

## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** VeriSpec<sup>®</sup> Multi-Element Standard 29

10 ppm: Al, Ag, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, S

**Product Number:** RV010860

**Other Identifying Product Numbers:** RV010860-100N

#### 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 1A | H314             | P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501 |
| Corrosive to Metals                          | Category 1  | H290             | P234, P390, P406                                                                                          |
| Hazardous to the Aquatic Environment (Acute) | Category 3  | H402             | P273, P501                                                                                                |

#### 2.2. GHS Label Elements

**Pictograms:**



# Safety Data Sheet

Signal Word: **Danger**

## Hazard Statements:

| Hazard Number | Hazard Statement                         |
|---------------|------------------------------------------|
| H290          | May be corrosive to metals.              |
| H314          | Causes severe skin burns and eye damage. |
| H402          | Harmful to aquatic life.                 |

## Precautionary Statements:

| Precautionary Number | Precautionary Statement                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P234                 | Keep only in original container.                                                                                                 |
| P260                 | Do not breathe fumes, mist, vapors, or spray.                                                                                    |
| P264                 | Wash arms, hands and face thoroughly after handling.                                                                             |
| P273                 | Avoid release to the environment.                                                                                                |
| P280                 | Wear protective gloves and eye protection.                                                                                       |
| P301+P330+P331       | IF SWALLOWED: rinse mouth. Do NOT induce vomiting.                                                                               |
| P303+P361+P353       | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.                                     |
| P304+P340            | IF INHALED: Remove person to fresh air and keep 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. |
| P310                 | Immediately call a POISON CENTER or physician.                                                                                   |
| P321                 | Specific treatment (Wash areas of contact with water immediately).                                                               |
| P363                 | Wash contaminated clothing before reuse.                                                                                         |
| P390                 | Absorb spillage to prevent material damage.                                                                                      |
| P405                 | Store locked up.                                                                                                                 |
| P406                 | Store in corrosive resistant container with a resistant inner liner.                                                             |
| 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% |
|------------------------------------|-----------------------------------------------------------------------|-----------------------------------|------------|---------|
| Water                              | H <sub>2</sub> O                                                      | 18.01 g/mol                       | 7732-18-5  | 94.89%  |
| Nitric Acid                        | HNO <sub>3</sub>                                                      | 63.01 g/mol                       | 7697-37-2  | 5.00%   |
| Beryllium Nitrate                  | Be(NO <sub>3</sub> ) <sub>2</sub>                                     | 133.02 g/mol                      | 13597-99-4 | 0.01%   |
| Aluminum Nitrate                   | Al(NO <sub>3</sub> ) <sub>3</sub>                                     | 212.99 g/mol                      | 13473-90-0 | 0.01%   |
| Lithium Nitrate                    | LiNO <sub>3</sub>                                                     | 68.94 g/mol                       | 7790-69-4  | 0.01%   |
| Magnesium Nitrate                  | Mg(NO <sub>3</sub> ) <sub>2</sub>                                     | 148.31 g/mol                      | 10377-60-3 | 0.01%   |
