



Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: VeriSpec[®] Multi-Element Standard 6

500 ppm Pb, 200 ppm Se; 150 ppm Cd, Zn; 100 ppm Mn, 50 ppm Be, Manufactured and Tested in an ISO 17

Product Number: RV010765

Other Identifying Product Numbers: RV010765-100N

1.2. Recommended Use and Restrictions on Use

Calibration Standard

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive
Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statement	Precautionary Statements
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2A	H319	P264, P280, P305+P351+P338, P337+P313
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H402	P273, P501

2.2. GHS Label Elements

Pictograms:



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Signal Word: **Warning**

Hazard Statements:

Hazard Number	Hazard Statement
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H402	Harmful to aquatic life.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P264	Wash arms, hands and face thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (Wash areas of contact with water immediately).
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.



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SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Nitric Acid	HNO ₃	63.01 g/mol	7697-37-2	2.00%
Lead Nitrate	Pb(NO ₃) ₂	331.20 g/mol	10099-74-8	0.08%
Beryllium Nitrate	Be(NO ₃) ₂	133.02 g/mol	13597-99-4	0.07%
Zinc Nitrate	Zn(NO ₃) ₂	189.41 g/mol	7779-88-6	0.04%
Selenous Acid	H ₂ SeO ₃	128.97 g/mol	7783-00-8	0.03%
Manganese Nitrate	Mn(NO ₃) ₂	178.94 g/mol	10377-66-9	0.03%
Cadmium Nitrate	CdN ₂ O ₆	236.42 g/mol	10325-94-7	0.03%

SECTION 4: First-Aid Measures

4.1. General First Aid Information

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

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of soap and water.

Ingestion: No action required to be taken. If necessary, dilute with water.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May cause mild irritation to areas of contact.

4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water immediately).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Not considered to be a fire or explosion hazard.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Wear protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.



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6.2. Cleanup and Containment Methods and Materials

Absorb with suitable material and dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Beryllium Nitrate (13597-99-4)	TWA	USA	2 µg/m³ TWA (as Be)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Beryllium Nitrate (13597-99-4)	TLV-TWA	USA	0.00005 mg/m³ TWA (inhalable fraction, as Be)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	5 µg/m³ Ceiling (as Be)	U.S. - OSHA - Final PELs - Ceiling Limits
Cadmium Nitrate (10325-94-7)	TLV-TWA	USA	0.01 mg/m³ TWA (as Cd) 0.002 mg/m³ TWA (respirable fraction, as Cd)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cadmium Nitrate (10325-94-7)	PEL	USA	5 µg/m³ TWA (Do not eat, drink or chew tobacco or gum or apply cosmetics in regulated areas. Carcinogen - dust can cause lung and kidney disease. See 29 CFR 1910.1027, as Cd) 2.5 µg/m³ Action Level (as Cd)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead Nitrate (10099-74-8)	TWA	USA	50 µg/m³ TWA (as Pb)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead Nitrate (10099-74-8)	TLV-TWA	USA	0.05 mg/m³ TWA (as Pb)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Lead Nitrate (10099-74-8)	PEL	USA	30 µg/m³ Action Level (Poison, See 29 CFR 1910.1025, as Pb) 50 µg/m³ TWA (as Pb)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Manganese Nitrate (10377-66-9)	TLV-TWA	USA	0.02 mg/m³ TWA (respirable fraction, as Mn) 0.1 mg/m³ TWA (inhalable fraction, as Mn)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Manganese Nitrate (10377-66-9)	PEL-Ceiling	USA	5 mg/m³ Ceiling (as Mn)	U.S. - OSHA - Final PELs - Ceiling Limits
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA 5 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Nitric Acid (7697-37-2)	TLV-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Selenous Acid (7783-00-8)	TWA	USA	0.2 mg/m³ TWA (as Se)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Selenous Acid (7783-00-8)	TLV-TWA	USA	0.2 mg/m³ TWA (as Se)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)



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8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: No specific controls are needed. Normal room ventilation is adequate

Skin Protection: Wear protective gloves and eye protection.

Eye Protection: Wear protective gloves and eye protection.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Data not available.

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Data not available.

