



## 4. First aid measures

### First aid measures

<b>General advice</b>	If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration.
<b>Ingestion</b>	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

### Most important symptoms and effects, both acute and delayed

**Symptoms** No known effects under normal use conditions.

### Indication of any immediate medical attention and special treatment needed

**Note to physicians** Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

## 5. Fire-fighting measures

### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

### Specific hazards arising from the chemical

None in particular.

#### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Protective equipment and precautions for firefighters

Use personal protective equipment as required.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. Avoid contact with eyes. Wash thoroughly after handling.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions** Collect spillage. Do not allow into any sewer, on the ground or into any body of water.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material. Clean contaminated surface thoroughly.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. Handling and Storage

### Precautions for safe handling

**Advice on safe handling** Use personal protective equipment as required. Use only in well-ventilated areas. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

**Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Store at ambient conditions.

**Incompatible materials** Strong oxidizing agents. Strong acids.

## 8. Exposure Controls/Personal Protection

### Control parameters

#### Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Zinc Oxide 1314-13-2	STEL: 10 mg/m <sup>3</sup> respirable fraction TWA: 2 mg/m <sup>3</sup> respirable fraction	TWA: 5 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> fume (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) STEL: 10 mg/m <sup>3</sup> fume	IDLH: 500 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup> dust TWA: 5 mg/m <sup>3</sup> dust and fume STEL: 10 mg/m <sup>3</sup> fume

### Appropriate engineering controls

**Engineering controls** Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Odor</b>	Characteristic
<b>Appearance</b>	Paste	<b>Odor threshold</b>	No information available
<b>Color</b>	Cream To Yellow		

#### Property

pH

Melting point/freezing point

Boiling point / boiling range

Flash point

Evaporation rate

Flammability (solid, gas)

Flammability limit in air

Upper flammability limit

Lower flammability limit

#### Values

#### Remarks •

No information available

No information available

No information available

No information available

No information available

No information available

No information available

No information available

Vapor pressure		No information available
Vapor density		No information available
Specific gravity		No information available
Water solubility	Insoluble in water	
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties		No information available
Oxidizing properties		No information available

**Other Information**

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available

## 10. Stability and Reactivity

**Reactivity**

No data available

**Chemical stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Hazardous polymerization**      Hazardous polymerization does not occur.

**Conditions to avoid**

None known.

**Incompatible materials**

Strong oxidizing agents. Strong acids.

**Hazardous decomposition products**

None under normal use conditions.

## 11. Toxicological Information

**Information on likely routes of exposure****Product information**

<b>Inhalation</b>	No data available.
<b>Eye contact</b>	No data available.
<b>Skin contact</b>	No data available.
<b>Ingestion</b>	No data available.

**Component information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc Oxide 1314-13-2	> 5000 mg/kg ( Rat )	>2000 mg/kg (Rat)	-

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.  
**Serious eye damage/eye irritation** No information available.  
**Irritation** No information available.  
**Corrosivity** No information available.  
**Sensitization** No information available.  
**Germ cell mutagenicity** No information available.  
**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.  
**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

## 12. Ecological Information

**Ecotoxicity**

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Zinc Oxide 1314-13-2	IC50 (72h) <1mg/l	LC50 (96h) <1mg/l		

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

## 13. Disposal Considerations

**Waste treatment methods**

**Disposal of wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Zinc Oxide 1314-13-2	Toxic

## 14. Transport Information

**Note:** For single packaging and combination packaging containing inner packaging with dangerous goods > 5L for liquids or > 5kg for solids:

### DOT

**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III

### ICAO (air)

**UN/ID no** 3082  
**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III

### IATA

**UN/ID no** 3082  
**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III

### IMDG

**UN/ID no** 3082  
**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III  
**Marine pollutant** This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

### RID

**UN/ID no** 3082  
**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III

### ADR

**UN/ID no** 3082  
**Proper shipping name** 3082 - Environmentally hazardous substances, liquid, n.o.s (Zinc Oxide)  
**Hazard class** 9  
**Packing group** III

## 15. Regulatory information

### International inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Not Determined
IECSC	Complies
KECL	Not Determined
PICCS	Not Determined
AICS	Complies

### Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 AICS - Australian Inventory of Chemical Substances

**US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc Oxide 1314-13-2		X		

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Zinc Oxide 1314-13-2	X	X	X

**16. Other information**

<b><u>NFPA</u></b>	Health Hazards 1	flammability 1	Instability 0	Physical and chemical properties - <b>PERSONAL PROTECTION C</b>
<b><u>HMIS</u></b>	Health Hazards 1	flammability 1	Physical Hazards 0	

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**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**