chills.

Ingestion: Excessive oral doses may cause intestinal obstruction with nausea, fever, and stomach cramps.

Skin Contact: Excessive skin contact may cause itching.

Eye Contact: May cause redness or pain.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: Persons with a pre-existing heart condition or impaired respiratory function may be more susceptible to the effects of this substance.

B. FIRST AID

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Exposure: Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Exposure: Wash thoroughly with running water. Get medical advice if irritation develops.

C. TOXICITY DATA (RTECS, 1982)

No LD50/LC50 information found relating to normal routes of occupational exposure.
Mutation references cited
Animal reproductive effect cited

Occupational Control Measures

SECTION 6

Airborne Exposure Limits: -ACGIH Threshold Limit Value (TLV): 10 mg/m³ of total dust <1 μ quartz or 5 mg/m³ respirable dust for zinc oxide as a nuisance dust.

Ventilation System: A system of local exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Local exhaust ventilation is generally preferred because it can control the emissions of the dust at its source, preventing dispersion of it in the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators: (NIOSH Approved) If the TLV is exceeded, a dust/mist respirator may be worn up to ten times the TLV. Consult respirator supplier for details.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Contact lenses should not be worn when working with this material.
Maintain eye wash fountain and quick-drench facility in work area.

Storage and Special Information

SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances.

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