1. CHEMICAL PRODUCT – COMPANY IDENTIFICATION.

GHS Product Name:	Zinc Oxide
Common / Trade Names:	Zinc Oxide, Oxzinal. Zinc Oxide, Maximo.
Application:	Zinc oxide is widely used as an additive to many products in ceramic, rubber, paint, animal feed, zinc compounds, pharmaceuticals, industries, etc...
Company Identification:	Zinc Nacional, S.A. Serafín Peña 938 Sur. Monterrey N.L. México. C.P. 64000 Phone: +52 (81) 8342 6861 www.zincnacional.com
Emergency telephone:	CHEMTREC (Mexico) 800 – 681 – 9531 CHEMTREC (Global) +1 – 703 – 527 – 3887 / 1 – 800 – 424 – 9300

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	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	Formula	CAS No.	EC No.	Trade Names of Our Zinc Oxide Products		
				Oxzinal 800 to 821	Maximo 318, 318T, 414, 417W, 730, 819 to 996	Maximo 720, 721, 725, 750 and Zinc Concentrates
Zinc Oxide	ZnO	1314-13-2	215-222-5	99.6 % min	99.0 % min	89.6% min
Appearance and Odor	NA	NA	NA	White powder, odorless	Creamy white powder, odorless	Brown powder, odorless

4. FIRST-AID MEASURES.

- **Description of first aid measures.**
  - **Inhalation:** Move into fresh air and keep at rest. If the person is not breathing provides 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.
- **Most important symptoms and effects, both acute and delayed.**
  - **Inhalation:** May cause irritation to the respiratory tract.
  - **Ingestion:** May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
  - **Skin contact:** May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
  - **Eye contact:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking, and tear production, with possible redness and swelling.
- **Indication of any immediate medical attention and special treatment needed.**
  Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. FIRE-FIGHTING MEASURES.

- **Flammability:** Not flammable
- **Autoignition:** Not applicable
- **Extinguishing Media:** Use media appropriate to the environment.
- **Flash point:** Not applicable.
- **Flammable Limit:** Not applicable.
- **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.

6. ACCIDENTAL RELEASE MEASURES.

- **Personal precautions:** Use personal protective equipment (see paragraph 8).
- **Precautions to protect the environment:** Product is 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 is placed 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 are 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 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/m³ 8 hours (powder). LMPE-CT: 10 mg/m³ 15 min (smoke). LMPE-PPT: 2 mg/m³ 8 hours (smoke).	**OSHA PEL (2/2013).** TWA: 5 mg/m³ 8 hours (Fume). TWA: 5 mg/m³ 8 hours (Respirable fraction). TWA: 15 mg/m³ 8 hours (Total dust). **ACGIH TLV (4/2014).** STEL: 10 mg/m³ 15 min (Respirable fraction). TWA: 2 mg/m³ 8 hours (Respirable fraction).	**ACGIH 4/2014 / ON 1/2013** STEL: 10 mg/m³ 15 min (Respirable fraction). TWA: 2 mg/m³ 8 hours. (Respirable fraction) **AB 4/2009 / BC 7/2013** STEL: 10 mg/m³ 15 min (Respirable). TWA: 2 mg/m³ 8 hours (Respirable). **QC 1/2014** STEL: 10 mg/m³ 15 min (smoke). TWA: 5 mg/m³ 8 hours (smoke).	**(WELS) / EH40** TWA 10 mg / m³ 8 hours (Total dust). TWA 4 mg / m³ 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.

- **Appearance:** White powder, creamy white or brown.
- **Odor:** Odorless
- **Molecular weight (gr/mol):** 81.39
- **Melting point:** 3587 °F (1975 °C)
- **Boiling point:** Not applicable
- **Specific Gravity:** 5.606
- **pH:** Neutral 6.8 to 8 (7.37 Nominal)
- **Flash point:** No data available.
- **Solubility in water:** Insoluble
- **Solubility:** Acids, ammonia, ammonium carbonate and alkali.
- **Explosive Properties:** Not applicable.
- **Oxidizing properties:** Not applicable.
- **Vapor pressure:** Not applicable.
- **Vapor density:** Not applicable.

10. STABILITY AND REACTIVITY.

- **Reactivity:** No dangerous reactions known under normal conditions of use.
- **Chemical stability:** Stable under normal conditions.
- **Possibility of hazardous reactions:** No dangerous reactions known under normal conditions of use.
- **Conditions to avoid:** Heat. Dust. Moisture. Incompatible materials.
- **Incompatible materials:** Strong alkalis. Strong acids.
- **Hazardous decomposition products:** May include and are not limited to carbon oxides.

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 throat and mouth.

12. ECOLOGICAL INFORMATION.

- **Ecotoxicity:** CE_{50} (Selenastrum capricornutum, 72 hours): 170 mg ZnO / l (LISEC 1997).
- **Mobility:** Not applicable.
- **Persistence / degradability:** Not applicable.
- **Bioaccumulation:** Not applicable.
- **Resultados de la valoración PBT y mPmB:** No aplicable.
- **Otros efectos adversos:** No aplicable.

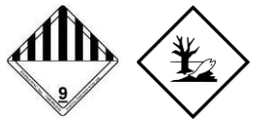
13. DISPOSAL INFORMATION.

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:**
  Not regulated.

- **European Union:**

Type of transport	Classification	UN Number	Proper Shipping Name	Class	Group Packing	Label
Land: Road Railroad	 ADR RID	UN 3077	Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Oxide)	9	III	
Sea	IMO / IMDG					
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: No (Impurities Pb & Cd listed).
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.
ODS/ODC 82: No

- **Europe REACH:** Registration Number 01-2119463881-32-0091.
- **SVHC:** Zinc oxide is not an SVHC. Impurities are below SVHC or candidate SVHC thresholds
- **Nano:** This product is not nano.

- **Inventory / Lists:**
  - **EE. UU:** TSCA: Yes, listed, notification not required.
  - **Canada:** Domestic Substances List (DSL): Yes, listed — Classification WHMIS: No, not listed.
  - **Europe:** EINECS: Yes, on inventory. — ELINCS: No.
  - **Yes, listed on the following lists:** AICS, IECS, ECL, SWISS, PICCS, ASIA-PAC, ENCS, KECI, NZIoC y Taiwan.

16. OTHER INFORMATION.

- **GHS Definitions**
  - **Hazard statements**
    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).

This information relates to the specific product designated and may not be valid for such a 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 arise from the use of this information, nor do we offer a 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.