



# MATERIAL SAFETY DATA SHEET

Zinc Sulphate Monohydrate

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Zinc Sulphate Monohydrate  
**Product Use:** Pulp and Paper Industry. Feed supplement. Wood preservative. Flotation agent.  
**Importer/Supplier:** ATA Chem Ltd.  
2506 Silica Pl., Coquitlam, B.C.  
V3E 3K9  
www.atachem.com  
**Phone Number:** (604) 630-7866  
**Emergency Phone:** North America: CHEM TEL (800) 255-3924  
INTERNATIONAL: +01-813-248-0585  
**Date of Preparation:** January 29, 2007

## Section 2: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

CAUTION

HARMFUL IF SWALLOWED. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

**Potential Health Effects:** See Section 11 for more information.

**Likely Routes of Exposure:** Skin contact, skin absorption, eye contact, inhalation, and ingestion.

- Eye:** May cause eye irritation.  
**Skin:** May cause skin irritation.  
**Ingestion:** Harmful if swallowed. May cause stomach distress, nausea or vomiting.  
**Inhalation:** May cause respiratory tract irritation.

**Chronic Effects:** Prolonged or repeated contact may dry skin and cause irritation.

**Signs and Symptoms:** Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Abdominal pain. Burning sensation. May cause anosmia, pneumoconiosis, central nervous system depression, changes in blood pressure, systemic poisoning, and coma.

**Medical Conditions Aggravated By Exposure:** Asthma. Allergies.

**Target Organs:** Skin, eyes, gastrointestinal tract and respiratory system.

**Potential Environmental Effects:** May cause long-term adverse effects in the aquatic environment See Section 12 for more information.

## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Zinc sulfate monohydrate	7446-19-7	97 - 100

## Section 4: FIRST AID MEASURES

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.



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- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

## Section 5: FIRE FIGHTING MEASURES

**Flammability:** Not flammable by WHMIS criteria.

**Means of Extinction:**

**Suitable Extinguishing Media:** Treat for surrounding material.

**Unsuitable Extinguishing Media:** Not available.

**Products of Combustion:** Oxides of sulphur. Oxides of zinc.

**Explosion Data:**

**Sensitivity to Mechanical Impact:** Not available.

**Sensitivity to Static Discharge:** Not available.

**Protection of Firefighters:** Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Environmental Precautions:** This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

**Methods for Containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

**Methods for Clean-Up:** Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

**Other Information:** Not available.

## Section 7: HANDLING AND STORAGE

**Handling:**

Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

**Storage:**

Keep out of the reach of children. Keep container tightly closed. Keep away from food, drink and animal feedingstuffs.



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## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Ingredient	Exposure Limits ACGIH-TLV
Zinc sulfate monohydrate	10 mg/m <sup>3</sup> (total); 3 mg/m <sup>3</sup> (resp)

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

### Personal Protective Equipment:

**Eye/Face Protection:** Wear eye/face protection.

**Hand Protection:** Wear suitable gloves.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Opaque.
<b>Color:</b>	White.
<b>Odour:</b>	Odourless.
<b>Odour Threshold:</b>	Not available.
<b>Physical State:</b>	Solid.
<b>pH:</b>	4.5-5
<b>Viscosity:</b>	Not applicable.
<b>Freezing Point:</b>	~ 100 °C (~ 212 °F)
<b>Boiling Point:</b>	~ 500 °C (~ 932 °F)
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not applicable.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not applicable.
<b>Specific Gravity:</b>	1.97
<b>Solubility in Water:</b>	Partial.
<b>Coefficient of Water/Oil Distribution:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.



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**Percent Volatile, wt. %:** 0  
**VOC content, wt. %:** Not available.

## Section 10: STABILITY AND REACTIVITY

**Stability:** Stable under normal storage conditions.  
**Conditions of Reactivity:** Heat. Incompatible materials.  
**Incompatible Materials:** Oxidizers. Bases. Aluminum. Bronze. Titanium. Cast iron.  
**Hazardous Decomposition Products:** Oxides of sulphur. Oxides of zinc.  
**Possibility of Hazardous Reactions:** No dangerous reaction known under conditions of normal use.

## Section 11: TOXICOLOGY INFORMATION

### EFFECTS OF ACUTE EXPOSURE

#### Component Analysis

Ingredient	LD <sub>50</sub> (oral)	LC <sub>50</sub>
Zinc sulfate monohydrate	Not available.	Not available.

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

**Skin:** May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Ingestion:** Harmful if swallowed. May cause stomach distress, nausea or vomiting. Abdominal pain. Burning sensation.

**Inhalation:** May cause respiratory tract irritation. May cause anosmia, pneumoconiosis, central nervous system depression, changes in blood pressure, systemic poisoning, and coma.

### EFFECTS OF CHRONIC EXPOSURE

**Target Organs:** Not available.

**Chronic Effects:** Not hazardous by WHMIS criteria.

**Carcinogenicity:** Not hazardous by WHMIS criteria.

#### Ingredient

#### Chemical Listed as Carcinogen or Potential Carcinogen \*

Zinc sulfate monohydrate

Not listed.

\* See Section 15 for more information.

**Mutagenicity:** Not hazardous by WHMIS criteria.

**Reproductive Effects:** Not hazardous by WHMIS criteria.

#### Developmental Effects:

**Teratogenicity:** Not hazardous by WHMIS criteria.

**Embryotoxicity:** Not hazardous by WHMIS criteria.

**Respiratory Sensitization:** Not hazardous by WHMIS criteria.



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**Skin Sensitization:** Not hazardous by WHMIS criteria.

**Toxicologically Synergistic Materials:** Not available.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** May cause long-term adverse effects in the aquatic environment

**Persistence / Degradability:** Not available.

**Bioaccumulation / Accumulation:** Not available.

**Mobility in Environment:** Not available.

## Section 13: DISPOSAL CONSIDERATIONS

### Disposal Instructions:

This material and its container must be disposed of in a safe way.

## Section 14: TRANSPORTATION INFORMATION

### TDG Classification

Not regulated

## Section 15: REGULATORY INFORMATION

### Federal Regulations

**Canadian:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

### Global Inventories

#### Ingredient

Zinc sulfate monohydrate

**Canada**  
**DSL/NDSL**  
DSL

### HMIS - Hazardous Materials Identification System

Health - 1

Flammability - 0

Physical Hazard - 0

### NFPA - National Fire Protection Association:

Health - 1

Fire - 0

Reactivity - 0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

### WHMIS Classification(s):

Class D2B - Skin/Eye Irritant

### WHMIS Hazard Symbols:



### SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

**OSHA (O)** Occupational Safety and Health Administration.

**ACGIH (G)** American Conference of Governmental Industrial Hygienists.  
A1 - Confirmed human carcinogen.



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- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

- IARC (I)** International Agency for Research on Cancer.
- 1 - The agent (mixture) is carcinogenic to humans.
  - 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
  - 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
  - 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
  - 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.
- NTP (N)** National Toxicology Program.
- 1 - Known to be carcinogens.
  - 2 - Reasonably anticipated to be carcinogens.

## Section 16: OTHER INFORMATION

**Disclaimer:**

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