Melting/Freezing Point: Data not available.

Initial Boiling Point /Range: Data not available.

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.06

Solubility: Data not available.

Partition Coefficient (n-Octanol/Water): Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.



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SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Protect from freezing and physical damage.

10.4. Hazardous Decomposition Products

May emit irritating fumes when heated to decomposition.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

Data not available.

Skin Corrosion and Irritation:

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water immediately). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. 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 attention.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.



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Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.



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SECTION 14: Transportation Information

14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

Not regulated according to IATA Regulations.

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Lead Nitrate (CAS # 10099-74-8): 30 µg/m³ Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m³ TWA (See 29 CFR 1910.1025, as Pb)

Cadmium Nitrate (CAS # 10325-94-7): 5 µg/m³ TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m³ Action Level (as Cd)

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Nitric Acid (CAS # 7697-37-2): 1000 lb EPCRA RQ

Nitric Acid (CAS # 7697-37-2): 1000 lb TPQ

Selenous Acid (CAS # 7783-00-8): 10 lb EPCRA RQ

Selenous Acid (CAS # 7783-00-8): 1000 lb lower TPQ; 10000 lb upper TPQ



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15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Lead Nitrate (CAS # 10099-74-8): 10 lb final RQ; 4.54 kg final RQ
Beryllium Nitrate (CAS # 13597-99-4): 1 lb final RQ (listed under Beryllium nitrate); 0.454 kg final RQ (listed under Beryllium nitrate)
Beryllium Nitrate (CAS # 13597-99-4): 1 lb final RQ; 0.454 kg final RQ
Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ
Zinc Nitrate (CAS # 7779-88-6): 1000 lb final RQ; 454 kg final RQ
Selenous Acid (CAS # 7783-00-8): 10 lb final RQ; 4.54 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Lead Nitrate (CAS # 10099-74-8): 0.1 % Supplier notification limit (listed under Chemical Category N420)
Lead Nitrate (CAS # 10099-74-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)
Lead Nitrate (CAS # 10099-74-8): 100 lb RT
Cadmium Nitrate (CAS # 10325-94-7): 0.1 % de minimis concentration (listed under Chemical Category N078)
Cadmium Nitrate (CAS # 10325-94-7): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)
Manganese Nitrate (CAS # 10377-66-9): 1.0 % de minimis concentration (listed under Chemical Category N450)
Beryllium Nitrate (CAS # 13597-99-4): 0.1 % de minimis concentration (listed under Chemical Category N050)
Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration
Zinc Nitrate (CAS # 7779-88-6): 1.0 % de minimis concentration (listed under Chemical Category N982)
Selenous Acid (CAS # 7783-00-8): 1.0 % de minimis concentration (listed under Chemical Category N725)

15.5. Massachusetts Right-to-Know Substance List

Lead Nitrate (CAS # 10099-74-8): Present
Beryllium Nitrate (CAS # 13597-99-4): Present
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous
Zinc Nitrate (CAS # 7779-88-6): Present
Selenous Acid (CAS # 7783-00-8): Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Lead Nitrate (CAS # 10099-74-8): Environmental hazard
Lead Nitrate (CAS # 10099-74-8): Present
Cadmium Nitrate (CAS # 10325-94-7): Environmental hazard
Cadmium Nitrate (CAS # 10325-94-7): Present
Manganese Nitrate (CAS # 10377-66-9): Environmental hazard
Manganese Nitrate (CAS # 10377-66-9): Present
Beryllium Nitrate (CAS # 13597-99-4): Environmental hazard
Beryllium Nitrate (CAS # 13597-99-4): Present
Nitric Acid (CAS # 7697-37-2): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Present
Zinc Nitrate (CAS # 7779-88-6): Environmental hazard
Zinc Nitrate (CAS # 7779-88-6): Present
Selenous Acid (CAS # 7783-00-8): Environmental hazard
Selenous Acid (CAS # 7783-00-8): Present



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15.7. New Jersey Worker and Community Right-to-Know Components

