

Safety Data Sheet

Section 1: Identification

Product Name: Zinc Oxide

Product Type: Solid

Recommended Uses: For further manufacturing of feed.

Synonyms: Zinc Oxide, Oxzinal. Zinc Oxide, Máximo.

Company Identification:

Origination, LLC
1802 Wooddale Drive, Suite 200
Woodbury, MN 55125

For information, call: 1-800-625-6079

Emergency Number: 1-800-625-6079

For CHEMTREC assistance, call: 1-800-424-9300

For International CHEMTREC assistance, call: 703-527-3887


Section 2: Hazard(s) Identification

Classification of the substance: GHS Classification.

Acute aquatic toxicity (Category 1) H400

Chronic aquatic toxicity (Category 1) H410

GHS label elements:

Pictograms	Signal Word	Hazard Statements	Precautionary Statements
	WARNING	H400 H410	P273 P391 P501

Hazards not otherwise classified: None Know.

Section 3: Composition / Information on Ingredients

Component	CAS Number	EC Number	Trade names of zinc oxide products		
			Oxzinal 800 to 821	Maximo 318, 414, 417W, 730, 819 to 996	Maximo 720, 721 and 725
Zinc Oxide, ZnO	1314-13-2	215-222-5	> 99.6%	> 99.0 %	> 89.6 %
Appearance and Odor	NA	NA	White powder, odorless	Creamy white powder, odorless	Brown powder, odorless

Section 4: First Aid Measures

Inhalation: Move into fresh air and keep at rest. If the person is not breathing provide artificial respiration, if breathing is difficult, give oxygen. Get medical attention.

Ingestion: Ingestion of large quantities, get medical attention, never induce vomiting unless indicated by medical personnel.

Skin contact: Wash with soap and water and launder clothing before re-use. If irritation occurs get medical attention.

Eye contact: Immediately flush with plenty of water for up to 15 minutes holding the eyelids open. Get medical attention.

Section 5: Fire Fighting Measures

Flammability: Not flammable

Flash point: Not applicable.

Autoignition: Not applicable.

Flammable Limit: Not applicable.

Extinguishing Media: Use media appropriate to the environment.

Risks: Emits toxic fumes.

Fighting Procedures: In case of fire in the environment, use protective equipment and self-protective clothing to prevent contact with skin and eyes.

Section 6: Accidental Release Measures

Personal precautions: Use personal protective equipment (see paragraph 8).

Precautions to protect the environment: Product dangerous to the environment in case of large spills or when the product contaminates lakes, rivers or sewers, inform appropriate authorities in accordance with local laws.

Clean Methods: Clean spills in a way that does not disperse dust into the air and place in suitable container. Dispose according to regulations. The disposal area can be cleaned with water, but prevent it from spilling into a river or reservoir.

Section 7: Handling and Storage

Precautions for safe handling: No special handling required, we recommend the following general measures:

- Use personal protective equipment (see paragraph 8).
- Wash after handling.

Conditions for safe storage: No special storage measures required; we recommend the following general measures:

- Store in a dry place.
- Do not expose to sun, heat or incompatible substances (see paragraph 10).

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Product life, unlimited if tightly closed and dry.
Place away from sources of ignition.
Do not store with food.

Section 8: Exposure Controls, Personal Protection

Exposure limits values

Component	Mexico	USA	Canada	Europe
Zinc Oxide	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 10 mg/m ³ 8 hours (powder). LMPE-CT: 10 mg/m ³ 15 min (smoke). LMPE-PPT: 5 mg/m ³ 8 hours (smoke).	OSHA PEL (2/2013). TWA: 5 mg/m ³ 8 hours (Fume). TWA: 5 mg/m ³ 8 hours (Respirable fraction). TWA: 15 mg/m ³ 8 hours (Total dust). ACGIH TLV (4/2014). STEL: 10 mg/m ³ 15 min (Respirable fraction). TWA: 2 mg/m ³ 8 hours (Respirable fraction).	ACGIH 4/2014 / ON 1/2013 STEL: 10 mg/m ³ 15 min (Respirable fraction). TWA: 2 mg/m ³ 8 hours. (Respirable fraction) AB 4/2009 / BC 7/2013 STEL: 10 mg/m ³ 15 min (Respirable). TWA: 2 mg/m ³ 8 hours (Respirable). QC 1/2014 STEL: 10 mg/m ³ 15 min (smoke). TWA: 5 mg/m ³ 8 hours (smoke).	(WELS) / EH40 TWA 10 mg / m ³ 8 hours (Total dust). TWA 4 mg / m ³ 8 hours (Respirable fraction).

Exposure Controls: Local and general ventilation, to ensure that concentration does not exceed the limits for occupational exposure. Consider enclosing the process. Ensuring control of process conditions. Replacement air supply to supply air continuously removed. Provide showers and eyewash stations.

