



Material Safety Data Sheet

Vanadium AA Standard 1ml = 1mg V (1000 ppm)

Section 1 - Chemical Product and Company Identification

MSDS Name:

Vanadium AA Standard 1ml = 1mg V (1000 ppm)

Catalog Numbers:

LC26640

Synonyms:

None

Company Identification:

LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7697-37-2	Nitric acid	4
7803-55-6	Ammonium metavanadate	0.24

Section 3 - Hazards Identification

Emergency Overview

Appearance: Clear, slight yellow solution**Caution.** May cause irritation with possible burns by all exposure routes. May be harmful if ingested.**Target Organs:** Eyes, skin, respiratory tract, teeth**Potential Health Effects****Eye:**

May cause eye irritation or burns. May cause irreversible eye injury.

Skin:

May cause skin irritation or burns.

Ingestion:

May cause irritation or burns of the digestive tract.

Inhalation:

May cause irritation or burns of the respiratory tract.



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Chronic:

Chronic exposure may cause a greenish tongue, metallic taste, cough, chronic bronchitis, and emphysema. Ammonium metavanadate is a potent enzyme inhibitor. Adverse reproductive effects and mutagenic effects have occurred in laboratory tests.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once. Do NOT allow victim to rub or keep eyes closed.

Skin:

Get medical aid at once. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not applicable.

Flash Point:

Not applicable.

NFPA Rating:

Health- 2, Flammability- 0, Instability- 1.

Explosion Limits:

Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with inert absorbent (vermiculite, sand, fuller's earth) and place in suitable containers labeled for later disposal. Do not use combustible materials such as sawdust or paper towels.



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Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing.

Storage:

Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below the Permissible Exposure Limits.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	none listed	none listed	none listed
Nitric acid	2 ppm TWA, 4 ppm STEL	2 ppm TWA, 25 ppm IDLH	2 ppm TWA, 5 mg/m ³ TWA
Ammonium metavanadate	none listed	none listed	none listed

OSHA Vacated PELs:

Nitric acid: 2 ppm TWA, 5 mg/m³ TWA

Personal Protective Equipment**Eyes:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Slight yellow
Odor:	Odorless
pH:	Acidic
Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	>1 (ether = 1)
Viscosity:	Not available
Boiling Point:	105°C



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Freezing/Melting Point:	Not available
Decomposition Temperature:	Not available
Solubility in water:	Soluble
Specific Gravity/Density:	1.05
Molecular Formula:	Not applicable
Molecular Weight:	Not applicable

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, excess heat.

Incompatibilities with Other Materials:

Metals, sulfuric acid, flammable and combustible materials.

Hazardous Decomposition Products:

Oxides of nitrogen, vanadium oxide (VOx) gases, ammonia.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.
CAS# 7697-37-2: QU5775000, QU5900000.
CAS# 7803-55-6: YW0875000.

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 7697-37-2:
Inhalation, rat: LC50 = 130 mg/m³/4H
Inhalation, rat: LC50 = 67 ppm (NO₂)/4H
Oral, rabbit: LD50 = 900 mg/kg.
CAS# 7803-55-6:
Oral, rat: LD50 = 58100 ug/kg.
Inhalation, rat: LC50 = 7800 ug/m³/4H
Skin, rabbit: LD50 = 2102 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7697-37-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7803-55-6: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

Teratogenic effects have occurred in experimental animals.



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Reproductive:

Adverse reproductive effects have occurred in experimental animals.

Mutagenicity:

Mutagenic effects have occurred in humans.

Neurotoxicity:

No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Corrosive liquid, acidic, inorganic, nos. (Nitric acid)

Hazard Class: 8

UN Number: UN3264

Packing Group: PGII

Section 15 - Regulatory Information

US Federal**TSCA:**

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 7697-37-2 is listed on the TSCA Inventory.

CAS# 7803-55-6 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)

CAS# 7803-55-6: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:

This material contains Nitric acid (CAS# 7697-37-2, 4%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

CAS# 7697-37-2 is considered highly hazardous by OSHA.

US State**State Right to Know:**

Nitric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Ammonium metavanadate can be found on the following state Right-to-Know lists: New Jersey, Pennsylvania, Massachusetts.



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California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7697-37-2 is listed on Canada's DSL List.

CAS# 7803-55-6 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List.

CAS# 7803-55-6 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 5, 2000

Revision Date: October 6, 2008

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