Lead Nitrate (CAS # 10099-74-8): carcinogen

Lead Nitrate (CAS # 10099-74-8): carcinogen; teratogen

Lead Nitrate (CAS # 10099-74-8): sn 1108

Lead Nitrate (CAS # 10099-74-8): sn 2266

Lead Nitrate (CAS # 10099-74-8): SN 2266 500 lb TPQ (Category Code N420. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Lead Nitrate (CAS # 10099-74-8): sn 3722

Lead Nitrate (CAS # 10099-74-8): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Cadmium Nitrate (CAS # 10325-94-7): carcinogen

Cadmium Nitrate (CAS # 10325-94-7): sn 2199

Cadmium Nitrate (CAS # 10325-94-7): SN 2199 500 lb TPQ (Category Code N078)

Cadmium Nitrate (CAS # 10325-94-7): sn 3722

Cadmium Nitrate (CAS # 10325-94-7): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Cadmium Nitrate (CAS # 10325-94-7): sn 4088

Manganese Nitrate (CAS # 10377-66-9): sn 2324

Manganese Nitrate (CAS # 10377-66-9): SN 2324 500 lb TPQ (Category Code N450. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Manganese Nitrate (CAS # 10377-66-9): sn 3722

Manganese Nitrate (CAS # 10377-66-9): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Beryllium Nitrate (CAS # 13597-99-4): carcinogen

Beryllium Nitrate (CAS # 13597-99-4): sn 0225

Beryllium Nitrate (CAS # 13597-99-4): sn 2163

Beryllium Nitrate (CAS # 13597-99-4): SN 2163 500 lb TPQ (Category Code N050)

Beryllium Nitrate (CAS # 13597-99-4): sn 3722

Beryllium Nitrate (CAS # 13597-99-4): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Beryllium Nitrate (CAS # 13597-99-4): sn 4097

Beryllium Nitrate (CAS # 13597-99-4): sn 4101

Nitric Acid (CAS # 7697-37-2): corrosive; reactive - second degree

Nitric Acid (CAS # 7697-37-2): sn 1356

Nitric Acid (CAS # 7697-37-2): SN 1356 500 lb TPQ

Nitric Acid (CAS # 7697-37-2): sn 3722

Nitric Acid (CAS # 7697-37-2): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Zinc Nitrate (CAS # 7779-88-6): sn 2036

Zinc

15.8. California Proposition 65

Lead Nitrate (CAS # 10099-74-8): carcinogen, 10/1/1992

Cadmium Nitrate (CAS # 10325-94-7): carcinogen, 10/1/1987

Beryllium Nitrate (CAS # 13597-99-4): carcinogen, 10/1/1987



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15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Lead Nitrate (CAS # 10099-74-8): Present (DSL)
Cadmium Nitrate (CAS # 10325-94-7): Present (DSL)
Manganese Nitrate (CAS # 10377-66-9): Present (DSL)
Beryllium Nitrate (CAS # 13597-99-4): Present (NDSL)
Nitric Acid (CAS # 7697-37-2): Present (DSL)
Zinc Nitrate (CAS # 7779-88-6): Present (DSL)
Selenous Acid (CAS # 7783-00-8): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

Lead Nitrate (CAS # 10099-74-8): Present
Cadmium Nitrate (CAS # 10325-94-7): Present
Manganese Nitrate (CAS # 10377-66-9): Present
Beryllium Nitrate (CAS # 13597-99-4): Present
Nitric Acid (CAS # 7697-37-2): Present
Zinc Nitrate (CAS # 7779-88-6): Present
Selenous Acid (CAS # 7783-00-8): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life.

Wash arms, hands and face thoroughly after handling. Avoid release to the environment. Wear protective gloves and eye protection.

IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (Wash areas of contact with water immediately). If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash it before reuse.

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

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

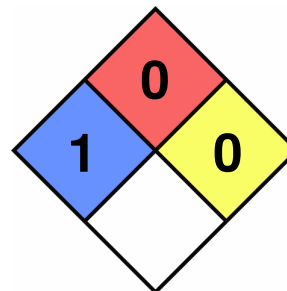
Not Applicable.



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16.3. National Fire Protection Association (NFPA) Rating

Health: 1
Flammability: 0
Reactivity: 0
Special Hazard:





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16.4. Document Revision

Last Revision Date: 9/15/2016

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.