1. CHEMICAL PRODUCT – COMPANY IDENTIFICATION.

GHS Product name: Zinc Sulphate Monohydrate.
Common / Trade names: Zinc Sulphate Monohydrate.
Zinc Sulphate Maximum 360 / 361 / 362 / 363 / 365

Application: Fertilizers, intermediates, laboratory chemicals, processing aid not otherwise listed, pharmaceutical substance, surface active agents, lubricants and lubricant additives, fillers, some grades of this substance are available for food/feedstuff additives, lubricant additives, fillers, some grades of this substance are available for food/feedstuff additives.

Company identification.
Zinc Nacional, S.A.
Senador Peña 328 Sur, Monterrey N.L, Mexico. C.P. 64000
Phone: +52 (81) 8344-4078
Fax: +52 (81) 8344-3446.

Emergency telephone.
Business Hours: +52 (81) 8345-4076;
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
Acute Tox. 4, H302; Eye Damage 1, H318
Exposure limits.
LMPE-PPT: 10 mg/m³ 8 hours (Respirable fraction).
OSHA PEL (2/2013).
TWA 4 mg / m³ 8 hours (Respirable fraction).
OSHA PEL (2013).
TWA 10 mg / m³ 8 hours (Total dust).
NOM-010-STPS (Mexico, 9/2000).

3. COMPOSITION AND INFORMATION ON INGREDIENTS.

Component Mexico USA Europe
GHS label elements:

4. FIRST-AID MEASURES.

Description of first-aid measures.
Ingestion: Have victim rinse mouth thoroughly with water. "Do not induce vomiting". Immediately give large amounts of water. If vomiting occurs, rinse mouth and repeat administration of water. Obtain medical advice. Never give anything by mouth to an unconscious or convulsing person.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. In case of breathing difficulties administer oxygen. If symptoms persist, obtain medical advice immediately.

Contact with eyes: In case of eye contact, keep eyelid open and flush with plenty of water for 15 minutes. If irritation should persist subsequently consult an ophthalmologist. Protect the eye that is not injured.

Contact with skin: After contact with skin, wash immediately with Water. Subsequently wash again with Water and soap. Take off immediately all contaminated clothing. If irritation persists, seek medical attention.

5. FIRE-FIGHTING MEASURE.

Suitable extinguishing media: Water sprays jet, water mist, foam and carbon dioxide (CO₂).
Unsuitable extinguishing media: Full water jet.
Special hazards: In case of fire may be liberated sulphur dioxide (SO₂) and Sulphur trioxide (SO₃).
Combustion decomposition products: Sulphur dioxide (SO₂) and sulphur trioxide (SO₃) are generated.
Advice for firefighters: Heating of container(s) will cause pressure rise with risk of bursting and subsequent explosion gives of toxic and irritant fumes when heated or burning. The vapor may be invisible and is heavier than air. It spreads along the ground and may enter sewers and basements. Keep container(s) cool with water. Extinguish with water fog (spray).
Do not use water jet to extinguish. Use water spray to knock down fire fumes if possible. Avoid unnecessary run-off of extinguishing media which may cause pollution.

6. ACCIDENTAL RELEASE MEASURES.

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.

Precautions for safe handling.
Avoid spilling, skin and eye contact.
Avoid inhalation of dust.
Keep in the original container.
Keep in a fresh, dry and vented place.
Store away of strong acids or alkaline substances.
Store away of oxidizing or reducing materials.
Store away of hot surfaces and risk flame places.

7. HANDLING AND STORAGE.

Environmental precautions: Stop leaks if possible. Contain spillage by any means available. Cover drains. Do not allow to enter into soil/subsoil. Do not empty into drains or the aquatic environment.

Methods and material for containment and cleaning up: Sweep spilled substance into containers. Carefully collect remainder, and then remove to safe place. Dispose according to regulations.

8. EXPOSURE CONTROL / PERSONAL PROTECTION.

Component Mexico USA Europe
Exposure limits: TWA 4 mg / m³ 8 hours (Respirable fraction).
TWA 15 mg / m³ 8 hours (Total dust).

9. PHYSICAL AND CHEMICAL PROPERTIES.

Appearance: Solid powder.
Color: White.
Odor: Odorless.
Molecular weight (g/mol): 179.47
Relative density (g/cm³): 3.35 20°C
Melting point: 100°C (212°F).
Boiling point: 500°C (932°F).
Ph: 4.5 – 5.5.
Solubility in water: 45 g. of Zinc Sulphate in 100 g. (100 ml) of water at 78°F
Flash Point: Not applicable.

10. TRANSPORT INFORMATION.

11. STABILITY AND REACTIVITY.

Incompatible materials:
Strong acids, strong bases, oxidizing agents, reducing agents, strong oxidizers, strong bases, strong bases, strong acids.

12. ECOSYSTEM EFFECTS.

Aquatic toxicity:
Category 1 H400; Chronic aquatic toxicity (Category 1) H410.

