



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Holmium Nickel Oxide

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1. Product and Company Identification

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Trade Name: Holmium Nickel Oxide  
Chemical Formula: HoNiO<sub>3</sub>  
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)

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H317: May cause an allergic skin reaction  
H350: May cause cancer  
H372: Causes damage to organs through prolonged or repeated exposure  
H413: May cause long lasting harmful effects to aquatic life

Precautionary Statements: P202: Do not handle until all safety precautions have been read and understood  
P260: Do not breathe dust/fume/gas/mist/vapours/spray  
P264: Wash skin thoroughly after handling  
P270: Do not eat, drink or smoke when using this product  
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  
P302+P352: IF ON SKIN: Wash with soap and water  
P308+P313: IF exposed or concerned: Get medical advice/attention  
P333+P313: If skin irritation or a rash occurs: Get medical advice/attention  
P363: Wash contaminated clothing before reuse  
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: 0  
Physical: 1

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### 3. Composition

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Material Family: Metal Oxide  
Additional Names: Holmium niccolate

Holmium Nickel Oxide (HoNiO<sub>3</sub>):  
Percentage: 100 wt%  
CAS #: N/A  
EC #: N/A

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### 4. First Aid Procedures

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General Treatment: Seek medical attention if symptoms persist.  
Special Treatment: None.  
Important Symptoms: None.

Inhalation: Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.

Ingestion: Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention.

Skin: Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention.

Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.

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### 5. Firefighting Measures

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Flammability: Non-flammable, except as powder

Extinguishing Media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide  
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.

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### 6. Accidental Release Measures

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If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a 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.

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### 7. Handling and Storage

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Handling Conditions: Wash thoroughly after handling.  
Storage Conditions: Store in a cool dry place in a tightly sealed container under inert gas. 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.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Use a recommended dust respirator or mask. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	N/A
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	8.3 g/cc
Molecular weight:	271.62 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions.
Reacts With:	Oxidizing agents, strong acids, fluorine, peroxides
Incompatible Conditions:	Excess heat
Hazardous Decomposition Products:	Metal oxide fumes

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation.
Skin:	May cause allergic reaction.
Ingestion:	May cause irritation
Inhalation:	May cause irritation.
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	>11,000 mg/kg for rat by mouth as NiO
Carcinogen:	N/A

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## 12. Ecological Information

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Aquatic Toxicity:	EC50: >127.3 mg/L, 72h for freshwater algae ( <i>Pseudokirchneriella subcapitata</i> ) (for NiO) LC50:>100 mg/L, 96h static for freshwater fish ( <i>Brachydanio rerio</i> ) (for NiO)
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	May cause long lasting harmful effects to aquatic life.

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### 13. Disposal Considerations

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

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### 14. Transportation Data

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Hazardous:	Not hazardous for transportation.
Hazard Class:	N/A
Packing Group:	N/A
UN Number:	N/A
Proper Shipping Name:	N/A

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### 15. Regulatory Information

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

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### 16. Other Information

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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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