

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name	NICKEL(II) CARBONATE HYDROXIDE TETRAHYDRATE
Product Number	339776
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) CARBONATE HYDROXIDETETRAHYDRATE	12244-51-8	No

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Toxic.

May cause cancer. Harmful by inhalation, in contact with skin and if swallowed. May cause sensitization by inhalation and skin contact. Irritating to eyes, respiratory system and skin.

Target organ(s): Lungs.

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 contact, immediately wash skin with soap and copious amounts of water.

## EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

## Section 5 - Fire Fighting Measures

## FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

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.

EXPOSURE HAZARD(S)

Material: Irritant.

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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 self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

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. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Store in a cool dry place.

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Section 8 - Exposure Controls / PPE

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ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

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Section 9 - Physical/Chemical Properties

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Molecular Weight                      587.67 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

Materials to Avoid: Peroxides, Strong acids.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nickel/nickel oxides.

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Multiple Routes: Causes eye and skin irritation. Harmful if swallowed, inhaled, or absorbed through skin.

### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Dermatitis. Gastrointestinal disturbances. Exposure can cause:

### CHRONIC EXPOSURE - CARCINOGEN

Result: Carcinogen.

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## Section 12 - Ecological Information

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No data available.

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## Section 13 - Disposal Considerations

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### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

The material should be dissolved in: 1) water, 2) acid solution, or 3) oxidized to a water-soluble state. Precipitate the material as the sulfide, adjusting the pH of the solution to 7 to complete

precipitation. Filter the insolubles and dispose of them in a hazardous waste site. Destroy any excess sulfide with sodium hypochlorite. Neutralize the solution before flushing down the drain. 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: T  
Indication of Danger: Toxic.  
R: 45-20/21/22-36/37/38-42/43  
Risk Statements: May cause cancer. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.  
S: 53-26-36/37/39-45  
Safety Statements: Avoid exposure - obtain special instructions before use. 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. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.  
Risk Statements: May cause cancer. Harmful by inhalation, in contact with skin and if swallowed. May cause sensitization by inhalation and skin contact. Irritating to eyes, respiratory system and skin.  
Safety Statements: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wear suitable protective clothing, gloves, and eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
US Statements: Target organ(s): Lungs.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
NOTES: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements.

### 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: No  
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.