



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 07/02/2007
Date Updated: 02/01/2006
Version 1.70

Section 1 - Product and Company Information

Product Name Ammonium nickel(II) sulfate hexahydrate, 99.999%
Product Number 574988
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country 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	EC no	Annex I Index Number
AMMONIUM NICKEL (II) SULFATE HEXAHYDRATE	7785-20-8	Yes	239-793-5	

Formula H₈N₂NiO₈S₂·6H₂O
Synonyms

Section 3 - Hazards Identification

Emergency Overview

Toxic.
May cause cancer. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.
Target organ(s): Lungs. Confirmed Carcinogen (US).

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 breathing becomes difficult, call a physician.

Dermal Exposure

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

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.

Section 5 - Fire Fighting Measures

Autoignition Temp: 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.

Section 6 - Accidental Release Measures

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.

Section 7 - Handling and Storage

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.

Section 8 - Exposure Controls / PPE

Engineering Controls

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

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 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.

Hand

Compatible chemical-resistant gloves.

Eye

Chemical safety goggles.

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General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

Exposure Limits, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	0.1 MG(NI)/M3

Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State Solid	Green	Crystalline

Molecular Weight: 395 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
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point °F	N/A
Flash Point °C	N/A

Explosion Limits N/A

Flammability	N/A
Autoignition Temp	N/A
Solubility	N/A

N/A = not available

Section 10 - Stability and Reactivity

Stability
Stable
Stable.
Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Sulfur oxides, Ammonia, Nickel/nickel oxides.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information**Route of Exposure**

Skin Contact
Causes skin irritation.
Skin Absorption
May be harmful if absorbed through the skin.

Eye Contact
Causes eye irritation.

Inhalation
May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion
Harmful if swallowed.

Sensitization

Sensitization
Causes dermatitis.

Respiratory
May cause allergic respiratory reaction.

Skin
May cause allergic skin reaction.

Target Organ(s) or System(s)

Lungs.

Signs and Symptoms of Exposure

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

RTECS Number: WS6061000

Toxicity Data

Oral - Rat: 399 mg/kg (LD50)
Remarks: Behavioral: Somnolence (general depressed activity).
Gastrointestinal: Changes in structure or function of salivary glands.
Gastrointestinal: Hypermotility, diarrhea.

Chronic Exposure - Carcinogen

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

IARC Carcinogen List

Rating
Group 1

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations**Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.
Observe all federal, state, and local environmental regulations.
(DN) Requires special label: "Contains a substance which is regulated by Danish work environmental law due to the risk of carcinogenic properties."

Section 14 - Transport Information

DOT

Proper Shipping Name: Environmentally hazardous substances, solid, n.o.s.
UN#: 3077
Class: 9
Packing Group: Packing Group III
Hazard Label: Class 9
PIH: Not PIH

IATA

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

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: T

Indication of Danger

Toxic.

Risk Statements R: 45 22 42/43

May cause cancer. Also harmful if swallowed. May cause sensitization by inhalation and skin contact.

Safety Statements S: 53 22 36/37 45

Avoid exposure - obtain special instructions before use. Do not breathe dust. Wear suitable protective clothing and gloves. 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 if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

Safety Statements

Avoid exposure - obtain special instructions before use. Do not breathe dust. 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 Statements

Target organ(s): Lungs. Confirmed Carcinogen (US).

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: No

NDSL: No

Section 16 - Other Information

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.



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