



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** VeriSpec<sup>®</sup> Instrument Calibration Standard 5  
100 ppm As, Tl; 50 ppm Cd, Se; 30 ppm Pb, Manufactured and Tested in an ISO 17025/Guide 34 Facility

**Product Number:** RV010779

**Other Identifying Product Numbers:** RV010779-100N

#### 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

#### 2.2. GHS Label Elements

**Pictograms:**





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Signal Word: **Danger**

### Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

### 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.
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%
Nitric Acid	HNO <sub>3</sub>	63.01 g/mol	7697-37-2	5.00%
Arsenic Acid	H <sub>3</sub> AsO <sub>4</sub>	141.94 g/mol	7778-39-4	0.02%
Cadmium Nitrate	CdN <sub>2</sub> O <sub>6</sub>	236.42 g/mol	10325-94-7	0.01%
Thallium (I) Nitrate	TlNO <sub>3</sub>	266.38 g/mol	10102-45-1	0.01%
Selenous Acid	H <sub>2</sub> SeO <sub>3</sub>	128.97 g/mol	7783-00-8	0.01%
Lead Nitrate	Pb(NO <sub>3</sub> ) <sub>2</sub>	331.20 g/mol	10099-74-8	0.00%

### 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.



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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

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
Arsenic Acid (7778-39-4)	TWA	USA	10 µg/m³ TWA (as As)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Arsenic Acid (7778-39-4)	TLV-TWA	USA	0.01 mg/m³ TWA (as As)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Arsenic Acid (7778-39-4)	PEL	USA	10 µg/m³ TWA (Cancer hazard, See 29 CFR 1910.1018, except Arsine, as As) 5 µg/m³ Action Level (as As)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
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
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)
Thallium (I) Nitrate (10102-45-1)	TWA	USA	0.1 mg/m³ TWA (as Tl)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Thallium (I) Nitrate (10102-45-1)	TLV-TWA	USA	0.02 mg/m³ TWA (inhalable fraction, as Tl)	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

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.



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**Germ Cell Mutagenicity:**

Not applicable.

**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**

Not applicable.

**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

Thallium (I) Nitrate (CAS # 10102-45-1): 100 lb final RQ; 45.4 kg final RQ

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

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

Thallium (I) Nitrate (CAS # 10102-45-1): 1.0 % de minimis concentration (listed under Chemical Category N760)

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)

Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration

Arsenic Acid (CAS # 7778-39-4): 0.1 % de minimis concentration (listed under Chemical Category N020)

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

Thallium (I) Nitrate (CAS # 10102-45-1): Present

Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous

Arsenic Acid (CAS # 7778-39-4): Present

Selenous Acid (CAS # 7783-00-8): Extraordinarily hazardous



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

Lead Nitrate (CAS # 10099-74-8): Environmental hazard

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

Thallium (I) Nitrate (CAS # 10102-45-1): Environmental hazard

Thallium (I) Nitrate (CAS # 10102-45-1): Present

Cadmium Nitrate (CAS # 10325-94-7): Environmental hazard

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

Nitric Acid (CAS # 7697-37-2): Environmental hazard

Nitric Acid (CAS # 7697-37-2): Present

Arsenic Acid (CAS # 7778-39-4): Environmental hazard

Arsenic Acid (CAS # 7778-39-4): 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)

Thallium (I) Nitrate (CAS # 10102-45-1): sn 1841

Thallium (I) Nitrate (CAS # 10102-45-1): sn 2809

Thallium (I) Nitrate (CAS # 10102-45-1): SN 2809 500 lb TPQ (Category Code N760. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Thallium (I) Nitrate (CAS # 10102-45-1): sn 3722

Thallium (I) Nitrate (CAS # 10102-45-1): 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

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)

Arsenic Acid (CAS # 7778-39-4): carcinogen

Arsenic Acid (CAS # 7778-39-4): sn 0153

Arsenic Acid (CAS # 7778-39-4): sn 2138

Arsenic Acid (CAS # 7778-39-4): SN 2138 500 lb TPQ (Category Code N020)

Selenous Acid (CAS # 7783-00-8): sn 2347

Selenous Acid (CAS # 7783-00-8): SN 2347 500 lb TPQ (Category Code N725. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Selenous Acid (CAS # 77

### 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

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)

Lead Nitrate (CAS # 10099-74-8): Present (DSL)  
Thallium (I) Nitrate (CAS # 10102-45-1): Present (NDSL)  
Cadmium Nitrate (CAS # 10325-94-7): Present (DSL)  
Nitric Acid (CAS # 7697-37-2): Present (DSL)  
Arsenic Acid (CAS # 7778-39-4): 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  
Thallium (I) Nitrate (CAS # 10102-45-1): Present  
Cadmium Nitrate (CAS # 10325-94-7): Present  
Nitric Acid (CAS # 7697-37-2): Present  
Arsenic Acid (CAS # 7778-39-4): 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

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

Keep only in original container. 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. 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.



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### 16.2. Miscellaneous Hazard Classes

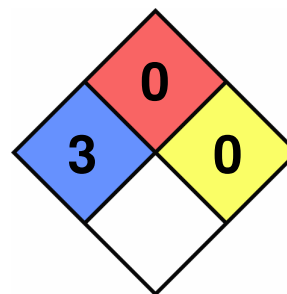
**Canadian Carcinogenicity Hazard Class:** Not Applicable.

**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:**





## Safety Data Sheet

### 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.