



# Safety Data Sheet

## ZINC OXIDE

### 1. Identification

#### 1.1 Product identifier

Product name ZINC OXIDE  
Product code 10566

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Additive in oilfield applications.  
Uses advised against Consumer use

#### 1.3 Details of the supplier of the safety data sheet

Supplier  
M-I PRODUCTION TECHNOLOGIES  
A Business Unit of M-I L.L.C.  
P.O. Box 42842  
Houston, TX 77242  
Telephone: 1 281-561-1511  
www.miswaco.slb.com

M-I SWACO, A Schlumberger Company  
200 - 125, 9th Avenue SE  
Calgary, Alberta T2G 0P6, Canada  
Telephone: 1-780-955-3388

Prepared by  
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#### 1.4 Emergency Telephone Number

Emergency telephone (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 561 1600

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS - Classification

Health hazards Not classified

##### Environmental hazards

Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Physical Hazards Not classified

**2.2 Label elements**



**Signal word**  
WARNING

**Hazard statements**

H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P273 - Avoid release to the environment  
P391 - Collect spillage  
P501 - Dispose of contents/ container to an approved waste disposal plant

Unknown acute toxicity Not Applicable.

**3. Composition/information on Ingredients**

**3.1 Substances**

Component	CAS-No	Weight % - range
Zinc oxide	1314-13-2	100

**3.2 Mixtures**

Not Applicable

**Comments**

The exact percentage (concentration) of composition has been withheld as a trade secret

**4. First aid measures**

**4.1 First-Aid Measures**

**Inhalation** If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

**Ingestion** Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

**Skin contact** Wash skin thoroughly with soap and water. Get medical attention if irritation persists.

**Eye contact** Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses. Get medical attention if any discomfort continues.

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

**General advice** The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

#### **Main symptoms**

**Inhalation** Please see Section 11. Toxicological Information for further information.

**Ingestion** Please see Section 11. Toxicological Information for further information.

**Skin contact** Please see Section 11. Toxicological Information for further information.

**Eye contact** Please see Section 11. Toxicological Information for further information.

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

**Notes to physician** Treat symptomatically

## **5. Fire-fighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use extinguishing media appropriate for surrounding material.

#### **Extinguishing media which shall not be used for safety reasons**

None known.

### **5.2 Special hazards arising from the substance or mixture**

#### **Unusual fire and explosion hazards**

None known.

#### **Hazardous combustion products**

Fire or high temperatures create: Zinc oxide fumes, Metal fumes.

### **5.3 Advice for firefighters**

#### **Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

#### **Special Fire-Fighting Procedures**

Containers close to fire should be removed immediately or cooled with water.

## **6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. See also section 8.

### **6.2 Environmental precautions**

The product should not be allowed to enter drains, water courses or the soil.

**Environmental exposure controls**

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and materials for containment and cleaning up**

**Methods for containment**

Cover powder spill with plastic sheet or tarp to minimize spreading. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

**6.4 Reference to other sections**

See section 13 for more information.

**7. Handling and storage**

**7.1 Precautions for safe handling**

**Handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid dust formation.

**Hygiene measures**

Use good work and personal hygiene practices to avoid exposure. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

**Technical measures/precautions**      Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

**Storage precautions**                      Keep containers tightly closed in a dry, cool and well-ventilated place.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

Component Information

Component	ACGIH TLV	OSHA PEL
Zinc oxide 1314-13-2 ( 100 )	2 mg/m <sup>3</sup> ; 10 mg/m <sup>3</sup> (STEL) (respirable)	5 mg/m <sup>3</sup> (fume); 15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable)

**8.2 Exposure controls**

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

**Engineering measures to reduce exposure**

Ensure adequate ventilation.

**Personal protective equipment**

**Eye protection**

Safety glasses with side-shields.

**Hand protection**

Wear chemical resistant gloves such as nitrile or neoprene.

<b>Respiratory protection</b>	No personal respiratory protective equipment normally required In case of insufficient ventilation wear suitable respiratory equipment Use NIOSH approved respirator with dust and mist protection (3M 8210). If dust concentration exceeds 5 times the exposure limit, wear an approved HEPA respirator
<b>Skin and body protection</b>	Wear suitable protective clothing, Eye wash and emergency shower must be available at the work place.
<b>Hygiene measures</b>	Wash hands before eating, drinking or smoking, Remove and wash contaminated clothing before re-use.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Powder
<b>Color</b>	Off-white - Yellow
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
<b>pH</b>	No information available.	
<b>pH @ dilution</b>	No information available	
<b>Melting/freezing point</b>	No information available	
<b>Boiling point/range</b>	No information available	
<b>Flash point</b>	Not Applicable	PMCC
<b>Evaporation rate (BuAc =1)</b>	No information available	
<b>Flammability (solid, gas)</b>	Not Applicable	
<b>Flammability Limits in Air</b>		
<b>Upper flammability limit</b>	No information available	
<b>Lower flammability limit</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific gravity</b>	No information available	
<b>Bulk density</b>	No information available	
<b>Water solubility</b>	Slightly soluble in water.	
<b>Solubility in other solvents</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Log Pow</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

### 9.2 Other information

<b>Pour point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content(%)</b>	No information available
<b>Density</b>	No information available

## 10. Stability and reactivity

### 10.1 Reactivity

No specific reactivity hazards associated with this product.

