

**NICKEL VANADIUM**  
**SAFETY DATA SHEET**  
**DATE OF LAST REVISION: 07/14/15**

**Section 1: Identification**

**Product Name:** Nickel Vanadium

**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:**

H317: May cause allergic skin reaction.  
H351: Suspected of causing cancer.  
H372: Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements:**

P261: Avoid breathing dust/fume/gas/mist/vapours/spray  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
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:	1
Flammability:	0
Physical:	0

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**Section 3: Composition/Information on Ingredients**

**Chemical characterization:** Alloy

**CAS# Description:** 11106-97-1

**Nickel (Ni):**

**Percentage:** 0-100 wt%

**CAS #:** 7440-02-0

**EC #:** 231-111-4

**Vanadium (V)**

**Percentage:** 0-100% wt%

**CAS#:** 7440-62-2

**EC#:** 231-171-1

**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:** No special restrictions - use suitable extinguishing agent for surrounding material and type of fire.

**Flammability:** Non-flammable

**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 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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**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/m<sup>3</sup> as Ni, Long-term value

**Threshold Limit Value:** 0.2 mg/m<sup>3</sup> as Ni, Long-term value

**Special Equipment:** None

**Respiratory Protection:** Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

**Protective Gloves:** Nitrile rubber, NBR 0.11 mm thick

**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**

**Form:** Sputtering Target

**Color:** Grey

**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:** Acids, Halogens, Oxidizing Agents.

**Chemical Stability:** Stable under recommended storage conditions

**Incompatible Conditions:** None

**Hazardous Decomposition Products:** Metal oxide fume, Vanadium oxides

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**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

**Carcinogen:**

IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

NTP-R: Reasonably anticipated to be a carcinogen, limited evidence of carcinogenicity from epidemiologic studies.

ACGIH A4: Not classifiable as a human carcinogen; Not suspected as a human carcinogen on the basis of properly conducted epidemiologic studies in humans. Studies have sufficiently long follow-up, reliable exposure histories, sufficiently high dose, and adequate statistical power to conclude that exposure to the agent does not convey a significant risk of cancer to humans. Evidence suggesting a lack of carcinogenicity in experimental animals will be considered if it is supported by other relevant data.

**Section 12: ECOLOGICAL INFORMATION**

**Aquatic Toxicity:** Low

**Persistent Bioaccumulation Toxicity:** No

**Very Persistent, Very Bioaccumulative:** No

**Notes:** N/A

**Section 13: DISPOSAL CONSIDERATIONS**

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

**Section 14: TRANSPORT INFORMATION**

**Hazardous:** Not hazardous for transportation.

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**Hazard Class:** N/A  
**Packing Group:** N/A  
**UN Number:** N/A  
**Proper Shipping Name:** N/A

**Section 15: REGULATORY INFORMATION**

**Sec 302 Extremely Hazardous:** No  
**Sec 304 Reportable Quantities:** N/A  
**Sec 313 Toxic Chemicals:** Yes

**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.