

**Material Safety Data Sheet**

Version 3.1  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Nickel(II) nitrate hexahydrate

Product Number : 203874  
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd  
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OAKVILLE ON L6H 6J8  
CANADA

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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula :  $\text{N}_2\text{NiO}_6 \cdot 6\text{H}_2\text{O}$   
Molecular Weight : 290.79 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Nickel dinitrate hexahydrate</b>			
13478-00-7	236-068-5	-	-

**3. HAZARDS IDENTIFICATION****Emergency Overview****Target Organs**

Lungs

**WHMIS Classification**

C Oxidizing Material  
D2A

Oxidizer  
Carcinogen

**HMIS Classification**

Health Hazard: 1  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 1

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes** May cause eye irritation.  
**Ingestion** Harmful if swallowed.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point not applicable

Ignition temperature no data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**

Use water spray to cool unopened containers.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

**Handling**

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
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Nickel dinitrate hexahydrate	13478-00-7	TWA	0.1 mg/m3	2004-04-30	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	0.1 mg/m3	2000-01-12	Canada. Quebec OELs
		TWAE V	0.1 mg/m3	2005-02-03	Canada. Ontario OELs
		TWA	0.05 mg/m3	2004-08-01	Canada. British Columbia OEL
Remarks	ACGIH "A1" applies to those substances confirmed as human carcinogens based on the weight of evidence from epidemiological studies IARC "1" applies to substances categorized as carcinogenic to humans, and used when there is sufficient evidence of carcinogenicity in humans.				

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form solid  
Colour dark green

### Safety data

pH no data available  
Melting point 56 °C (133 °F) - lit.  
Boiling point no data available  
Flash point not applicable  
Ignition temperature no data available  
Lower explosion limit no data available

Upper explosion limit	no data available
Density	2.05 g/mL at 25 °C (77 °F)
Water solubility	no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Organic materials, Powdered metals, Strong reducing agents, acids

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nickel/nickel oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 1,620 mg/kg

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: 1 - Group 1: Carcinogenic to humans (Nickel dinitrate hexahydrate)

### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Target Organs</b>	Lungs,

### Additional Information

RTECS: QR7300000

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT (US)

UN-Number: 2725 Class: 5.1 Packing group: III

Proper shipping name: Nickel nitrate

Marine pollutant: No

Poison Inhalation Hazard: No

#### IMDG

UN-Number: 2725 Class: 5.1 Packing group: III EMS-No: F-A, S-Q

Proper shipping name: NICKEL NITRATE

Marine pollutant: No

#### IATA

UN-Number: 2725 Class: 5.1 Packing group: III

Proper shipping name: Nickel nitrate

### 15. REGULATORY INFORMATION

#### DSL Status

All components of this product are on the Canadian DSL list.

#### WHMIS Classification

C Oxidizing Material  
D2A

Oxidizer  
Carcinogen

### 16. OTHER INFORMATION

#### Further information

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