Personal Protection

Eye Protection: Wear approved safety goggles.

Hand Protection: Rubber gloves are recommended. Wash hands and face before eating, drinking or smoking.

Respiratory Equipment: If ventilation is insufficient, suitable respiratory protection must be provided.

Other Protection: Self-contained breathing apparatus and overalls.

Section 9: Physical and Chemical Properties

Odor: Odorless

Boiling point: Not applicable.

Explosive Properties: Not applicable.

Appearance: White powder, creamy white or brown.

Specific Gravity: 5.606

Oxidizing properties: Not applicable.

Molecular weight (gr/mol): 81.39

Solubility in water: Insoluble

Vapor pressure: Not applicable.

Melting point : 3587 °F (1975 °C)

Solubility: Acids, ammonia, ammonium carbonate and alkali.

Section 10: Stability and Reactivity

Reactivity: Stable under normal conditions.

Stability: Stable under normal conditions.

Conditions to avoid: None

Materials to avoid: Strong alkalis. Strong acids

Hazardous decomposition products: None.

Section 11: Toxicological Information

Toxicity Data: LD50 (oral, mouse): 7950 mg / kg. LC50 (inhalation, mouse): 2500 mg/m³

Chronic effects: No known significant effects or critical hazards. There is no information that prolonged or repeated exposure aggravates medical conditions.

Acute effects: Powder or zinc oxide fumes can irritate the respiratory tract. Prolonged exposure of the skin may lead to dermatitis. Exposure to high levels of dust or smoke can lead to fever, muscle pain, headache and dry throat and mouth.

Section 12: Ecological Information

Ecotoxicity: CE50 (Selenastrum capricornutum, 72 hours): 170 mg ZnO / l (LISEC 1997).

Bioaccumulation: Not applicable.

Mobility: Not applicable.

Results of PBT and mPmB: Not applicable.

Persistence / degradability: Not applicable.

Other adverse effects: Not applicable.

Section 13: Disposal Considerations (non-mandatory)

Avoid or minimize the generation of waste wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products must meet the requirements of environmental protection legislation and waste disposal and the requirements of local authorities.



Section 14: Transport Information

America: This material is not regulated.

European Union:

Type of transport	Classification	UN Number	Proper shipping name	Class	Group Packing	Label	Additional information
Land:	ADR	UN 3077	Environmentally	9	III		Hazard No. 90

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Road Railroad	RID	Hazardous Substance, Solid, N.O.S. (Zinc Oxide)	 	Transportation Guide: 90G02
Sea	IMO/IMDG			Emergency Plans (EmS) F-A, S-F
Air	IATA/DGR			

Section 15: Regulatory Information

Mexico: This material is not regulated.

EE.UU.

DOT 172: Not regulated.

SARA 302: RQ=None, TPQ=None.

SARA 311/312: Yes (Acute).

SARA 313: Zn and Pb Compounds.

Prop. 65: Yes (Pb, Cd).

CAA 112, 61 HAP: No.

FIFRA 152 et seq.: No

RCRA 261: Determination of TCLP (Pb, Cd).

CERCLA 102/103: Name List, RQ=None.

NSF 60/61: Envoy: NSF, UL. FCC: Enumerated.

CONEG: Compliant.

TSCA: Yes, Inventory. Complies with TSCA.

TSCA 8(b) inventory: Zinc oxide

ODS/ODC 82: No.

Illinois toxic substances disclosure to employee act: Zinc oxide

Rhode Island RTK hazardous substances: Zinc oxide

Pennsylvania RTK: Zinc oxide

Minnesota: Zinc oxide

Massachusetts RTK: Zinc oxide

New Jersey: Zinc oxide

California Director's List of Hazardous Substances: Zinc oxide

Canada

Classification WHMIS: Not controlled

Domestic Substances List (DSL): Listed

European Union

EINECS: Yes, in inventory.

ELINCS: No.

REACH: Yes (01-2119463881-32-0091).

International Lists:

AICS: Yes

IECS: Yes

ECL: Yes

SWISS: Yes

PICCS: Yes

ASIA-PAC: Yes

ENCS: Yes

NZIoC: Yes

Section 16: Additional Information

GHS Definitions

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... (in accordance with local/regional/national/international regulation).

Hazardous Materials Identification System, (HMIS)

Health: 1

Fire: 0

Reactivity: 0

Personal Protection: E

Personal Protection: E (recommended only for bulk powder) = Gloves + Mask + Glasses

Definitions Classifications

0 = Minimum

1 = Slight

2 = Moderate

3 = Serious

4 = Severe

This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement. Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.

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Prepared by: Origination, LLC

Prepared: April 8, 2021

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