

## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** VeriSpec® Elan DRC-e Tuning Solution 9  
10 ppm Ba, Be, Ce, Co, In, Mg, Pb, Rh, U

**Product Number:** RV010877

**Other Identifying Product Numbers:** RV010877-100N

#### 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 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:
Acute Toxicity - Inhalation	Category 3	H331	P261, P271, P304+P340, P311, P321, P403+P233, P405, P501
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
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H412	P273, P501

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## 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.
H331	Toxic if inhaled.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
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.
P311	Call a POISON CENTER or physician.
P321	Specific treatment (Wash areas of contact with water.).
P337+P313	If eye irritation persists: Get medical attention.
P363	Wash contaminated clothing 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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## 2.4. 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%
Nitric Acid	HNO <sub>3</sub>	63.01 g/mol	7697-37-2	1.00
Beryllium Nitrate	Be(NO <sub>3</sub> ) <sub>2</sub>	133.02 g/mol	13597-99-4	< 0.1
Magnesium Nitrate	Mg(NO <sub>3</sub> ) <sub>2</sub>	148.31 g/mol	10377-60-3	< 0.1
Cerium (III) Nitrate Hexahydrate	Ce(NO <sub>3</sub> ) <sub>3</sub> ·6H <sub>2</sub> O	326.13 g/mol	10294-41-4	< 0.1
Cobalt (II) Nitrate	Co(NO <sub>3</sub> ) <sub>2</sub>	182.94 g/mol	10141-05-6	< 0.1
Indium (III) Nitrate Hydrate	In(NO <sub>3</sub> ) <sub>3</sub> ·xH <sub>2</sub> O	mol (anhydrous basis)	13465-14-0	< 0.1
Rhodium (III) Chloride	RhCl <sub>3</sub>	209.26 g/mol	10049-07-7	< 0.1
Barium Nitrate	Ba(NO <sub>3</sub> ) <sub>2</sub>	261.33 g/mol	10022-31-8	< 0.1
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	< 0.1
Lead Nitrate	Pb(NO <sub>3</sub> ) <sub>2</sub>	331.20 g/mol	10099-74-8	< 0.1

## 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. Toxic if inhaled.

### 4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.).

## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

Not considered to be a fire or explosion hazard.



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### 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 locked up.

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### SECTION 8: Exposure Controls / Personal Protection

