



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Nickel Phosphide

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1. Product and Company Identification

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Trade Name: Nickel phosphide  
Chemical Formula: Ni<sub>2</sub>P  
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 by inhalation/swallowed/in contact with skin  
H372 Causes damage to organ through prolonged or repeated exposure  
H410 Very toxic to aquatic life with lasting effects

Precautionary Statements:

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash 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.  
P301+P312+P302+P304 If swallowed/inhaled/on skin seek medical attention  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.

P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

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

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### 3. Composition

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Chemical Family: Salt  
Additional Names: N/A

Nickel phosphide (Ni<sub>2</sub>P):  
Percentage: 100 wt.%  
CAS #: 12035-64-2  
EC #: 234-828-0

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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 and induce vomiting. 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 and seek medical attention if symptoms persist.

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### 5. Fire and Explosion Hazards Data

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Flammability: Non-flammable  
Flash Point: N/A  
Autoignition Temperature: N/A

Extinguishing Media: Do not use water – use CO<sub>2</sub>, sand, extinguishing powder.  
Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

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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 and well-ventilated place in a tightly sealed container. Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects
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:	0.1 mg/m <sup>3</sup>
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator, NIOSH approved
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	Grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Density:	N/A
Molecular weight:	148.36 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts with:	N/A
Incompatible Conditions:	Oxidizing agent, Acids, Halogens, Strong bases
Hazardous Decomposition Products:	Oxides of Phosphorus, Nickel/Nickel Oxides

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	Harmful if absorbed through skin. May cause allergic reaction.
Ingestion:	Harmful if swallowed
Inhalation:	Harmful if inhaled
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	IARC: Group 1: Carcinogenic to humans (Nickel phosphide) NTP: Known - Known to be human carcinogen (Nickel phosphide)

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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#### 12. Ecological Information

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Notes: Very toxic to aquatic organisms. May harm environment with long-lasting effects.  
Do not allow runoff to reach drinking water even in small amounts.

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#### 13. Disposal Considerations

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

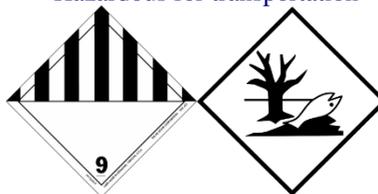
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#### 14. Transportation Data

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Hazardous:

Hazardous for transportation



Hazard Class:

9 Miscellaneous hazardous substances

Packing Group:

III

UN Number:

UN3077

Proper Shipping Name:

Environmentally hazardous substance, solid, n.o.s. (Nickel phosphide)

Additional markings:

Environmental hazard

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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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