

Safety Data Sheet

V-Nb-Mo-Ta-W Alloy powder

1. Product and Company Identification

Trade Name: V-Nb-Mo-Ta-W Alloy powder
Recommended Use: Scientific research and development

Manufacturer/Supplier:
Heeger Materials Inc.
230 Steele St Denver
CO 80206
United States
925-385-8104

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
H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
P261 Avoid breathing dust/fume/vapor
P280: Wear protective gloves/protective clothing/eye protection/face protection
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 CO2 or powder 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 Bulk

Health:	1	1
Flammability:	3	0
Physical:	1	0

3.Composition

Chemical Family: Alloy

Additional Names: None

Vanadium (V)

CAS#: 7440-62-2

EC#: 231-171-1

Molybdenum(Mo)

CAS#: 7439-98-7

EC#: 231-107-2

Niobium (Nb)

CAS #: 7440-03-1

EC #: 231-113-5

Tantalum (Ta):

CAS #: 7440-25-7

EC #: 231-135-5

Tungsten (W):

CAS #: 7440-33-7

EC #: 231-143-9

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: Seek medical attention

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:

Non-flammable, except as powder

Extinguishing Media:

Do not use water for metal fires – use CO₂ or extinguishing powder.

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.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits: 5 mg/m³ as Ta metal, long-term value

Threshold Limit Value:

5 mg/m³ as W, long-term value

10 mg/m³ as W, short-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: 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 Mettalic

Form: Powder

Odor: Odorless

Water Solubility: Insoluble

Boiling Point: N/A

Melting Point: 3020-3422 °C

Flash Point: N/A

Autoignition Temperature: N/A

Density: N/A

Molecular weight: N/A

10. Reactivity

Stability: Stable under recommended storage conditions

Reacts With: Acids, Oxidizing agents

Incompatible Conditions: None

Hazardous Decomposition Products: Tantalum oxide, Metal oxide fume

11. Toxicological Information

Potential Health Effects:

Eyes: Causes serious eye damage

Skin: Causes 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: N/A

12. Ecological Information

Aquatic Toxicity: Low

Persistent Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: N/A

13. Disposal Considerations

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

14. Transportation Data

Heeger Materials Inc.

Hazardous: Hazardous as powder only.



Hazard Class: 4.1 Flammable solid, self-reactive substances and solid desensitized explosives

Packing Group: II

UN Number: UN3089

Proper Shipping Name: Metal powders, flammable, n.o.s. (Tungsten alloy)

15.Regulatory Information

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

16.Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.