

## Zinc Nitrate Hexahydrate

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Zinc Nitrate Hexahydrate
<b>Other Means of Identification</b>	Nitric acid zinc salt hexahydrate, Zinc dinitrate
<b>Product Code(s)</b>	ZI2220
<b>Product Family</b>	Inorganic Solid
<b>Recommended Use</b>	Laboratory and industrial use.
<b>Restrictions on Use</b>	None known.
<b>Supplier Identifier</b>	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
<b>Emergency Phone No.</b>	CANUTEC CANADA, 613-996-6666, 24 Hours
<b>SDS No.</b>	1140

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Oxidizing solid - Category 2; Acute toxicity (Oral) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 3

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

May intensify fire; oxidizer.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.

#### Precautionary Statement(s):

##### Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Take any precaution to avoid mixing with combustibles.  
Wash hands thoroughly after handling.  
Avoid breathing dust/fume/gas/mist/vapours/spray.

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Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### **Other Hazards**

Hazardous to the aquatic environment.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Zinc(II) nitrate, hexahydrate (1:2:6)	10196-18-6	> 99	Nitric acid zinc salt hexahydrate, Zinc dinitrate	

### **SECTION 4. FIRST-AID MEASURES**

#### **First-aid Measures**

##### **Inhalation**

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

##### **Skin Contact**

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

##### **Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

##### **Ingestion**

Rinse mouth with water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Immediately call a Poison Centre or doctor.

##### **First-aid Comments**

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

#### **Most Important Symptoms and Effects, Acute and Delayed**

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Identification) and Section 11 (Toxicological Information) of this SDS.

#### **Immediate Medical Attention and Special Treatment**

##### **Special Instructions**

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Use flooding quantities of water or other suitable extinguishing agent. Use water to keep non-leaking, fire-exposed containers cool.

#### Unsuitable Extinguishing Media

None known.

### Specific Hazards Arising from the Product

Oxidizer. May cause or intensify fire. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides; Zinc oxide.

### Special Protective Equipment and Precautions for Fire-fighters

Oxidizer. Prevent contact with flammable and combustible materials. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area. Dike and recover contaminated water for appropriate disposal.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid generating dusts. Only use where there is adequate ventilation. Prevent accidental contact with flammable and combustible materials. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

### Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Protect from sunlight. Separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Store in a closed container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA

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Zinc(II) nitrate, hexahydrate (1:2:6)	Not established		Not established			
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**TLV Comments:**

NOTE: In many jurisdictions, exposure limits are similar to the ACGIH TLVs. Since a TLV has not been established for this substance, appropriate government agencies in each jurisdiction should be consulted to determine which regulations apply.

**Appropriate Engineering Controls**

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

**Individual Protection Measures**

**Eye/Face Protection**

Wear chemical safety goggles and face shield when contact is possible.

**Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

**Respiratory Protection**

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Basic Physical and Chemical Properties**

<b>Appearance</b>	White crystalline powder.
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	5.1 (5% solution)
<b>Melting Point/Freezing Point</b>	36 °C (97 °F) (estimated) (melting); 36 °C (97 °F) (estimated) (freezing)
<b>Initial Boiling Point/Range</b>	~ 105 °C (221 °F)
<b>Flash Point</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	< 0.01 kPa (0.08 mm Hg) at 25 °C
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	2.07 at 20 °C
<b>Solubility</b>	Soluble in water; Highly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	-0.51 (estimated)
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid
<b>Molecular Weight</b>	297.48

**SECTION 10. STABILITY AND REACTIVITY**

**Reactivity**

Oxidizer. May cause or intensify fire.

**Chemical Stability**

Normally stable.

**Possibility of Hazardous Reactions**

Hazardous polymerization does not occur.

**Conditions to Avoid**

Heat. Incompatible materials.

**Incompatible Materials**

Reducing agents (e.g. hydroquinone). Combustible materials.

**Hazardous Decomposition Products**

Corrosive, oxidizing nitrogen oxides. zinc oxide.

**SECTION 11. TOXICOLOGICAL INFORMATION****Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Zinc(II) nitrate, hexahydrate (1:2:6)	Not available	1330 mg/kg (rat)	Not available

**Skin Corrosion/Irritation**

Causes skin irritation.

**Serious Eye Damage/Irritation**

Causes serious eye irritation.

**STOT (Specific Target Organ Toxicity) - Single Exposure****Inhalation**

May cause nose and throat irritation.

**Ingestion**

Harmful.

**Aspiration Hazard**

No information was located.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

No information was located.

**Respiratory and/or Skin Sensitization**

No information was located for respiratory sensitization. Not known to be a skin sensitizer.

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Zinc(II) nitrate, hexahydrate (1:2:6)	Not Listed	Not designated	Not Listed	Not Listed

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**Reproductive Toxicity****Development of Offspring**

Not known to harm the unborn child.

**Sexual Function and Fertility**

Not known to cause effects on sexual function or fertility.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

No information was located.

**Interactive Effects**

No information was located.

**SECTION 12. ECOLOGICAL INFORMATION**

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal Methods**

Bury in a licensed landfill according to federal, provincial/state, and local regulations.

**SECTION 14. TRANSPORT INFORMATION**

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1514	ZINC NITRATE	5.1	II
Canadian TDG	UN1514	ZINC NITRATE	5.1	II

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15. REGULATORY INFORMATION****Safety, Health and Environmental Regulations****Canada****Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Not listed on the DSL.

**USA****Toxic Substances Control Act (TSCA) Section 8(b)**

Not listed on the TSCA Inventory.

**SECTION 16. OTHER INFORMATION**

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

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**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has

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been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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