



State of the Art Ingredients • Fast Friendly Service

Zinc Oxide

SECTION 1 :: PRODUCT IDENTIFICATION

Product Name: Zinc Oxide

Product Use : Pigment

Synonyms: Chinese white; zinc white; flowers of zinc; calamine

CAS No.: 1314-13-2

Molecular Weight: 81.38

Chemical Formula: ZnO

SECTION 2 :: HAZARDS IDENTIFICATION

Emergency Overview

SECTION 3 :: PHYSICAL DATA

Ingredient	CAS No	Percent	Hazardous
Zinc Oxide	1314-13-2	99 - 100%	Yes

SECTION 4 :: FIRST AID MEASURES

CAUTION! MAY IRRITATE RESPIRATORY TRACT.

Potential Health Effects

Inhalation:

May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath. Inhalation can cause a flu-like illness (metal fume fever). This 24- to 48-hour illness is characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache.

Ingestion: Large oral doses may cause irritation to the gastrointestinal tract.

Skin Contact: Not expected to be a health hazard from skin exposure.

Eye Contact: Not expected to be a health hazard.

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.

SECTION 5 :: FIREFIGHTING MEASURES

Fire: Not considered to be a fire hazard.

Explosion: Finely divided powder presents 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

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pressure demand or other positive pressure mode. Zinc oxide fume may be released when heated.

SECTION 6 :: ACCIDENTAL RELEASE MEASURES

Clean-up personnel require protective clothing and respiratory protection from dust. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

SECTION 7 :: HANDLING AND STORAGE

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8 :: EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

Zinc oxide:

-OSHA Permissible Exposure Limit (PEL): fume: 5 mg/m³ (TWA)

respirable fraction: 5 mg/m³ (TWA)

total dusts: 15 mg/m³ (TWA)

-ACGIH Threshold Limit Value (TLV):

2 mg/m³ (TWA), 10 mg/m³ (STEL), Respirable fraction

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into 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 exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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Skin Protection: Wear protective gloves and clean body-covering clothing.
Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9 :: PHYSICAL & CHEMICAL PROPERTIES

Appearance: White to yellowish-white amorphous powder.
Odor: Odorless.
Solubility: Insoluble in water, alcohol; soluble in dilute acids.
Specific Gravity: 5.67
pH: No information found.
% Volatiles by volume @ 21C (70F): 0
Boiling Point: Sublimes.

Melting Point: 1975C (3587F)

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

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

SECTION 10 :: STABILITY & REACTIVITY

Stability:
Stable under ordinary conditions of use and storage. Absorbs carbon dioxide from air.

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.

Conditions to Avoid:
Heat, incompatibles.

SECTION 11 :: TOXICOLOGICAL INFORMATION

Investigated as a mutagen, reproductive effector.



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Cancer Lists\
---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Zinc Oxide (1314-13-2)	No	No	None

SECTION 12 :: ECOLOGICAL INFORMATION

Environmental Fate: No information found.

Environmental Toxicity: No information found.

SECTION 13 :: DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 :: TRANSPORT INFORMATION

Not regulated.

SECTION 15 :: REGULATORY INFORMATION

Chemical Inventory Status Part 1\
Ingredient TSCA EC Japan Australia
Zinc Oxide (1314-13-2) Yes Yes Yes Yes

Chemical Inventory Status Part 2\
--Canada--
Ingredient Korea DSL NDSL Phil.
Zinc Oxide (1314-13-2) Yes Yes No Yes

Federal, State & International Regulations Part 1\
-SARA 302- SARA 313 --
Ingredient RQ TPQ List Chemical Catg.
Zinc Oxide (1314-13-2) No No No Zinc compound

Federal, State & International Regulations Part 2\
-RCRA- TSCAIngredient
CERCLA 261.33 8(d)
Zinc Oxide (1314-13-2) 1000 No No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

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SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16 :: OTHER INFORMATION

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0

Disclaimer

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