



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

1. Product and Company Identification

Trade Name: Nickel Iron Oxide
Chemical Formula: NiFe₂O₄
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: H317: May cause an allergic skin reaction
H350: May cause cancer

Precautionary Statements: P261: Avoid breathing dust/fume/vapor
P272: Contaminated work clothing should not be allowed out of the workplace
P281: Use personal protective equipment as required
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: 2
Flammability: 0
Physical: 0

3. Composition

Chemical Family: Inorganic compound
Additional Names: Diiron nickel tetraoxide

Nickel Iron Oxide (NiFe₂O₄):
Percentage: 0-100 wt%
CAS #: 12168-54-6
EC #: 235-335-3

4. First Aid Procedures

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: Allergic skin reaction, 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. Seek immediate medical attention.
Ingestion: induce vomiting or give anything by mouth to an unconscious person. Rinse mouth with water. Seek immediate medical attention.
Skin: 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: Use 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.

6. Accidental Release Measures

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.

7. Handling and Storage

Handling Conditions: Wash thoroughly after handling.
Storage Conditions: Store in a cool dry place in a tightly sealed container. 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:	1 mg/m ³ as NiFe ₂ O ₄ , long-term value
Threshold Limit Value:	0.2 mg/m ³ as NiFe ₂ O ₄ , long-term value
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
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 brown
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	N/A
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	5.368 g/cc
Molecular weight:	234.39 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents
Incompatible Conditions:	N/A
Hazardous Decomposition Products:	Nickel oxides, Iron oxides

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause an allergic skin reaction
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	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:	N/A
Carcinogen:	IARC: 1 - Group 1: Carcinogenic to humans (Diiron nickel tetraoxide) NTP: Known - Known to be human carcinogen (Diiron nickel tetraoxide) OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A

Notes: May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Not hazardous for transportation.

Hazard Class: N/A

Packing Group: N/A

UN Number: N/A

Proper Shipping Name: N/A

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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