

## Nickel Sulfate Hexahydrate

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Nickel Sulfate Hexahydrate
<b>Other Means of Identification</b>	Nickelous sulfate, Sulfuric acid, nickel salt
<b>Product Code(s)</b>	5120
<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>	0423
<b>Date of Preparation</b>	March 09, 2016

### SECTION 2. HAZARD IDENTIFICATION

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

#### Classification

Acute toxicity (Oral) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Respiratory sensitization - Category 1; Skin sensitization - Category 1; Germ cell mutagenicity - Category 2; Carcinogenicity - Category 1A; Reproductive toxicity - Category 1A; Specific target organ toxicity (repeated exposure) - Category 1

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

Harmful if swallowed or if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause genetic defects.  
May cause cancer.  
May cause damage to organs through prolonged or repeated exposure.

#### Precautionary Statement(s):

Do not breathe dust/fume/gas/mist/vapours/spray.  
In case of inadequate ventilation wear respiratory protection.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage:

Store locked up.

Disposal:

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

#### Other Hazards

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Nickel(II) sulfate hexahydrate (1:1:6)	10101-97-0	>99	Nickelous sulfate, Sulfuric acid, nickel salt

### SECTION 4. FIRST-AID MEASURES

#### First-aid Measures

##### Inhalation

Move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

##### Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

##### 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

Do not induce vomiting. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again.

##### 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

In sensitized people, contact with a very small amount of product can cause an allergic reaction. Symptoms include redness, rash, itching and swelling. This reaction can spread from the hands or arms to the face and body. Repeated exposure will make the reaction worse.

#### 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.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

##### Unsuitable Extinguishing Media

None known.

#### Specific Hazards Arising from the Product

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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 sulfur oxides.

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

Fight fire remotely due to the risk of explosion. Approach fire from upwind to avoid hazardous vapours or gases. 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. Increase ventilation to area or move leaking container to a well-ventilated and secure area. 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**

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Do not breathe in this product. Do not get in eyes, on skin or on clothing. Avoid generating dusts. Only use where there is adequate ventilation.

### **Conditions for Safe Storage**

Store in an area that is: cool, dry, well-ventilated. Store in a closed container. Separate from incompatible materials (see Section 10: Stability and Reactivity).

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control Parameters**

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Nickel(II) sulfate hexahydrate (1:1:6)	0.1 mg/m <sup>3</sup> A4		0.1 mg/m <sup>3</sup>			

ACGIH® = American Conference of Governmental Industrial Hygienists.

TLV® = Threshold Limit Value. A4 = Not classifiable as a human carcinogen.

### **Appropriate Engineering Controls**

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

### **Individual Protection Measures**

#### **Eye/Face Protection**

Wear chemical safety goggles.

#### **Skin Protection**

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

No specific guidelines are available. Contact chemical manufacturer/supplier for advice.

#### **Respiratory Protection**

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

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Basic Physical and Chemical Properties**

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<b>Appearance</b>	Blue - green crystals.
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	3.8 (5% solution)
<b>Melting Point/Freezing Point</b>	Not applicable (melting); Not applicable (freezing)
<b>Initial Boiling Point/Range</b>	Not applicable
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Will not burn.
<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	~ 0 kPa (0 mm Hg)
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	2.07
<b>Solubility</b>	40.1 g/100 mL (Soluble) in water; Highly soluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	-0.17 (estimated)
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	280 °C (536 °F)
<b>Viscosity</b>	Not applicable (kinematic); Not available (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None known.

### Conditions to Avoid

Heat. Generation of dust. Temperatures above 840.0 °C (1544.0 °F)

### Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

### Hazardous Decomposition Products

Corrosive sulfur oxides, nickel oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Nickel(II) sulfate hexahydrate (1:1:6)	Not available	362 mg/kg (rat)	Not available

### Skin Corrosion/Irritation

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May cause moderate or severe irritation based on information for closely related materials.

#### **Serious Eye Damage/Irritation**

May cause serious eye irritation based on information for closely related materials.

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

##### **Inhalation**

Harmful.

##### **Ingestion**

Harmful.

#### **Aspiration Hazard**

No information was located.

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

Irritation of the respiratory system. May cause respiratory tract injury.

#### **Respiratory and/or Skin Sensitization**

May cause severe asthma-like symptoms (respiratory sensitization) based on information for closely related chemicals.

May cause an allergic reaction (skin sensitization) based on limited evidence.

#### **Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Nickel(II) sulfate hexahydrate (1:1:6)	Group 1	Not Listed	Not Listed	

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans.

#### **Reproductive Toxicity**

##### **Development of Offspring**

May harm the unborn child.

##### **Sexual Function and Fertility**

May cause effects on sexual function and/or fertility.

##### **Effects on or via Lactation**

No information was located.

#### **Germ Cell Mutagenicity**

May be mutagenic based on limited evidence.

#### **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**

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

## **SECTION 14. TRANSPORT INFORMATION**

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN3288	TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) sulfate hexahydrate (1:1:6))	6.1	III

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Canadian TDG	UN3288	TOXIC SOLID, INORGANIC, N.O.S.	6.1	III
IATA (Air)	UN3288	Toxic solid, inorganic, n.o.s	6.1	III
IMO (Marine)	UN3288	Toxic solid, inorganic, n.o.s	6.1	III

**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)**

Listed on the DSL.

#### USA

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

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**SDS Prepared By** Alphachem Limited

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

**Date of Preparation** March 09, 2016

**Date of Last Revision** June 03, 2016

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

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