

**Distributed by**  
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MATERIAL SAFETY DATA SHEET
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**CR4 CR40 CR4-USP series**

**ZINC OXIDE**

SECTION 1-PRODUCT IDENTIFICATIONS
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**CAS REGISTRATION NUMBER: 1314-13-2**

**TDG / DOT CLASSIFICATION:** Unregulated

**GRADES:** CR4 CR40 CR4-USP TR4 series

**SYNONYMS:** White zinc, permanent white, Chinese White, zinc monoxide.

**PRODUCT APPLICATIONS:** Paint, rubber, ink, plastics, enamel, glass, astringent topical protectant, antiseptics, electronics, adhesives, chemical products, cosmetics.

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SECTION 2-FLAMMABILITY AND EXPLOSION HAZARD
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No risk when exposed to heat or flames.

**MEASURES TO EXTINGUISH SMALL OR MODERATE FIRES**

- Chemical powder
- Carbon dioxide
- Halon
- Water spray or standard foam

**MEASURES TO EXTINGUISH LARGER FIRES**

- Water spray or standard foam

**PRECAUTIONS:** Avoid breathing any fumes or dust. Remain upwind of the fire and wear a self contained breathing apparatus.

Stable at standard temperature and pressure.

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## SECTION 3-REACTIVITY

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### PRODUCTS INCOMPATIBLE WITH ZINC OXIDE

Chlorinated rubber: Violent reaction or explosion with zinc oxide at 215°C

Flax oil: Exothermic reaction with possibility of ignition.

Magnesium: If heated: explosive reaction.

Strong bases and acids: Possibility of violent reaction.

When heated at high temperature, zinc oxide can produce toxic fumes.

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## SECTION 4-TOXICOLOGICAL PROPERTIES AND HEALTH EFFECTS

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NOTE: Zinc oxide fumes appear only upon the formation of zinc oxide from zinc metal.

### EXPOSURE LIMITS (ACGIH)

10 milligrams per cubic meter of zinc oxide dust

5 milligrams per cubic meter of zinc oxide fumes

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## SECTION 5-TOXICITY DATA

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500 milligrams/24hours/skin-rabbit: light irritation

500 milligrams/24hours/eyes-rabbit: light irritation

600 milligrams/cubic meter/inhalation-human: TCLO

Carcinogenic effect: none

Toxic by absorption through the peritoneum.

### INHALATION

Inhalation of fumes can cause fume fever.

Symptoms:

Sweating, shivering, headache, fever, chills, thirst, muscle aches, nausea, vomiting, weakness and tiredness.

The symptoms occur 4 to 12 hours after exposure and usually last up to 24 hours.

### SKIN CONTACT

No irritation of skin for short exposure.

Chronic exposure:

In cases of poor personal hygiene, occupational dermatitis (oxide pox) can occur where zinc oxide dust

combines with debris and bacteria to block sweat glands on the skin.

## EYE CONTACT

Acute exposure:

May cause redness and irritation.

Chronic exposure:

Repetitive or prolonged exposure to zinc oxide fumes may cause conjunctivitis.

## INGESTION

Acute exposure:

The toxic dose is 2 grams/kilogram and over. At the extreme, zinc oxide can cause gastro-enteritis.

Chronic exposure:

Permeates the placenta and excreted through maternal milk.

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## SECTION 6-FIRST AID AND PREVENTIVE MEASURES

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### INHALATION

If exposed to zinc oxide fumes, remove person to a well ventilated area, treat according to symptoms and seek medical attention.

### SKIN CONTACT

Remove contaminated clothes. Wash contacted area with mild soap and water (15 minutes), then dry. Seek medical attention if skin irritation occurs and persists.

### EYE CONTACT

Rinse eyes immediately with water making sure to occasionally lift the eyelids (15-20 minutes).

Consult a physician.

### INGESTION

\* If the person is conscious, give him/her two (2) to four (4) glasses of water and provoke vomiting by placing finger deep in the throat. Keep victim warm and rested. Consult a physician.

## SECTION 7-PREVENTIVE MEASURES

### PERSONAL PROTECTION EQUIPMENT:

#### RESPIRATOR (FOR ZINC OXIDE FUMES)

Positive pressure, anti-dust, anti-fog respirator or standard respirator.

If the concentration is over 250 milligrams/cubic meter:

Requires an air purifier respirator with full facial unit complete with high efficiency particle filter, positive pressure or standard respirator complete with full facial unit.

If the concentration is over 2500 milligrams/cubic meter:

Self-contained half mask apparatus.

GLOVES:\*protective gloves

CLOTHES:\*appropriate working clothes

EYE PROTECTION:\*anti-splash or anti-dust safety goggles. Do not use contact lenses as safety equipment.

COLLECTIVE PROTECTION EQUIPMENT:

VENTILATION :

It is recommended to use positive displacement air extractor and/or a mechanical ventilation system and/or a ventilation system complete with an air treatment enclosure to meet the published exposure limits norms.

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## SECTION 8-LEAKAGE DISPOSAL AND STORAGE OF PRODUCT

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Recover the product and place in appropriate containers. The containers should be labeled, clean, dry and fitted with a cover. Sweep and/or wash down the surface exposed to the product. Ventilate the area while cleaning.

### DISPOSAL

The product recovered can be recycled if in acceptable condition. If not, dispose per published norms and/or contact the manufacturer for assistance and recommendation on disposal of the product.

Observe any Federal, State or local rules relative to disposal of product.

### STORAGE

Store as far as possible from non-compatible substances.

Store product in labeled, clean, dry, covered containers.

Place in a cool, dry, and well ventilated area.

Keep the containers closed if product is not used.

Observe any Federal, State or local rules relative to the storage of this product.

## SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements

of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

**Cas#:** Not applicable.

**CHEMICAL NAME:** Zinc Oxide (Reportable as a Zinc compound)

**PERCENT BY WEIGHT:** 100%

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