| Chromium (III) Nitrate             | Cr(NO <sub>3</sub> ) <sub>3</sub>                                     | 238.01 g/mol                      | 13548-38-4 | 0.00%   |
| Ferric Nitrate                     | Fe(NO <sub>3</sub> ) <sub>3</sub>                                     | 241.85 g/mol                      | 10421-48-4 | 0.00%   |
| Ammonium Hexafluorotitanate        | (NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub>                      | 197.93 g/mol                      | 16962-40-6 | 0.00%   |
| Calcium Nitrate                    | Ca(NO <sub>3</sub> ) <sub>2</sub>                                     | 164.08 g/mol                      | 10124-37-5 | 0.00%   |
| Sodium Nitrate                     | NaNO <sub>3</sub>                                                     | 84.99 g/mol                       | 7631-99-4  | 0.00%   |
| Gallium Nitrate Hydrate            | Ga(NO <sub>3</sub> ) <sub>3</sub> ·xH <sub>2</sub> O                  | 275.75 g/mol<br>(anhydrous basis) | 69365-72-6 | 0.00%   |
| Manganese Nitrate                  | Mn(NO <sub>3</sub> ) <sub>2</sub>                                     | 178.94 g/mol                      | 10377-66-9 | 0.00%   |
| Nickel (II) Nitrate                | Ni(NO <sub>3</sub> ) <sub>2</sub>                                     | 182.70 g/mol                      | 13138-45-9 | 0.00%   |
| Cobalt (II) Nitrate                | Co(NO <sub>3</sub> ) <sub>2</sub>                                     | 182.94 g/mol                      | 10141-05-6 | 0.00%   |
| Cupric Nitrate                     | Cu(NO <sub>3</sub> ) <sub>2</sub> ·xH <sub>2</sub> O                  | 251.10 g/mol                      | 3251-23-8  | 0.00%   |
| Zinc Nitrate                       | Zn(NO <sub>3</sub> ) <sub>2</sub>                                     | 189.41 g/mol                      | 7779-88-6  | 0.00%   |
| Indium (III) Nitrate Hydrate       | In(NO <sub>3</sub> ) <sub>3</sub> ·xH <sub>2</sub> O                  | 300.83 g/mol<br>(anhydrous basis) | 13465-14-0 | 0.00%   |
| Potassium Nitrate                  | KNO <sub>3</sub>                                                      | 101.10 g/mol                      | 7757-79-1  | 0.00%   |
| Strontium Nitrate                  | Sr(NO <sub>3</sub> ) <sub>2</sub>                                     | 211.62 g/mol                      | 10042-76-9 | 0.00%   |
| Ammonium Metavanadate              | NH <sub>4</sub> VO <sub>3</sub>                                       | 116.97 g/mol                      | 7803-55-6  | 0.00%   |
| Cadmium Nitrate                    | CdN <sub>2</sub> O <sub>6</sub>                                       | 236.42 g/mol                      | 10325-94-7 | 0.00%   |
| Bismuth (III) Nitrate Pentahydrate | Bi(NO <sub>3</sub> ) <sub>3</sub> ·5H <sub>2</sub> O                  | 485.07 g/mol                      | 10035-06-0 | 0.00%   |
| Arsenic Acid                       | H <sub>3</sub> AsO <sub>4</sub>                                       | 141.94 g/mol                      | 7778-39-4  | 0.00%   |
| Barium Nitrate                     | Ba(NO <sub>3</sub> ) <sub>2</sub>                                     | 261.33 g/mol                      | 10022-31-8 | 0.00%   |
| Uranyl Acetate Dihydrate           | UO <sub>2</sub> (CH <sub>3</sub> COO) <sub>2</sub> ·2H <sub>2</sub> O | 424.15 g/mol                      | 6159-44-0  | 0.00%   |
| Rubidium Nitrate                   | RbNO <sub>3</sub>                                                     | 147.47 g/mol                      | 13126-12-0 | 0.00%   |
| Selenous Acid                      | H <sub>2</sub> SeO <sub>3</sub>                                       | 128.97 g/mol                      | 7783-00-8  | 0.00%   |
| Silver Nitrate                     | AgNO <sub>3</sub>                                                     | 169.87 g/mol                      | 7761-88-8  | 0.00%   |
| Lead Nitrate                       | Pb(NO <sub>3</sub> ) <sub>2</sub>                                     | 331.20 g/mol                      | 10099-74-8 | 0.00%   |
| Cesium Nitrate                     | CsNO <sub>3</sub>                                                     | 194.91 g/mol                      | 7789-18-6  | 0.00%   |



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### 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:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

#### 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

Immediately call a POISON CENTER or physician. 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.

#### 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

Store in corrosive resistant container with a resistant inner liner.

