



LTS Research Laboratories, Inc.
Safety Data Sheet
Neodymium (NIB) Magnet

1. Product and Company Identification

Trade Name: Neodymium (NIB) Magnet
Chemical Formula: $Nd_2Fe_{14}B$
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:

H228: Flammable Solid
H250: Catches fire spontaneously if exposed to air
H252: Self-heating in large quantities; may catch fire
H260: In contact with water releases flammable gases which may ignite spontaneously
H302+H332: Harmful if swallowed or if inhaled
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P222: Do not allow contact with air
P231+P232: Handle under inert gas. Protect from moisture
P261: Avoid breathing dust/fume/vapor
P280: Wear protective gloves/protective clothing/eye protection/face
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
P370+P378: In case of fire: Use suitable extinguishing media for extinction
P405: Store locked up
P422: Store contents under inert gas
P501: Dispose of contents/container in accordance with local/regional/national/international regulations protection

HMIS Health Ratings (0-4):	Powder	Bulk
Health:	2	0
Flammability:	3	0
Physical:	2	0

3. Composition

Chemical Family: Alloy
 Additional Names: Neodymium Iron Boron Alloy

Neodymium (Nd):
 Percentage: 0-100 wt%
 CAS #: 7440-00-8
 EC #: 231-109-3

Iron (Fe):
 Percentage: 0-100 wt%
 CAS #: 7439-89-6
 EC #: 231-096-4

Boron (B):
 Percentage: 0-100 wt%
 CAS #: 7440-42-8
 EC #: 231-151-2

4. First Aid Procedures

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

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

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

5. Firefighting Measures

Flammability: Flammable as powder

Extinguishing Media: Do not use water, CO₂, or foam. Use sand, or approved Class D extinguishers.

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. Avoid dust formation.
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:	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	Metallic Gray
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:	7.5 g/cc
Molecular weight:	1081.12 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Acid chlorides, Aldehydes, Ammonia, Halogens, Nitriles, Oxygen, Strong oxidizing agents
Incompatible Conditions:	Exposure to air. Exposure to moisture or water. Excess heat.
Hazardous Decomposition Products:	Boron oxides, Iron oxides, Neodymium oxides, Hydrogen

11. Toxicological Information

Potential Health Effects:

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

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: LD50 Oral: 650 mg/kg for rat as B
LD50 Oral: 30,000 mg/kg for rat as Fe

Carcinogen: N/A

12. Ecological Information

Aquatic Toxicity: N/A

Persistent Bioaccumulation Toxicity: N/A

Very Persistent, Very Bioaccumulative: N/A

Notes: N/A

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous as powder only



Hazard Class: 4.1 Flammable solids

Packing Group: III

UN Number: UN3089

Proper Shipping Name: Metal powders, flammable, n.o.s. (Neodymium (NIB) Magnet)

15. Regulatory Information

Sec 302 Extremely Hazardous: N/A

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: N/A

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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