**10.2 Chemical stability**

Stable under normal temperature conditions and recommended use.

**10.3 Possibility of Hazardous Reactions**

**Hazardous polymerization**

Hazardous polymerization does not occur.

**10.4 Conditions to avoid**

None known.

**10.5 Incompatible materials**

No materials to be especially mentioned.

**10.6 Hazardous decomposition products**

See also section 5.2.

**11. Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

**Inhalation**

Inhalation of dust in high concentration may cause irritation of respiratory system.

**Eye contact**

Dust may cause mechanical irritation.

**Skin contact**

Prolonged contact may cause redness and irritation.

**Ingestion**

Ingestion may cause stomach discomfort.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc oxide	> 5000 mg/kg ( Rat )	No data available	No data available

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA listed carcinogens	NTP
Zinc oxide	No data available	No data available	No data available	No data available

**Sensitization**

This product does not contain any components suspected to be sensitizing.

**Mutagenic effects**

This product does not contain any known or suspected mutagens.

**Carcinogenicity**

This product does not contain any known or suspected carcinogens.

**Reproductive toxicity**

This product does not contain any known or suspected reproductive hazards.

**Developmental toxicity**

Not known to cause birth defects or have a deleterious effect on a developing fetus.

**Routes of exposure**

Skin contact. Inhalation.

**Routes of entry**

No route of entry noted.

**Specific target organ toxicity (single exposure)** Not classified  
**Specific target organ toxicity (repeated exposure)** Not classified.  
**Aspiration hazard** Not Applicable.

**12. Ecological information**

**12.1 Toxicity**

**Toxicity to algae**  
This product is not considered toxic to algae.

**Toxicity to fish**  
This product is not considered toxic to fish.

**Toxicity to daphnia and other aquatic invertebrates**  
This product is not considered toxic to invertebrates.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Zinc oxide	No information available	No information available	No information available

**12.2 Persistence and degradability**

No product level data available.

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No information available.

**12.5 Results of PBT and vPvB assessment**

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)  
 This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB)

**12.6 Other adverse effects.**

None known.

**13. Disposal considerations**

**13.1 Waste treatment methods**

**Disposal Method** Disposal should be made in accordance with federal, state and local regulations.  
**Contaminated packaging** Empty containers should be taken for local recycling, recovery or waste disposal.

**14. Transport information**

**14.1 UN Number**

UN No. (DOT)	UN 3077
UN No. (TDG)	UN 3077
UN/ID No. (ADR/RID/ADN/ADG)	UN 3077
UN No. (IMDG)	UN 3077
UN No. (ICAO)	UN 3077

**14.2 Proper shipping name**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains zinc oxide)

**14.3 Hazard class(es)**

DOT Hazard class	9
TDG Hazard class	9
ADR/RID/ADN/ADG Hazard class	9
IMDG Hazard class	9
ICAO Hazard class/division	9

**14.4 Packing group**

DOT Packing group	PG III
TDG Packing group	PG III
ADR/RID/ADN/ADG Packing group	PG III
IMDG Packing group	PG III
ICAO Packing group	PG III

**14.5 Environmental hazard**

Marine pollutant	Yes
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**14.6 Special precautions**

Not Applicable

**15. Regulatory information**

**International inventories**

USA (TSCA)	Complies
Canada (DSL)	Complies
European Union (EINECS and ELINCS)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

**U.S. Federal and State Regulations**

**SARA 311/312 Hazard Categories**

Immediate (acute) health hazard.



Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Zinc oxide	N/A	N/A	N/A

**State Comments**

Proposition 65: This product is not known to contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer and/or reproductive toxicity at levels that are expected to pose a significant risk under anticipated use conditions.

**Canadian Classification**

This Safety Data Sheet has been prepared in compliance with the Hazardous Products Regulations.

**16. Other information**

**Supersedes date** 28/Mar/2014  
**Revision date** 15/Sep/2015  
**Version** 2  
**The following sections have been revised:** All sections. Updated according to GHS/CLP.

**HMIS classification**

Health 1  
 Flammability 1  
 Physical hazard 0  
 PPE E

N/A - Not Applicable, N/D - Not Determined.

**Disclaimer**

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