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### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

| Chemical Name                            | Limit Type  | Country | Exposure Limit                                                                                                                                                                                                                           | Information Source                                                |
|------------------------------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Ammonium Hexafluorotitanate (16962-40-6) | TWA         | USA     | 2.5 mg/m <sup>3</sup> TWA (as F)<br>2.5 mg/m <sup>3</sup> TWA (dust)                                                                                                                                                                     | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Ammonium Hexafluorotitanate (16962-40-6) | TLV-TWA     | USA     | 2.5 mg/m <sup>3</sup> TWA (as F)                                                                                                                                                                                                         | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Arsenic Acid (7778-39-4)                 | TWA         | USA     | 10 µg/m <sup>3</sup> TWA (as As)                                                                                                                                                                                                         | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Arsenic Acid (7778-39-4)                 | TLV-TWA     | USA     | 0.01 mg/m <sup>3</sup> TWA (as As)                                                                                                                                                                                                       | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Arsenic Acid (7778-39-4)                 | PEL         | USA     | 10 µg/m <sup>3</sup> TWA (Cancer hazard, See 29 CFR 1910.1018, except Arsine, as As)<br>5 µg/m <sup>3</sup> Action Level (as As)                                                                                                         | U.S. - OSHA - Specifically Regulated Chemicals with PELs          |
| Barium Nitrate (10022-31-8)              | TWA         | USA     | 0.5 mg/m <sup>3</sup> TWA (as Ba)                                                                                                                                                                                                        | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Barium Nitrate (10022-31-8)              | TLV-TWA     | USA     | 0.5 mg/m <sup>3</sup> TWA (as Ba)                                                                                                                                                                                                        | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Beryllium Nitrate (13597-99-4)           | TWA         | USA     | 2 µg/m <sup>3</sup> TWA (as Be)                                                                                                                                                                                                          | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Beryllium Nitrate (13597-99-4)           | TLV-TWA     | USA     | 0.00005 mg/m <sup>3</sup> TWA (inhalable fraction, as Be)                                                                                                                                                                                | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Beryllium Nitrate (13597-99-4)           | PEL-Ceiling | USA     | 5 µg/m <sup>3</sup> Ceiling (as Be)                                                                                                                                                                                                      | U.S. - OSHA - Final PELs - Ceiling Limits                         |
| Cadmium Nitrate (10325-94-7)             | TLV-TWA     | USA     | 0.01 mg/m <sup>3</sup> TWA (as Cd)<br>0.002 mg/m <sup>3</sup> TWA (respirable fraction, as Cd)                                                                                                                                           | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Cadmium Nitrate (10325-94-7)             | PEL         | USA     | 5 µg/m <sup>3</sup> 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)<br>2.5 µg/m <sup>3</sup> Action Level (as Cd) | U.S. - OSHA - Specifically Regulated Chemicals with PELs          |
| Chromium (III) Nitrate (13548-38-4)      | TWA         | USA     | 0.5 mg/m <sup>3</sup> TWA (as Cr)                                                                                                                                                                                                        | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Chromium (III) Nitrate (13548-38-4)      | TLV-TWA     | USA     | 0.5 mg/m <sup>3</sup> TWA (as Cr)                                                                                                                                                                                                        | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Cobalt (II) Nitrate (10141-05-6)         | TLV-TWA     | USA     | 0.02 mg/m <sup>3</sup> TWA (as Co)                                                                                                                                                                                                       | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Cupric Nitrate (3251-23-8)               | TLV-TWA     | USA     | 1 mg/m <sup>3</sup> TWA (dust and mist, as Cu)                                                                                                                                                                                           | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |

