



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** VeriSpec™ Cerium (Ce) Standard for AAS 1000 ppm in 2% HNO<sub>3</sub>  
Manufactured and Tested in an ISO 17025/Guide 34 Accredited Facility

**Product Number:** RV010070

**Other Identifying Product Numbers:** RV010070-100N, RV010070-500N

#### 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
Acute Toxicity - Inhalation	Category 3	H331	P261, P271, P304+P340, P311, P321, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 1	H370	P260, P264, P270, P307+P311, P321, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501

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### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe dust, fumes or mist.
P261	Avoid breathing dust, fumes or mist.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and 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.
P307+P311	IF exposed: Call a POISON CENTER or physician.
P310	Immediately call a POISON CENTER or physician.
P311	Call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water immediately).
P332+P313	If skin irritation occurs: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.



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### 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.

## 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	97.69%
Nitric Acid	HNO <sub>3</sub>	63.01 g/mol	7697-37-2	2.00%
Cerium (III) Nitrate Hexahydrate	Ce(NO <sub>3</sub> ) <sub>3</sub> ·6H <sub>2</sub> O	326.13 g/mol	10294-41-4	0.31%

## 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: 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

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.



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### 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 locked up.

### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Nitric Acid (7697-37-2)	TWA	USA	2 ppm TWA 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)

#### 8.2. Exposure Controls

**Engineering Controls:** Use only outdoors or in a well-ventilated area.

**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.



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### 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:** 1.01

**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.

#### 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.



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### 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:**

Toxic if inhaled. Avoid breathing dust, fumes or mist. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**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 damage. 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. Immediately call a POISON CENTER or physician.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

Not applicable.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Not applicable.

**Specific Target Organ Toxicity from Single Exposure:**

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



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### **Specific Target Organ Toxicity from Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

### **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.

## SECTION 14: Transportation Information

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

Not regulated according to DOT Regulations.



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Not regulated according to IATA Regulations.

### SECTION 15: Regulatory Information

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

Not listed.

#### 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

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

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

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

Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): 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

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

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

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

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

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

Water (CAS # 7732-18-5): Present

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

Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): sn 3722

Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

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)





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### 15.8. California Proposition 65

Not listed.

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

Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): Present (DSL)

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

Water (CAS # 7732-18-5): Present (DSL)

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

Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): Present

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

Water (CAS # 7732-18-5): 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 damage. Toxic if inhaled. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection.

IF ON SKIN: Wash with plenty of soap and 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. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. 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.

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

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.

**Biohazardous Infectious Materials Hazard Class:** 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:** 9/1/2016

### 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.