



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: VeriSpec[®] Cesium (Cs) Standard for AAS 1000 ppm in 2% HNO₃
Manufactured and Tested in an ISO 17025/ISO 17034 Accredited Facility

Product Number: RV010014

Other Identifying Product Numbers: RV010014-100N, RV010014-500N

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: 412 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

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

| Hazard Class | Category | Hazard Statements: | Precautionary Statements: |
|-----------------------------|------------|--------------------|---|
| Skin Corrosion / Irritation | Category 1 | H314 | P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501 |
| Eye Damage / Irritation | Category 2 | H319 | P264, P280, P305+P351+P338, P337+P313 |

Safety Data Sheet

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

| Hazard Number | Hazard Statement |
|---------------|--|
| H314 | Causes severe skin burns and eye damage. |
| H319 | Causes serious eye irritation. |

Precautionary Statements:

| Precautionary Number | Precautionary Statement |
|----------------------|--|
| 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). |
| P337+P313 | If eye irritation persists: Get medical attention. |
| P363 | Wash contaminated clothing before reuse. |
| P405 | Store locked up. |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

Safety Data Sheet

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

| Chemical Name | Formula | Molecular Weight | CAS Number | Weight% |
|----------------|-------------------|------------------|------------|---------|
| Water | H ₂ O | 18.01 g/mol | 7732-18-5 | 97.85 |
| Nitric Acid | HNO ₃ | 63.01 g/mol | 7697-37-2 | 2.00 |
| Cesium Nitrate | CsNO ₃ | 194.91 g/mol | 7789-18-6 | 0.15 |

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

Causes severe skin burns and eye damage. Causes serious eye irritation.

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.



Safety Data Sheet

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.

Safety Data Sheet

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

| Chemical Name | Limit Type | Country | Exposure Limit | Information Source |
|-------------------------|------------|---------|---|--|
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| 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) |
| Nitric Acid (7697-37-2) | TWA | USA | 2 ppm TWA; 5 mg/m ³ TWA | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |

Safety Data Sheet

| | | | | |
|-------------------------|----------|-----|---|---|
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Nitric Acid (7697-37-2) | TLV-TWA | USA | "2 ppm TWA" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |
| Nitric Acid (7697-37-2) | TLV-STEL | USA | "4 ppm STEL" As Nitric acid [7697-37-2] | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Nitric Acid (7697-37-2) | TWA | USA | "2 ppm TWA; 5 mg/m ³ TWA" As Nitric acid [7697-37-2] | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs) |

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.



Safety Data Sheet

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: 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.

Safety Data Sheet

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:

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.

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.



Safety Data Sheet

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.

Safety Data Sheet

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

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG 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" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): "1000 lb TPQ" As Nitric acid [7697-37-2]

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

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

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

Nitric Acid (CAS # 7697-37-2): 454 kg final RQ" As Nitric acid [7697-37-2]

Safety Data Sheet

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

Nitric Acid (CAS # 7697-37-2): "1.0 % de minimis concentration" As Nitric acid [7697-37-2]

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

Cesium Nitrate (CAS # 7789-18-6): "1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511, As Nitrate compounds, water dissociable [RR-03804-0])

Cesium Nitrate (CAS # 7789-18-6): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

15.5. Massachusetts Right-to-Know Substance List

Nitric Acid (CAS # 7697-37-2): "Extraordinarily hazardous" As Nitric acid [7697-37-2]

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

15.6. Pennsylvania Right-to-Know Hazardous Substances

Nitric Acid (CAS # 7697-37-2): "Environmental hazard" As Nitric acid [7697-37-2]

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

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

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

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

Nitric Acid (CAS # 7697-37-2): "corrosive

Nitric Acid (CAS # 7697-37-2): "SN 1356 500 lb TPQ" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): "sn 1356" As Nitric acid [7697-37-2]

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

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

Nitric Acid (CAS # 7697-37-2): reactive - second degree" As Nitric acid [7697-37-2]

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)

Cesium Nitrate (CAS # 7789-18-6): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Cesium Nitrate (CAS # 7789-18-6): "sn 3722" As Nitrate compounds [RR-01770-9]

Cesium Nitrate (CAS # 7789-18-6): sn 3722

Cesium Nitrate (CAS # 7789-18-6): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

15.8. California Proposition 65

Not listed.

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

Nitric Acid (CAS # 7697-37-2): "Present" As Nitric acid [7697-37-2] (DSL)

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

Water (CAS # 7732-18-5): "Present" As Water [7732-18-5] (DSL)

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

Cesium Nitrate (CAS # 7789-18-6): "Present" As Cesium nitrate [7789-18-6] (DSL)

Cesium Nitrate (CAS # 7789-18-6): Present (DSL)

Safety Data Sheet

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

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Nitric Acid (CAS # 7697-37-2): "Present (ACTIVE)" As Nitric acid [7697-37-2]

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

Water (CAS # 7732-18-5): "Present [XU] (ACTIVE)" As Water [7732-18-5]

Water (CAS # 7732-18-5): Present [XU] (ACTIVE)

Cesium Nitrate (CAS # 7789-18-6): "Present (ACTIVE)" As Nitric acid, cesium salt (1:1) [7789-18-6]

Cesium Nitrate (CAS # 7789-18-6): Present (ACTIVE)

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

Nitric Acid (CAS # 7697-37-2): "231-714-2" As Nitric acid [7697-37-2]

Nitric Acid (CAS # 7697-37-2): 231-714-2

Water (CAS # 7732-18-5): "231-791-2" As Water [7732-18-5]

Water (CAS # 7732-18-5): 231-791-2

Cesium Nitrate (CAS # 7789-18-6): "232-146-8" As Caesium nitrate [7789-18-6]

Cesium Nitrate (CAS # 7789-18-6): 232-146-8

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Causes severe skin burns and eye damage. Causes serious eye irritation.

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). If eye irritation persists: Get medical attention. Wash contaminated clothing before reuse.

Store locked up.

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

Safety Data Sheet

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

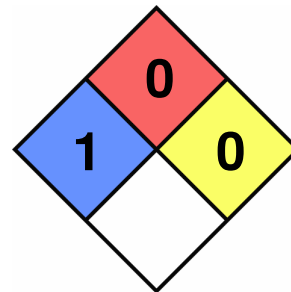
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

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



16.4. Document Revision

Last Revision Date: 2026-01-08

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.