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|                                      |             |     |                                                                                                                  |                                                                        |
|--------------------------------------|-------------|-----|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Ferric Nitrate (10421-48-4)          | TLV-TWA     | USA | 1 mg/m <sup>3</sup> TWA (as Fe)                                                                                  | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Lead Nitrate (10099-74-8)            | TWA         | USA | 50 µg/m <sup>3</sup> TWA (as Pb)                                                                                 | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Lead Nitrate (10099-74-8)            | TLV-TWA     | USA | 0.05 mg/m <sup>3</sup> TWA (as Pb)                                                                               | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Lead Nitrate (10099-74-8)            | PEL         | USA | 30 µg/m <sup>3</sup> Action Level (Poison, See 29 CFR 1910.1025, as Pb)<br>50 µg/m <sup>3</sup> TWA (as Pb)      | U.S. - OSHA - Specifically Regulated Chemicals with PELs               |
| Manganese Nitrate (10377-66-9)       | TLV-TWA     | USA | 0.02 mg/m <sup>3</sup> TWA (respirable fraction, as Mn)<br>0.1 mg/m <sup>3</sup> TWA (inhalable fraction, as Mn) | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Manganese Nitrate (10377-66-9)       | PEL-Ceiling | USA | 5 mg/m <sup>3</sup> Ceiling (as Mn)                                                                              | U.S. - OSHA - Final PELs - Ceiling Limits                              |
| Nickel (II) Nitrate (13138-45-9)     | TWA         | USA | 1 mg/m <sup>3</sup> TWA (as Ni)                                                                                  | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Nickel (II) Nitrate (13138-45-9)     | TLV-TWA     | USA | 0.1 mg/m <sup>3</sup> TWA (inhalable fraction, as Ni)                                                            | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Nitric Acid (7697-37-2)              | TWA         | USA | 2 ppm TWA<br>5 mg/m <sup>3</sup> 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/m <sup>3</sup> TWA (as Se)                                                                                | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Selenous Acid (7783-00-8)            | TLV-TWA     | USA | 0.2 mg/m <sup>3</sup> TWA (as Se)                                                                                | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Silver Nitrate (7761-88-8)           | TWA         | USA | 0.01 mg/m <sup>3</sup> TWA (as Ag)                                                                               | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Silver Nitrate (7761-88-8)           | TLV-TWA     | USA | 0.01 mg/m <sup>3</sup> TWA (as Ag)                                                                               | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |
| Uranyl Acetate Dihydrate (6159-44-0) | TWA         | USA | 0.05 mg/m <sup>3</sup> TWA (as U)                                                                                | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Uranyl Acetate Dihydrate (6159-44-0) | TWA         | USA | 0.25 mg/m <sup>3</sup> TWA (as U)                                                                                | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Uranyl Acetate Dihydrate (6159-44-0) | TLV-STEL    | USA | 0.6 mg/m <sup>3</sup> STEL (as U)                                                                                | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Uranyl Acetate Dihydrate (6159-44-0) | TLV-TWA     | USA | 0.2 mg/m <sup>3</sup> TWA (as U)                                                                                 | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |

### 8.2. Exposure Controls

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



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**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:** 1.09

**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.

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.



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### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container.

### 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 severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Serious Eye Damage and Irritation:

Not applicable.

#### Respiratory Sensitization:

Not applicable.

#### Skin Sensitization:

Not applicable.

#### Germ Cell Mutagenicity:

Not applicable.

#### Carcinogenicity:

Not applicable.

#### Reproductive Toxicity:

Not applicable.



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**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.

**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)

**Sizes:** 100 mL

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

**Hazard Class:** 8

**Packing Group:** II

**Hazard Placard Labels:**



**Sizes:**

**UN Number:**

**Proper Shipping Name:**

**Hazard Class:**

**Packing Group:**

**Hazard Placard Labels:**

#### 14.2. Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 100 mL

**UN Number:** UN3264

**Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid)

**Hazard Class:** 8

**Packing Group:** II

**Hazard Placard Labels:**





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### SECTION 15: Regulatory Information

#### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Lead Nitrate (CAS # 10099-74-8): 30 µg/m<sup>3</sup> Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1025, as Pb)

Cadmium Nitrate (CAS # 10325-94-7): 5 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1027, as Cd); 2.5 µg/m<sup>3</sup> Action Level (as Cd)