13. OTHER INFORMATION.

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

Components Mexico USA Europe
Zinc Sulphate Maximum 360 / 361 / 362 / 363 / 365

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

Component MX N° CAS N° % (w/w)
Zinc Sulphate, ZnSO₄ 231-739-3 7446-19-7 97.4

Hand protection:
Natural rubber gloves are recommended. Wash hands and face before eating, drinking or smoking.

Respiratory Equipment: P2 filter respirator for inert particles. Use NIOSH approved particulate respirator if dust generation occurs.

Other protection: Wear appropriate clothing to prevent reasonably probable skin contact. Chemical resistant safety shoes.

Individual protection.
Eye Protection: Safety goggles are recommended.
Hand protection: Natural rubber gloves are recommended. Wash hands and face before eating, drinking or smoking.
Respiratory Equipment: P2 filter respirator for inert particles. Use NIOSH approved particulate respirator if dust generation occurs.

Other protection: Wear appropriate clothing to prevent reasonably probable skin contact. Chemical resistant safety shoes.

SALT SILVER

SAFETY DATA SHEET

Date Previous Revision: 23.01.2012
Date of this revision: 18.05.2015
Revision Number: 5
Página: 1 de 2
10. STABILITY AND REACTIVITY.
Readability: Stable.
Chemical stability: Stable under ordinary conditions and storage.
Possibility of hazardous reactions: Reacts with peroxides and other radical forming substances.
Conditions to avoid: High temperatures and moisture.
Incompatible materials: Oxidizers (strong). Acids.
Hazardous decomposition products: In case of fire, sulfur oxides (Sox) are produced.

11. TOXICOLOGICAL INFORMATION.
Information on toxicological effects.
- Acute toxicity:
  Oral: LD50 = 564 to 2949 mg/kg bw. (Rat).
  Dermal: LD50 = 2000 mg/kg bw. (Rat).
- Serious eye damage/irritation.
  Strong irritant
- STOT-single exposure.
  Not toxic.
- STOT-repeated exposure.
  Not toxic.
- Skin corrosion/irritation.
  Not irritant.
- Respiratory or skin sensitization.
  No sensitizing.
- Germ cell mutagenicity.
  Not mutagenic.
- Carcinogenicity.
  Not carcinogenic.

12. ECOTOLOGICAL INFORMATION.
Toxicity.
- Ecotoxicity.
  Aquatic invertebrates. For pH >7-8.5: 3.73 mg Zn/l (based on 72 h. Selenastrum capricornutum test)
  Algae. For pH =7-8.5: 1.13 mg Zn/l (based on 48 h. C. dubia test)
- Mobility in soil.
  Not available.
- Results of PBT and mPnB.
  Not available.
- Persistence / degradability.
  Not available.
- Other adverse effects.
  Not available.

13. DISPOSAL INFORMATION.
Waste treatment methods.
SUBSTANCE DISPOSAL: Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible.
CONTAINER DISPOSAL: Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods.

14. TRANSPORT INFORMATION.
- America
  This material is not regulated.

EE.UU.
No DOT regulated in domestic (USA ground) transportation in package sizes less than 1000 lbs (454 kg). The DOT transportation information below is for shipments with package sizes equal to or exceeding this value. IMDG Regulated Marine Pollutant.

DOT
- Basic shipping requirements:
  UN number: 3077
  Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Zinc Sulphate Monohydrate RQ = 1000lbs.)
  Hazard class: 9
  Packing group: III
  Special precautions: Read safety instructions, SDS and emergency procedures before handling.

Additional Information:
- Special provisions: 8, 146, 335, A112, B54, IB8, B3, N20; T1, TP33
- Packing exceptions: 155
- Packaging non bulk: 213
- Packaging bulk: 240
- Reportable quantity: 1000

- European Union:
  Not controlled

15. REGULATORY INFORMATION.
- Mexico.
  This material is not regulated.

- EE.UU.
  SARA 302: RC-None. TPH= None.
  SARA 311/312: Yes (R113).
  SARA 313: Zn and Pb Compounds.
  RCRA 801: No
  TSCA: No.

- California: Classificaciòn WHMIS: Not controlled.
- Lista de Substancias Doméstitas (DSL): No

- Unión Europea: EINECS: No.
  ELINCS: No.

16. OTHER INFORMATION.
Hazard statements
H302: Harmful if swallowed.
H315: Causes serious eye damage.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements
P261: Rinse cautiously with water for several minutes.
P261-P211: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P272: Avoid contact with the environment.

- Hazardous Materials Identification System, (HMIS)
  Health: 2
  Fire: 0
  Reactivity: 0
  Personal Protection: E
  Personal Protection: E (recommended only for bulk powdered) = Gloves + Mask + Glasses

Definitions Classifications.
0 = Minimum 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This information is based upon calculated data. The company holds no responsibility for damage suffered by the purchaser or other persons handling these goods if safety instructions are not observed. The company holds no responsibility for the wrong use of this material, even if safety instructions have been followed. The purchaser is solely responsible for the use of this material.