



LTS Research Laboratories, Inc.
Safety Data Sheet
Nickel nitrate hexahydrate

1. Product and Company Identification

Trade Name:	Nickel nitrate hexahydrate
Chemical Formula:	$\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	37 Ramland Road
City:	Orangeburg
State:	New York
Zip Code:	10962
Country:	USA
Tel #:	855-587-2436 / 855-lts-chem
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)



2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H272: May intensify fire; oxidizer
H302+H332: Harmful if swallowed or if inhaled
H315: Causes skin irritation
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341: Suspected of causing genetic defects
H350: May cause cancer
H360: May damage fertility or the unborn child
H372: Causes damage to organs through prolonged or repeated exposure if inhaled
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood
P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P220: Keep/Store away from clothing/ combustible materials
P221: Take any precaution to avoid mixing with combustibles
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray
P264: Wash face, hands and any exposed skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P272: Contaminated work clothing should not be allowed out of the workplace
P273: Avoid release to the environment
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P281: Use personal protective equipment as required
P285: In case of inadequate ventilation wear respiratory protection.
P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302+P352: IF ON SKIN: Wash with plenty of soap and water
P304+P340+P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell
P305+P351+P338+P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308+P313: IF exposed or concerned: Get medical advice/ attention.
P333+P313: If skin irritation or rash occurs: Get medical advice/ attention.
P362: Take off contaminated clothing and wash before reuse
P370+P378: In case of fire: Use CO₂, dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391: Collect spillage
P403+P233: Store in a well-ventilated place. Keep container tightly closed
P405: Store locked up

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	3
Flammability:	1
Physical:	2

3. Composition

Material Family:	Salt
Additional Names:	Nickel (II) nitrate hexahydrate, Nickel dinitrate hexahydrate

Nickel nitrate hexahydrate (Ni(NO₃)₂*6H₂O):

Percentage:	100 wt%
CAS #:	13478-00-7
EC #:	N/A

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
Ingestion:	Seek immediate medical attention.
Skin:	Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention

5. Firefighting Measures

Flammability:	Non-flammable, except as powder
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Keep combustibles (wood, paper, oil, etc) away from spilled material. Soak up with inert absorbent material. Vacuum up spill using an electrically protected high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. This product is hygroscopic. Store away from heat and sources of ignition, strong oxidizing agents, organic materials, powdered metals, acids, strong reducing agents, combustible materials. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves with minimum thickness of 0.11 mm
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Dark green, blue green
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Soluble
Boiling Point:	137°C
Melting Point:	56.7°C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.05 g/cc
Molecular weight:	290.8 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions. Contact with combustible/organic material may cause fire. Thermal decomposition can lead to release of irritating gases and vapors.
Reacts With:	Strong reducing agents, combustible materials, strong oxidizing agents, organic materials, powdered metals, acids
Incompatible Conditions:	Air, heat and sources of ignition, water/moisture
Hazardous Decomposition Products:	Metal oxide fume, nitric acid, nickel/nickel oxides

11. Toxicological Information

Potential Health Effects:

Eyes:	Causes serious eye damage
Skin:	Causes skin irritation
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A

Signs & Symptoms: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Aggravated Medical Conditions: N/A

Median Lethal Dose: 1,620 mg/kg for rat by mouth

Carcinogen: IARC: 1 - Group 1: Carcinogenic to humans (Nickel dinitrate hexahydrate)
NTP: Known to be human carcinogen (Nickel dinitrate hexahydrate)
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	Persistence is unlikely
Very Persistent, Very Bioaccumulative:	N/A
Notes:	Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class:	5.1 Oxidizers
Packing Group:	III
UN Number:	UN2725
Proper Shipping Name:	Nickel nitrate

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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