

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 1 of 8

Zinc Oxide

SECTION 1: Identification

Product identifier

Product name: Zinc Oxide

Product code: S25641

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

United States

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

Supplier:

United States

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard(s) identification

GHS classification:

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

Label elements

Hazard pictograms:



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 and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
----------------	------	----------

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 2 of 8

Zinc Oxide

CAS number: 1314-13-2	Zinc oxide	100
--------------------------	------------	-----

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

After skin contact:

Rinse affected area with soap and water

If symptoms develop or persist, seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

If symptoms develop or persist, seek medical attention

After swallowing:

Rinse mouth thoroughly

Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 3 of 8

Zinc Oxide

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

- Ensure air handling systems are operational
- Wear protective eye wear, gloves and clothing
- Ensure adequate ventilation

Environmental precautions:

- Should not be released into the environment
- Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

- Wear protective eye wear, gloves and clothing
- Sweep or scoop up solid material while minimizing dust generation
- Dispose of contents / container in accordance with local regulations

Reference to other sections:

- Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

- Use only with adequate ventilation.
- Avoid breathing dust.
- Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

- Keep container tightly sealed.
- Keep container dry.
- Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Zinc oxide	1314-13-2	ACGIH TLV TWA 2.0 mg/m ³
	Zinc oxide	1314-13-2	ACGIH TLV TWA 10.0 mg/m ³
United States (OSHA)	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Fume)
	Zinc oxide	1314-13-2	OSHA PEL TWA 15 mg/m ³ (Total dust)
	Zinc oxide	1314-13-2	OSHA PEL TWA 5 mg/m ³ (Respirable fraction)
NIOSH	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; C 15 mg/m ³ (Dust)
	Zinc oxide	1314-13-2	NIOSH REL TWA 5.0 mg/m ³ ; ST 10 mg/m ³ (Fume)

Biological limit values:

- No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

- Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
- Biological monitoring may also be appropriate for some substances.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 4 of 8

Zinc Oxide

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Off-white
Odor	Odorless
Odor threshold	Not determined or not available.
pH	7.50 g/L aq. sol (susp)
Melting point/freezing point	1975 °C / 3587 °F
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	5.6
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 5 of 8

Zinc Oxide

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Avoid generating dust.

Incompatible materials:

Magnesium, chlorinated rubber.

Hazardous decomposition products:

Oxides of zinc.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 6 of 8

Zinc Oxide

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Zinc oxide	Oncorhynchus mykiss (rainbow trout) - 1.1 mg/l - 96.0 h
	Daphnia magna (Water flea) - 0.098 mg/l - 48 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	3077
-----------	------

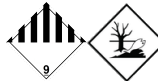
Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

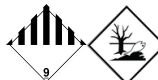
Initial preparation date: 05.09.2017

Page 7 of 8

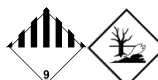
Zinc Oxide

UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. Zinc Oxide		
UN transport hazard class(es)	9		
Packing group	III		
Environmental hazards	Marine Pollutant Zinc Oxide Marine Pollutant		
Special precautions for user	None		

International Maritime Dangerous Goods (IMDG)

UN number	3077		
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. Zinc Oxide		
UN transport hazard class(es)	9		
Packing group	III		
Environmental hazards	Marine Pollutant Zinc Oxide		
Special precautions for user	None		

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	3077		
UN proper shipping name	Environmentally Hazardous Substance, Solid, N.O.S. Zinc Oxide		
UN transport hazard class(es)	9 		
Packing group	III		
Environmental hazards	Marine Pollutant Zinc Oxide		
Special precautions for user	None		

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	None		
Ship type	None		
Pollution category	None		

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

1314-13-2	Zinc oxide	Listed
-----------	------------	--------

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
-------	---------	------	----------	----------

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 05.09.2017

Page 8 of 8

Zinc Oxide

No	No	No	No	No
----	----	----	----	----

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

1314-13-2	Zinc oxide	Not Listed
-----------	------------	------------

CERCLA: Not determined.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

1314-13-2	Zinc oxide	Listed
-----------	------------	--------

New Jersey Right to Know:

1314-13-2	Zinc oxide	Not Listed
-----------	------------	------------

New York Right to Know:

1314-13-2	Zinc oxide	Listed
-----------	------------	--------

Pennsylvania Right to Know:

1314-13-2	Zinc oxide	Listed
-----------	------------	--------

California Proposition 65: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 0-0-0-0

HMIS: 0-0-0-0

Initial preparation date: 05.09.2017

End of Safety Data Sheet