

AMMONIUM NICKEL (II) SULFATE HEXAHYDRATE

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1. Product Identification

Synonyms: Nickel ammonium sulfate

CAS No.: 15699-18-0

Molecular Weight: 394.986

Chemical Formula: $\text{Ni}(\text{NH}_4)_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$

Product Codes: CHEM-024 and others.

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Nickel Ammonium Sulfate	15699-18-0	100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. CANCER HAZARD. CAN CAUSE CANCER. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, SKIN, NOSE, SINUSES.

SAF-T-DATA^(tm) Ratings

Health Rating: 3 - Severe (Cancer Causing)

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 3 - Severe (Life)

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

Potential Accute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation (lung irritant).

Ingestion Hazardous in case of ingestion.

Potential Chronic Health Effects

Carcinogenic Effects

Classified 1 (Proven for human.) by IARC, + (Proven.) by NIOSH. Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure:

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

4. First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation:

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

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

5. Fire Fighting Measures

Flammability of the Product:

Non-flammable.

Auto-ignition Temperature:

Not applicable.

Flash Points:

Not applicable.

Flammable Limits

Not applicable.

Products of Combustion:

Not available.

Fire Hazards in Presence of Various Substances:

Not applicable.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of static discharge:

No.

Risks of explosion of the product in presence of mechanical impact:

No.

Fire Fighting Media and Instructions:

Not applicable.

Protective Clothing (Fire):

Not applicable.

Special Remarks on Fire Hazards:

Not available.

Special Remarks on Explosion Hazards:

Not available.

6. Accidental Release Measures

Small Spill and Leak:

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill and Leak:

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information:

No specific spill kit required for this product.

7. Handling and Storage

Handling:

Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing dust. Keep container closed.

Storage:

Keep container in a cool, well-ventilated area.

8. Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles, lab coat, dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate, gloves.

Product Name Exposure Limits:

NIOSH REL (United States, 2000). Notes: See Appendix A " NIOSH Potential Occupational Carcinogen:

TWA: 0.01 mg/m³ Period: 10 hour(s).

9. Physical and Chemical Properties

Appearance:

Blue-green crystals or granules.

Odor:

Odorless.

Solubility:

Soluble.

Specific Gravity:

1.92 (Water = 1).

pH:

Not available.

% Volatiles by volume @ 21°C (70°F):

0

Boiling Point:

Not available.

Melting Point:

Not available.

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability and Reactivity:

The product is stable.

Conditions of Instability:

Not available.

Incompatibility with Various Substances:

Not available.

Hazardous Decomposition Products:

Sulfur oxides (SO₂, SO₃...) , Ammonia.

Hazardous Polymerization:

Will not occur.

11. Toxicological Information

RTECS Number:

WS6050000

Toxicity:

Acute oral toxicity (LD50): 400 mg/kg [Rat].

Chronic Effects on CARCINOGENIC EFFECTS:

Classified 1 (Proven for human.) by IARC, + (Proven.) by NIOSH.

Acute Effects on Humans:

Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (permeator, irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation (lung irritant). Hazardous in case of ingestion.

Synergetic Products (Toxicologically):

Not available.

Irritancy:**Draize Test:**

Not available.

Sensitization

Not available.

Carcinogenic Effects

Classified 1 (Proven for human.) by IARC, + (Proven.) by NIOSH.

Toxicity to Reproductive System:

Not available.

Teratogenic Effects:

Not available.

Mutagenic Effects:

Not available.

12. Ecological Information

Ecotoxicity:

Not available.

BOD5 and COD:

Not available.

Toxicity of the Products of Biodegradation:

The products of degradation are less toxic than the product itself.

13. Disposal Considerations

EPA Waste Number:

Not available.

Treatment:

Material does not have an EPA Waste Number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

14. Transport Information

Not regulated.

15. Regulatory Information

U.S. Federal Regulations:

TSCA 8(b) inventory: NICKEL AMMONIUM SULFATE SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: NICKEL AMMONIUM SULFATE

SARA 311/312 MSDS distribution " chemical inventory " hazard identification: NICKEL

AMMONIUM SULFATE: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

SARA 313 toxic chemical notification and release reporting: NICKEL AMMONIUM SULFATE

Clean Water Act (CWA) 307: NICKEL AMMONIUM SULFATE

Clean Water Act (CWA) 311: NICKEL AMMONIUM SULFATE

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) Class D"1B: Material causing immediate and serious toxic effects (TOXIC).

Class D"2A: Material causing other toxic effects (VERY TOXIC).

Class D"2B: Material causing other toxic effects (TOXIC).

CEPA DSL: NICKEL AMMONIUM SULFATE

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS NICKEL AMMONIUM SULFATE 239"793"5

DSCL (EEC) R22" Harmful if swallowed.

R37/38" Irritating to respiratory system and skin.

R41" Risk of serious damage to eyes.

State Regulations Pennsylvania RTK: NICKEL AMMONIUM SULFATE: (environmental hazard, generic environmental hazard)

Massachusetts RTK: NICKEL AMMONIUM SULFATE

New Jersey: NICKEL AMMONIUM SULFATE

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: NICKEL AMMONIUM SULFATE California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: NICKEL AMMONIUM SULFATE

16. Other Information

Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label Precautions:

None.

Label First Aid:

Not applicable.

Product Use:

Laboratory Reagent and Consumer Hobby.

Revision Information:

None

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