

SAFETY DATA SHEET

Date Printed: 05/10/2024

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Vanadium(IV) Silicide

Product Code: V4-SID-05

CAS Number: 12039-87-1

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
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Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Signal Word: Warning



Hazard Statements: H315 Causes skin irritation

H319 Causes serious eye irritation

H302: Harmful if swallowed

H335: May cause respiratory irritation

Precautionary Statements: P261 Avoid breathing dust/fume/vapor

P280: Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P405: Store locked up

P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health: 2

Flammability: 1

Physical: 1

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family: Ceramic

Additional Names: None

Vanadium silicide (VSi₂):

Percentage: 100 wt%

CAS #: 12039-87-1

EC #: 234-908-5

SECTION 4. FIRST AID MEASURES

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

SECTION 5. FIREFIGHTING MEASURES

Flammability: Non-flammable, except as powder

Extinguishing Media: Use CO₂, extinguishing powder, water spray, alcohol resistant foam.

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.

SECTION 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.

SECTION 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits: N/A

Threshold Limit Value: N/A

Special Equipment: None

Respiratory Protection: Dust Respirator

Protective Gloves: 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

Color Grey

Form: Crystalline

Odor: Odorless

Water Solubility: Insoluble

Boiling Point: N/A

Melting Point: N/A

Flash Point: N/A

Autoignition Temperature: N/A

Density: 4.42 g/cc

Molecular weight: 107.11 g/mol

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Reacts With: Oxidizing agents

Incompatible Conditions: None

Hazardous Decomposition Products: Metal oxide fume

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Causes serious eye damage

Skin: Causes skin irritation

Ingestion: May cause irritation

Inhalation: May cause irritation

Chronic: Inorganic silicon compounds may be acute inhalation irritants. Prolonged inhalation may cause pulmonary fibrosis known as silicosis.

Vanadium compounds act chiefly as an irritant to the eyes and respiratory tract. Exposure may cause conjunctivitis, rhinitis and reversible irritation of the respiratory tract. More severe cases may cause bronchitis, bronchospasms and asthma like disease. May cause polycythemia, red blood cell destruction and anemia, albuminuria and hematuria, gastrointestinal disorders, nervous complaints and severe cough.

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

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: Hazardous for transportation
Hazard Class: 6.1 Toxic substances.
Packing Group: III
UN Number: UN3285
Proper Shipping Name: Vanadium compound, n.o.s. (Vanadium silicide)

SECTION 15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.