Arsenic Acid (CAS # 7778-39-4): 10 µg/m<sup>3</sup> TWA (See 29 CFR 1910.1018, except Arsine, as As); 5 µg/m<sup>3</sup> Action Level (See 29 CFR 1910.1018, except Arsine, as As)

#### 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

#### 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

Ferric Nitrate (CAS # 10421-48-4): 1000 lb final RQ; 454 kg final RQ

Nickel (II) Nitrate (CAS # 13138-45-9): 100 lb final RQ; 45.4 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

Cupric Nitrate (CAS # 3251-23-8): 100 lb final RQ; 45.4 kg final RQ

Uranyl Acetate Dihydrate (CAS # 6159-44-0): 100 lb final RQ; 45.4 kg final RQ

Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ

Silver Nitrate (CAS # 7761-88-8): 1 lb final RQ; 0.454 kg final RQ

Arsenic Acid (CAS # 7778-39-4): 1 lb final RQ; 0.454 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

Ammonium Metavanadate (CAS # 7803-55-6): 1000 lb final RQ; 454 kg final RQ



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

Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (does not include Barium sulfate CAS 7727-43-7, Chemical Category N040)  
Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)  
Strontium Nitrate (CAS # 10042-76-9): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)  
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  
Calcium Nitrate (CAS # 10124-37-5): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)  
Cobalt (II) Nitrate (CAS # 10141-05-6): 0.1 % de minimis concentration (listed under Chemical Category N096)  
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)  
Magnesium Nitrate (CAS # 10377-60-3): 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)  
Ferric Nitrate (CAS # 10421-48-4): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)  
Rubidium Nitrate (CAS # 13126-12-0): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)  
Nickel (II) Nitrate (CAS # 13138-45-9): 0.1 % de minimis concentration (listed under Chemical Category N495)  
Chromium (III) Nitrate (CAS # 13548-38-4): 1.0 % de minimis concentration (except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing resi

### 15.5. Massachusetts Right-to-Know Substance List

Barium Nitrate (CAS # 10022-31-8): Present  
Strontium Nitrate (CAS # 10042-76-9): Present  
Lead Nitrate (CAS # 10099-74-8): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Ferric Nitrate (CAS # 10421-48-4): Present  
Nickel (II) Nitrate (CAS # 13138-45-9): Present  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Cupric Nitrate (CAS # 3251-23-8): Present  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present  
Sodium Nitrate (CAS # 7631-99-4): Present  
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous  
Potassium Nitrate (CAS # 7757-79-1): Present  
Silver Nitrate (CAS # 7761-88-8): Present  
Arsenic Acid (CAS # 7778-39-4): Present  
Zinc Nitrate (CAS # 7779-88-6): Present  
Selenous Acid (CAS # 7783-00-8): Extraordinarily hazardous  
Ammonium Metavanadate (CAS # 7803-55-6): Present



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### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Barium Nitrate (CAS # 10022-31-8): Environmental hazard  
Barium Nitrate (CAS # 10022-31-8): Present  
Strontium Nitrate (CAS # 10042-76-9): Present  
Lead Nitrate (CAS # 10099-74-8): Environmental hazard  
Lead Nitrate (CAS # 10099-74-8): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): Environmental hazard  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Cadmium Nitrate (CAS # 10325-94-7): Environmental hazard  
Cadmium Nitrate (CAS # 10325-94-7): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Manganese Nitrate (CAS # 10377-66-9): Environmental hazard  
Manganese Nitrate (CAS # 10377-66-9): Present  
Ferric Nitrate (CAS # 10421-48-4): Environmental hazard  
Ferric Nitrate (CAS # 10421-48-4): Present  
Nickel (II) Nitrate (CAS # 13138-45-9): Environmental hazard  
Nickel (II) Nitrate (CAS # 13138-45-9): Present  
Chromium (III) Nitrate (CAS # 13548-38-4): Environmental hazard  
Chromium (III) Nitrate (CAS # 13548-38-4): Present  
Beryllium Nitrate (CAS # 13597-99-4): Environmental hazard  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Cupric Nitrate (CAS # 3251-23-8): Environmental hazard  
Cupric Nitrate (CAS # 3251-23-8): Present  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Environmental hazard  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present  
Sodium Nitrate (CAS # 7631-99-4): Present  
Nitric Acid (CAS # 7697-37-2): Environmental hazard  
Nitric Acid (CAS # 7697-37-2): Present  
Water (CAS # 7732-18-5): Present  
Potassium Nitrate (CAS # 7757-79-1): Present  
Silver Nitrate (CAS # 7761-88-8): Environmental hazard  
Silver Nitrate (CAS # 7761-88-8): Present  
Arsenic Acid (CAS # 7778-39-4): Environmental hazard  
Arsenic Acid (CAS # 7778-39-4): 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  
Ammonium Metavanadate (CAS # 7803-55-6): Environmental hazard  
Ammonium Metavanadate (CAS # 7803-55-6): Present



