



LTS Research Laboratories, Inc.
Safety Data Sheet
Nickel Metal

1. Product and Company Identification

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|----------------------------|---|
| Trade Name: | Nickel metal |
| Chemical Formula: | Ni |
| 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 (powder)
H317: May cause an allergic skin reaction
H350: May cause cancer
H372: Causes damage to organs through prolonged or repeated exposure
H412: Harmful 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
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ventilating/light/equipment
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
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
P363: Wash contaminated clothing before reuse
P302+P350: IF ON SKIN: Gently wash with plenty of soap and water
P308+P313: IF exposed or concerned: Get medical advice/attention
P332+P313: If skin irritation occurs: Get medical advice/attention
P370+P378: In case of fire: Use CO2, dry chemical, or foam for extinction
P405: Store locked up
P501 Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

| | Powder | Pieces & larger |
|---------------|--------|-----------------|
| Health: | 1 | 1 |
| Flammability: | 3 | 0 |
| Physical: | 1 | 0 |

3. Composition

| | |
|-------------------|-----------|
| Chemical Family: | Metal |
| Additional Names: | None |
| Nickel (Ni): | |
| Percentage: | 100 wt.% |
| CAS #: | 7440-02-0 |
| EC #: | 231-111-4 |

4. First Aid Procedures

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| General Treatment: | Seek medical attention if symptoms persist. |
| Special Treatment: | None |
| Important Symptoms: | None |
| Inhalation: | Supply fresh air and if required, provide artificial respiration. Seek medical attention. |
| Ingestion: | Seek medical attention. |
| Skin: | Wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical advice. |
| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Consult a doctor. |

5. Firefighting Measures

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| Flammability: | Flammable as powder |
| Extinguishing Media: | Special powder for metal fires. Do not use water 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

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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 adequate 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. Keep away from ignition sources. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

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. 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. Protect against electrostatic charges. |
| Ventilation: | Provide sufficient ventilation to maintain concentration at or below threshold limit. |

8. Exposure Controls and Personal Protection

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| Permissible Exposure Limits: | 0.5 mg/m ³ as Ni, long term value |
| Threshold Limit Value: | 1.5 mg/m ³ as Ni, long-term value |
| Special Equipment: | None |
| Respiratory Protection: | Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards. |
| Protective Gloves: | Nitrile rubber, NBR 0.11mm thick. |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

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| Color | Silver grey |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | Insoluble |
| Boiling Point: | 2730 °C |
| Melting Point: | 1455 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 8.908 g/cc (74.337 lbs/gal) |
| Molecular weight: | 58.6934 g/mol |

10. Reactivity

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| Stability: | Stable under recommended storage conditions |
| Reacts with: | Acids, Oxidizing agents, Sulfur compounds, Hydrogen gas, Oxygen, Methanol, organic solvents, Aluminum, Fluorine, Ammonia |
| Incompatible Conditions: | N/A |
| Hazardous Decomposition Products: | Nickel oxides |

11. Toxicological Information

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| Potential Health Effects: | |
| Eyes: | May cause irritation |
| Skin: | May cause an allergic skin reaction |
| Ingestion: | May cause irritation |
| Inhalation: | Causes damage to organs through prolonged or repeated exposure |
| Chronic: | Causes damage to the lung, the kidneys and the liver through prolonged or repeated exposure |
| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | LD50 Oral- >9000 mg/kg for rat by mouth |
| Carcinogen: | Suspected of causing cancer IARC-2B: Possibly carcinogenic to humans IARC-Group 1: Carcinogenic to humans NTP-RAHC: Reasonably anticipated to be a human carcinogen |

12. Ecological Information

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| Aquatic Toxicity: | Harmful to aquatic life with long lasting effects |
| Persistent Bioaccumulation Toxicity: | No |
| Very Persistent, Very Bioaccumulative: | No |
| Notes: | Do not allow to reach ground water |

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: II
UN Number: UN3089
Proper Shipping Name: Metal powder, flammable, n.o.s. (Nickel)

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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