



MSDS - Zinc Sulphate Monohydrate

Issued JUNE 18, 2010

Section 1. Product Information

Product Name: Zinc Sulphate Monohydrate

Other Names: Sulfuric Acid, Zinc Salt Monohydrate, Zinc Vitril, Monohydrate

Chemical Name: $\text{ZnSO}_4 \cdot \text{H}_2\text{O}$

Molecular Weight: 179.445 (Monohydrate)

CAS No.: 7446-19-7

Product Use: Included in animal feeds and used as a fertilizer micronutrient

EINECS (EC) No: 231-793-1

Distributed by Pestell Minerals & Ingredients, New Hamburg, ON Canada

24 Hour Emergency Telephone (Canutec): 613-996-6666

Section 2. Composition/Information on Ingredients

Ingredient: Zinc Sulfate Monohydrate, CAS #7446-19-7

Concentration: <98% - 100%

Section 3. Physical Data

Appearance and Colour: White powder and/or granules

Odor Threshold: Odourless

Boiling Point: Not applicable

Freezing Point: Not applicable

Melting Point: Not Applicable

Evaporation Rate: Not applicable

Specific Gravity ($\text{H}_2\text{O}=1$): 3.28

Vapor Density ($\text{Air}=1$): Not applicable

Vapor Pressure: Not applicable

Coefficient of Water/Oil Distribution: Not available

pH: 4.0 to 7.0 in 10% solution

% Volatiles by Volume (at 20°C): Not available

Solubility: Readily soluble in water, slightly soluble in alcohol, insoluble in acetone.

Section 4. Stability/Reactivity Data

Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, high temperatures, moisture

Incompatibility (Materials to Avoid): Oxidizers (strong), strong acids, hydrogen peroxides.

Hazardous Decomposition Products: May release toxic and hazardous oxides of zinc and sulfur.

Hazardous Polymerization: Will not occur under normal temperatures and pressure.

Other Precautions: Avoid excessive heat.

Section 5. Hazardous Identification

Overview: Harmful if swallowed or inhaled. Potential acute hazardous in case of eye contact, slightly hazardous in case of skin contact.

Potential Acute Health Effects

Eyes: May cause irritation or injury. Symptoms include stinging, tearing, redness

Skin: May cause skin irritation. Symptoms may include redness, burning of skin and other damages.

Ingestion: May cause severe irritation and burns of mouth, throat and digestive system. Symptoms may include vomiting, nausea, stomachache, blood in the stool, inability to urinate.

Inhalation: Harmful inhaled. May cause irritation to nose and upper respiratory tract. Symptoms may include coughing, pain and shortness of breath.

Potential Chronic Health Effects

Chronic exposure may cause harmful effects on respiratory system, digestive system and circulatory system. Please refer to **Section 12: Toxicological Information** of this MSDS to get more details about the potential chronic health effects.

Section 6. First Aid Measures

Inhalation: Remove victim to fresh air environment. If breathing is difficult administer oxygen. If breathing has stopped administer artificial respiration. Keep victim warm and calm. Seek medical attention.

Ingestion: Seek immediate medical attention. Don't induce vomiting. If victim is conscious and alert, immediately rinse mouth with water and give milk or water.

Skin: Flush affected area with plenty of water and mild detergent for several minutes. Remove contaminated clothing and wash before re-use. Seek medical advice if effects persist.

Eyes: Wash eyes with large amounts of water for 15 minutes. Seek medical attention if effects persist.

Section 7. Fire or Explosion Hazard

Flash Point: N/A

Explosive Limit: N/A

Autoignition Temperature: N/A

Fire/Explosion: Not considered to be a fire and explosion hazard

Extinguishing Medium: Dry chemical, carbon dioxide or foam. Water fog may be used as a cooling agent.

Fire Fighting Instructions: Use suitable protective equipment for surrounding fire.

Section 8. Spills & Disposal

Don't touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

Section 9. Handling & Storage

Handling: Wash hands before eating. Use with adequate ventilation. Avoid breathing dust. Avoid contacting skin, eyes and clothing. Avoid prolonged or repeated exposure.

Storage: Keep in a tightly closed container, store in a cool, dry, ventilated place. Protect against physical damage. Isolate from all incompatible substances.

Section 10. Disposal Method

Dispose of in accordance with all applicable local, state and federal regulations at an approved waste

disposal facility.

Section 11. Exposure Controls/Personal Protection

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles

Skin: Wear appropriate protective gloves

Respiratory System: Approved or certified respirators

Other Protective Equipment: Overalls or similar protective apparel, clean-up facilities

Don't eat, drink or smoke in work areas. Wash hands thoroughly after handling this material

Engineering Controls: Use adequate exhaust ventilation to keep airborne concentrations below the allowable exposure limit.

Section 12. Toxicological Properties

Toxicity to Animals: Oral, Rat, LD50 1710 mg/kg, not belonged to toxic substances

Chronic Effects on Humans:

Overview: The material may cause harmful effects on respiratory system, digestive system and circulatory system. May cause minor, reversible health effects on lungs. Long term exposures to high concentrations of dusts may cause increase mucous flow in the nose and airways. This condition usually disappears after exposure ceases. It may cause anemia. Repeated skin contact can cause swelling or other skin eruptions.

Carcinogenicity: Not listed as a suspected/confirmed carcinogen by ACGIH, IARC, NTP, SHA.

Mutagenicity: N/A

Reproductive Toxicity: N/A

Teratogenicity: N/A

Section 13. Ecological Information

Degradability: N/A

Aquatic Toxicity: This product is classified as an environmental factor by EC with the phrases N; R50-53.

Environmental Precautions: Do not discharge into drains or rivers

Section 14. Transportation Information

Not classified as hazardous material by IMDG Code and IATA. See UN suggestion if not redefined in your area.

Canadian TDG Classification:

TDG Class 9.2: Environmentally hazardous material PIN UN9161, PG iii

US Dot: Non regulated by DOT. RQ: 1000lbs in containers weighing more than 1,000lbs it is shipped as: Environmentally Hazardous Material, Solid, NOS (Zinc Sulphate), UN3077, 9, PGIII, ERG 31

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