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

Barium Nitrate (CAS # 10022-31-8): sn 0186  
Barium Nitrate (CAS # 10022-31-8): sn 2146  
Barium Nitrate (CAS # 10022-31-8): SN 2146 500 lb TPQ (except Barium sulfate, Category Code N040.)  
Barium Nitrate (CAS # 10022-31-8): sn 3722  
Barium Nitrate (CAS # 10022-31-8): SN 3722 500 lb TPQ (water dissociable, Category Code N511)  
Bismuth (III) Nitrate Pentahydrate (CAS # 10035-06-0): sn 3722  
Bismuth (III) Nitrate Pentahydrate (CAS # 10035-06-0): SN 3722 500 lb TPQ (water dissociable, Category Code N511)  
Strontium Nitrate (CAS # 10042-76-9): sn 1743  
Strontium Nitrate (CAS # 10042-76-9): sn 3722  
Strontium Nitrate (CAS # 10042-76-9): SN 3722 500 lb TPQ (water dissociable, Category Code N511)  
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)  
Calcium Nitrate (CAS # 10124-37-5): sn 0324  
Calcium Nitrate (CAS # 10124-37-5): sn 3722  
Calcium Nitrate (CAS # 10124-37-5): SN 3722 500 lb TPQ (water dissociable, Category Code N511)  
Cobalt (II) Nitrate (CAS # 10141-05-6): carcinogen  
Cobalt (II) Nitrate (CAS # 10141-05-6): sn 2222  
Cobalt (II) Nitrate (CAS # 10141-05-6): SN 2222 500 lb TPQ (Category Code N096)  
Cobalt (II) Nitrate (CAS # 10141-05-6): sn 3722  
Cobalt (II) Nitrate (CAS # 10141-05-6): 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)  
Cadm

### 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  
Nickel (II) Nitrate (CAS # 13138-45-9): carcinogen, 5/7/2004  
Beryllium Nitrate (CAS # 13597-99-4): carcinogen, 10/1/1987  
Arsenic Acid (CAS # 7778-39-4): 0.06 µg/day NSRL (inhalation, listed under Arsenic); 10 µg/day NSRL (except inhalation, listed under Arsenic)  
Arsenic Acid (CAS # 7778-39-4): carcinogen, 2/27/1987



