

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (3N) 99.9% Yttrium Vanadate

**Product Code:** Y-VO-03-C

**CAS Number:** 13566-12-6

**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  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity Category 4

Acute Inhalation Toxicity - Dusts and Mists Category 4

Serious Eye Damage/Eye Irritation Category 2

Specific target organ toxicity (single exposure) Category 3

Target Organs - Respiratory system.

Label Elements



Signal Word

Warning

Hazard Statements

Causes serious eye irritation

May cause respiratory irritation

Harmful if swallowed or if inhaled

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear eye/face protection

Inhalation

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

Call a POISON CENTER or doctor/physician if you feel unwell

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Family:

Ceramic

Additional Names:

Yttrium vanadium oxide, Yttrium orthovanadate

Yttrium vanadate (YVO<sub>4</sub>):

Percentage: 100 wt%

CAS#: 13566-12-6

EC #: 236-965-1

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### **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

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## **SECTION 5. FIREFIGHTING MEASURES**

Flammability:

Non-flammable

Extinguishing Media:

No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.

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.

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## **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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling Conditions:

Handle under dry protective gas.

Wash thoroughly after handling.

Storage Conditions:

Store in a cool dry place in a tightly sealed container.

Store under dry inert gas.

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.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Permissible Exposure Limits:N/A

Threshold Limit Value: N/A

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:

Nitrile rubber, NBR 0.11mm thick.

Eye Protection:

Safety glasses or goggles

Body Protection:

Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Color: N/A

Form: Powder, Granules, Pellets, Sputtering target, Custom parts

Odor: Odorless

Water Solubility: Insoluble

Boiling Point: N/A

Melting Point: N/A

Flash Point: N/A

Autoignition Temperature: N/A

Density: 4.24g/cc

Molecular weight: 203.85g/mol

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## **SECTION 10. STABILITY AND REACTIVITY**

Stability: Stable under recommended storage conditions

Reacts With: Mineral acids, Oxidizing agents

Incompatible Conditions: Water/moisture

Hazardous Decomposition Products: Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Potential Health Effects:

Eyes: May cause irritation

Skin: May cause irritation

Ingestion: Harmful

Inhalation: Toxic

Chronic: N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: N/A

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## **SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity: High

Persistent Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes:

Very toxic for aquatic organism.

May cause long lasting harmful effect on aquatic life.

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach any water sources.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies  
Avoid transfer into the environment.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

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

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## **SECTION 14. TRANSPORT INFORMATION**

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

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## **SECTION 15. REGULATORY INFORMATION**

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

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## **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.