

## MATERIAL SAFETY DATA SHEET

Date Printed: 02/27/2007

Date Updated: 08/25/2006

Version 1.5

## Section 1 - Product and Company Information

Product Name	NICKEL(II) SULFAMATE TETRAHYDRATE, 98%
Product Number	262277
Brand	ALDRICH
Company	Sigma-Aldrich
Address	3050 Spruce Street SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Fax:	800-325-5052
Emergency Phone:	314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
NICKEL(II) SULFAMATE TETRAHYDRATE	124594-15-6	Yes
Formula	H4N2NiO6S2·4H2O	

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful. Dangerous for the environment.  
Harmful if swallowed. Limited evidence of a carcinogenic effect.  
Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Possible Carcinogen (US). Target organ(s): Lungs.

## HMIS RATING

HEALTH: 3\*  
FLAMMABILITY: 0  
REACTIVITY: 0

## NFPA RATING

HEALTH: 3  
FLAMMABILITY: 0  
REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed.

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### Section 8 - Exposure Controls / PPE

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN

(EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

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#### Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	322.9 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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#### Section 10 - Stability and Reactivity

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##### STABILITY

Stable: Stable.

Materials to Avoid: Oxidizing agents.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides, Sulfur oxides, Nickel/nickel oxides.

##### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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#### Section 11 - Toxicological Information

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##### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes severe eye irritation.  
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.  
Ingestion: Harmful if swallowed.

#### SENSITIZATION

Skin: May cause allergic skin reaction.

#### TARGET ORGAN(S) OR SYSTEM(S)

Lungs.

#### SIGNS AND SYMPTOMS OF EXPOSURE

The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

#### CHRONIC EXPOSURE - CARCINOGEN

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

#### IARC CARCINOGEN LIST

Rating: Group 1 Group 1

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#### Section 12 - Ecological Information

No data available.

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#### Section 13 - Disposal Considerations

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#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

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. Observe all federal, state, and local environmental regulations.

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#### Section 14 - Transport Information

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##### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

##### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

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#### Section 15 - Regulatory Information

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#### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn-N  
Indication of Danger: Harmful. Dangerous for the environment.  
R: 22-40-41-43-50/53  
Risk Statements: Harmful if swallowed. Limited evidence of a carcinogenic effect. Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
S: 26-36/37/39-60-61  
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear

suitable protective clothing, gloves, and eye/face protection. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful. Dangerous for the environment.

Risk Statements: Harmful if swallowed. Limited evidence of a carcinogenic effect. Risk of serious damage to eyes. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

US Statements: Possible Carcinogen (US). Target organ(s): Lungs.

#### UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

DEMINIMIS: 0.1 %

NOTES: This product is subject to SARA section 313 reporting requirements - nickel compounds.

#### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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#### Section 16 - Other Information

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#### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

#### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.