

1. CHEMICAL PRODUCT – COMPANY IDENTIFICATION.

GHS Product name: Zinc Oxide
Common / Trade names: Zinc Oxide, Oxzinal.
 Zinc Oxide, Máximo.
Application: Zinc oxide is widely used as an additive to many products in the ceramic, rubber, paint, animal feed, zinc compounds, pharmaceuticals, industries, etc...
Company Identification: Zinc Nacional, S.A.
 Serafin Peña 938 Sur. Monterrey N.L. México. C.P. 64000
 Phone: +52 (81) 8345-4078 Fax +52 (81) 8344-3446.
www.zincnacional.com
Emergency telephone: Business Hours: +52 (81) 8345-4078.
 24 Hours: +52 (81) 8376-5730.

2. HAZARDS 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

For the full meaning of the phrases H and P: see section 16

- Hazards not otherwise classified:** None Know.

3. COMPOSITION AND INFORMATION ON INGREDIENTS.

Component	CAS Number	EC Number	Trade names of zinc oxide products		
			Oxzinal 800 to 821	Máximo 318, 414, 417W, 730, 819 to 996	Máximo 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 or granule, odorless	Creamy white powder or granule, odorless	Brown powder or granule, odorless

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.

5. FIRE-FIGHTING MEASURES.

- Flammability:** Not flammable
- Autoignition:** Not applicable.
- Extinguishing Media:** Use media appropriate to the environment.
- Fighting Procedures:** In case of fire in the environment, use protective equipment and self-protective clothing to prevent contact with skin and eyes.
- Flash point:** Not applicable.
- Flammable Limit:** Not applicable.
- Risks:** Emits toxic fumes.

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.

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

8. EXPOSURE CONTROL / PERSONAL PROTECTION.
Exposure limits values.

Component	Mexico	USA	Canada	Europe
Zinc Oxide	NOM-010-STPS (Mexico, 4/2014). LMPE-PPT: 10 mg/m ³ 8 hours (powder). LMPE-CT: 10 mg/m ³ 15 min (smoke). LMPE-PPT: 2 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.

9. PHYSICAL AND CHEMICAL PROPERTIES.

- **Odor:** Odorless
- **Appearance:** powder or granule, white, creamy white or brown.
- **Molecular weight (gr/mol):** 81.39
- **Melting point :** 3587 °F (1975 °C)
- **Boiling point:** Not applicable.
- **Specific Gravity:** 5.606
- **Solubility in water:** Insoluble
- **Solubility:** Acids, ammonia, ammonium carbonate and alkali.
- **Explosive Properties:** Not applicable.
- **Oxidizing properties:** Not applicable.
- **Vapor pressure:** Not applicable.

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.

11. TOXICOLOGICAL INFORMATION.

- **Toxicity Data:** LD50 (oral, mouse): 7950 mg / kg. LC50 (inhalation, mouse): 2500 mg/m3
- **Chronic effects:** No know 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 throa and mouth.

12. ECOLOGICAL INFORMATION

- **Ecotoxicity:** CE₅₀ (Selenastrum capricornutum, 72 hours): 170 mg ZnO / l (LISEC 1997).
- **Mobility:** Not applicable.
- **Persistence / degradability:** Not applicable.
- **Bioaccumulation:** Not applicable.
- **Results of PBT and mPmB:** Not applicable.
- **Other adverse effects:** Not applicable.

13. DISPOSAL INFORMATION.

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.

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: Road Railroad	ADR RID	UN 3077	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)	9	III	 	Hazard No. 90 Transportation Guide: 90G02
Sea	IMO / IMDG						Emergency Plans (EmS) F-A, S-F
Air	IATA / DGR						---

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

16. OTHER 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 pertinent in the storage, application and disposal of this product.