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

Barium Nitrate (CAS # 10022-31-8): Present (DSL)  
Bismuth (III) Nitrate Pentahydrate (CAS # 10035-06-0): Present (DSL)  
Strontium Nitrate (CAS # 10042-76-9): Present (DSL)  
Lead Nitrate (CAS # 10099-74-8): Present (DSL)  
Calcium Nitrate (CAS # 10124-37-5): Present (DSL)  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present (DSL)  
Cadmium Nitrate (CAS # 10325-94-7): Present (DSL)  
Magnesium Nitrate (CAS # 10377-60-3): Present (DSL)  
Manganese Nitrate (CAS # 10377-66-9): Present (DSL)  
Ferric Nitrate (CAS # 10421-48-4): Present (DSL)  
Rubidium Nitrate (CAS # 13126-12-0): Present (NDSL)  
Nickel (II) Nitrate (CAS # 13138-45-9): Present (DSL)  
Aluminum Nitrate (CAS # 13473-90-0): Present (DSL)  
Chromium (III) Nitrate (CAS # 13548-38-4): Present (DSL)  
Beryllium Nitrate (CAS # 13597-99-4): Present (NDSL)  
Ammonium Hexafluorotitanate (CAS # 16962-40-6): Present (NDSL)  
Cupric Nitrate (CAS # 3251-23-8): Present (DSL)  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present (DSL)  
Gallium Nitrate Hydrate (CAS # 69365-72-6): Present (NDSL)  
Sodium Nitrate (CAS # 7631-99-4): Present (DSL)  
Nitric Acid (CAS # 7697-37-2): Present (DSL)  
Water (CAS # 7732-18-5): Present (DSL)  
Potassium Nitrate (CAS # 7757-79-1): Present (DSL)  
Silver Nitrate (CAS # 7761-88-8): Present (DSL)  
Arsenic Acid (CAS # 7778-39-4): Present (DSL)  
Zinc Nitrate (CAS # 7779-88-6): Present (DSL)  
Selenous Acid (CAS # 7783-00-8): Present (DSL)  
Cesium Nitrate (CAS # 7789-18-6): Present (DSL)  
Lithium Nitrate (CAS # 7790-69-4): Present (DSL)  
Ammonium Metavanadate (CAS # 7803-55-6): Present (DSL)



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

Barium Nitrate (CAS # 10022-31-8): Present  
Bismuth (III) Nitrate Pentahydrate (CAS # 10035-06-0): Present  
Strontium Nitrate (CAS # 10042-76-9): Present  
Lead Nitrate (CAS # 10099-74-8): Present  
Calcium Nitrate (CAS # 10124-37-5): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Cadmium Nitrate (CAS # 10325-94-7): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Manganese Nitrate (CAS # 10377-66-9): Present  
Ferric Nitrate (CAS # 10421-48-4): Present  
Rubidium Nitrate (CAS # 13126-12-0): Present  
Nickel (II) Nitrate (CAS # 13138-45-9): Present  
Aluminum Nitrate (CAS # 13473-90-0): Present  
Chromium (III) Nitrate (CAS # 13548-38-4): Present  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Ammonium Hexafluorotitanate (CAS # 16962-40-6): Present  
Cupric Nitrate (CAS # 3251-23-8): Present  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present  
Gallium Nitrate Hydrate (CAS # 69365-72-6): Present  
Sodium Nitrate (CAS # 7631-99-4): Present  
Nitric Acid (CAS # 7697-37-2): Present  
Water (CAS # 7732-18-5): Present  
Potassium Nitrate (CAS # 7757-79-1): Present  
Silver Nitrate (CAS # 7761-88-8): Present  
Arsenic Acid (CAS # 7778-39-4): Present  
Zinc Nitrate (CAS # 7779-88-6): Present  
Selenous Acid (CAS # 7783-00-8): Present  
Cesium Nitrate (CAS # 7789-18-6): Present  
Lithium Nitrate (CAS # 7790-69-4): Present  
Ammonium Metavanadate (CAS # 7803-55-6): 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.



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### SECTION 16: Other Information

#### 16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Causes severe skin burns and eye damage. Harmful to aquatic life.

Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Avoid release to the environment. Wear protective gloves and eye protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

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

#### 16.2. Miscellaneous Hazard Classes

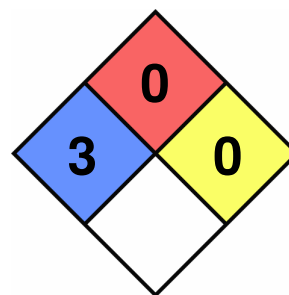
**Canadian Carcinogenicity Hazard Class:** Not Applicable.

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

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

#### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 3  
**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.