Section 1: Identification

**Product Name:** Nickel iron

**Company:** Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110
For more information call: 412-469-8466
(Monday - Friday 9:00 AM - 5:00 PM EST)

Section 2: HAZARD IDENTIFICATION

**Signal Word:** Danger

**Hazard Statements:**
- H228: Flammable solid
- H317: May cause allergic skin reaction
- H351: Suspected of causing cancer
- H372: Causes damage to organs through prolonged or repeated exposure
- H319: Causes serious eye irritation
- H335: May cause respiratory irritation

**Precautionary Statements:**
- P210: Keep away from sparks/heat. No smoking
- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P260: Do not breathe dust/fume/gas/mist/vapors/spray
- P305 + P351 + P338: If In Eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - Continue rinsing
- 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):

<table>
<thead>
<tr>
<th></th>
<th>Powder</th>
<th>Bulk</th>
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<tbody>
<tr>
<td>Health</td>
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<td>0</td>
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<tr>
<td>Flammability</td>
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<td>0</td>
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<tr>
<td>Physical</td>
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Section 3: Composition/Information on Ingredients

Chemical characterization: Metal Alloy

Nickel (Ni):

CAS# Description: 7440-02-0
Percentage: 0-100 wt%
EC number: 231-157-5

Iron (Fe):

CAS# Description: 7439-89-6
Percentage: 0-100 wt%
EC number: 231-096-4

Section 4: FIRST AID MEASURES

General Treatment: Seek medical attention if symptoms persist.
Special Treatment: None
Important Symptoms: None
Eye Contact: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Skin Contact: Wash affected area with mild soap and water. Remove any contaminated clothing.
Inhalation: Remove to fresh air. Supply oxygen if breathing is difficult.
Ingestion: Seek medical attention.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing Media: Do not use water for metal fires. Use special powder, sand, CO2
Flammability: Non-flammable, except as powder
Special Fire Fighting Procedure: Use full-face, self contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particle 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.
Section 7: HANDLING AND STORAGE
Handling Precautions for safe handling: Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities: Store in a cool dry place in a tightly sealed container.
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.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION
Permissible Exposure Limits: 1 mg/m³ as Ni, Long-term value
Threshold Limit Value: 1.5 mg/m³ 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: Butyl Rubber gloves
Eye Protection: Safety glasses or goggles
Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
Appearance:
Form: Powder, Sputtering target
Color: Silver
Odor: Odorless
Water Solubility: Insoluble
Boiling Point: N/A
Melting Point: N/A
Flash Point: N/A
Autoignition Temperature: N/A
Density: N/A
Molecular Weight: N/A

Section 10: STABILITY AND REACTIVITY
Reactivity: Oxidizing Agents.
Chemical Stability: Stable under recommended storage conditions
Incompatible Conditions: Protect against electrostatic charges
Hazardous Decomposition Products: Metal oxide fume
Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:
Eyes: May cause irritation
Skin: May cause irritation
Ingestion: May cause irritation
Inhalation: May cause irritation
Chronic: N/A

Signs & Symptoms: N/A
Aggravated Medical Conditions: N/A
Median Lethal Dose: N/A
EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer
NTP-K: Known to be carcinogenic: sufficient evidence from human studies

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: High
Persistent Bioaccumulation Toxicity: No
Very Persistent, Very Bioaccumulative: No
Notes: May cause long lasting harmful effect on aquatic life.
Do not allow product to reach any water sources.
Danger to drinking water if even extremely small quantities leak into the ground.
Avoid transfer into the environment.
Toxic to aquatic life.

Section 13: DISPOSAL CONSIDERATIONS
Dispose of in accordance with local, state, national, and international regulations

Section 14: TRANSPORT INFORMATION
Hazardous: Hazardous as powder only
Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives
Packing Group: III
UN Number: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s. (Nickel iron)

Section 15: REGULATORY INFORMATION
Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: Components

Section 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.