#### 8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Barium Nitrate (10022-31-8)	TLV-TWA	USA	"0.5 mg/m <sup>3</sup> TWA (as Ba)" As Barium soluble compounds [RR-00049-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Barium Nitrate (10022-31-8)	TWA	USA	"0.5 mg/m <sup>3</sup> TWA (regulated under CAS 7440-39-3, as Ba)" As Barium, soluble compounds [RR-00049-7]	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)
Barium Nitrate (10022-31-8)	TWA	USA	0.5 mg/m <sup>3</sup> TWA (regulated under CAS 7440-39-3, as Ba)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Rhodium (III) Chloride (10049-07-7)	TLV-TWA	USA	"1 mg/m <sup>3</sup> TWA (as Rh)" As Rhodium insoluble compounds [RR-00047-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Rhodium (III) Chloride (10049-07-7)	TWA	USA	"0.1 mg/m <sup>3</sup> TWA (as Rh)" As Rhodium, insoluble compounds [RR-00047-5]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Rhodium (III) Chloride (10049-07-7)	TLV-TWA	USA	1 mg/m <sup>3</sup> TWA (as Rh)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Rhodium (III) Chloride (10049-07-7)	TWA	USA	0.1 mg/m <sup>3</sup> TWA (as Rh)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Lead Nitrate (10099-74-8)	PEL	USA	"30 µg/m <sup>3</sup> Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m <sup>3</sup> TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Lead Nitrate (10099-74-8)	TWA	USA	"50 µg/m <sup>3</sup> TWA (as Pb)" As Lead, inorganic compounds [RR-00538-9]	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)" As Lead inorganic compounds [RR-00538-9]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Lead Nitrate (10099-74-8)	PEL	USA	30 µg/m <sup>3</sup> Action Level (See 29 CFR 1910.1025, as Pb); 50 µg/m <sup>3</sup> TWA (as Pb)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
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)	TWA	USA	50 µg/m <sup>3</sup> TWA (as Pb)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Cobalt (II) Nitrate (10141-05-6)	TLV-TWA	USA	"0.02 mg/m <sup>3</sup> TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	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 (inhalable particulate matter, as Co)	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 (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Indium (III) Nitrate Hydrate (13465-14-1)	TLV-TWA	USA	"0.1 mg/m <sup>3</sup> TWA (as In)" As Indium compounds [RR-00600-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Indium (III) Nitrate Hydrate (13465-14-1)	TLV-TWA	USA	"0.1 mg/m <sup>3</sup> TWA (as In)" As Indium compounds [RR-00600-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Indium (III) Nitrate Hydrate (13465-14-1)	TLV-TWA	USA	0.1 mg/m <sup>3</sup> TWA (as In)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Indium (III) Nitrate Hydrate (13465-14-1)	TLV-TWA	USA	"0.1 mg/m <sup>3</sup> TWA (as In)" As Indium compounds [RR-00600-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	"2 µg/m <sup>3</sup> Ceiling (as Be)" As Beryllium compounds [RR-00557-2]	U.S. - OSHA - Final PELs - Ceiling Limits
Beryllium Nitrate (13597-99-4)	TWA	USA	"0.2 µg/m <sup>3</sup> TWA (as Be)" As Beryllium compounds [RR-00557-2]	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 particulate matter, as Be)" As Beryllium compounds [RR-00557-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	2 µg/m <sup>3</sup> Ceiling (as Be)	U.S. - OSHA - Final PELs - Ceiling Limits
Beryllium Nitrate (13597-99-4)	TLV-TWA	USA	0.00005 mg/m <sup>3</sup> TWA (inhalable particulate matter, as Be)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	TWA	USA	0.2 µg/m <sup>3</sup> TWA (as Be)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	"2 µg/m <sup>3</sup> Ceiling (as Be)" As Beryllium compounds [RR-00557-2]	U.S. - OSHA - Final PELs - Ceiling Limits
Beryllium Nitrate (13597-99-4)	TWA	USA	"0.2 µg/m <sup>3</sup> TWA (as Be)" As Beryllium compounds [RR-00557-2]	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 particulate matter, as Be)" As Beryllium compounds [RR-00557-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	TLV-TWA	USA	"0.00005 mg/m <sup>3</sup> TWA (inhalable particulate matter, as Be)" As Beryllium compounds [RR-00557-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	TWA	USA	"0.2 µg/m <sup>3</sup> TWA (as Be)" As Beryllium compounds [RR-00557-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	"2 µg/m <sup>3</sup> Ceiling (as Be)" As Beryllium compounds [RR-00557-2]	U.S. - OSHA - Final PELs - Ceiling Limits
Beryllium Nitrate (13597-99-4)	TWA	USA	"0.2 µg/m <sup>3</sup> TWA (as Be)" As Beryllium compounds [RR-00557-2]	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 particulate matter, as Be)" As Beryllium compounds [RR-00557-2]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Beryllium Nitrate (13597-99-4)	PEL-Ceiling	USA	"2 µg/m <sup>3</sup> Ceiling (as Be)" As Beryllium compounds [RR-00557-2]	U.S. - OSHA - Final PELs - Ceiling Limits
Uranyl Acetate Dihydrate (6159-44-0)	TLV-TWA	USA	"0.2 mg/m <sup>3</sup> TWA (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Uranyl Acetate Dihydrate (6159-44-0)	TLV-STEL	USA	"0.6 mg/m <sup>3</sup> STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Uranyl Acetate Dihydrate (6159-44-0)	TWA	USA	"0.05 mg/m <sup>3</sup> TWA (as U)" As Uranium, soluble compounds [RR-00044-2]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Uranyl Acetate Dihydrate (6159-44-0)	TWA	USA	"0.05 mg/m <sup>3</sup> TWA (as U)" As Uranium, soluble compounds [RR-00044-2]; "0.25 mg/m <sup>3</sup> TWA (as U)" As Uranium, insoluble compounds [RR-00045-3]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Uranyl Acetate Dihydrate (6159-44-0)	TLV-TWA	USA	"0.2 mg/m <sup>3</sup> TWA (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Uranyl Acetate Dihydrate (6159-44-0)	TLV-STEL	USA	"0.6 mg/m <sup>3</sup> STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	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)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Uranyl Acetate Dihydrate (6159-44-0)	TLV-STEL	USA	"0.6 mg/m <sup>3</sup> STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
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)	TLV-STEL	USA	"0.6 mg/m <sup>3</sup> STEL (as U)" As Uranium soluble and insoluble compounds [RR-00617-7]	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)" As Uranium soluble and insoluble compounds [RR-00617-7]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
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)



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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)
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)
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-TWA	USA	2 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Nitric Acid (7697-37-2)	TLV-STEL	USA	4 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

### 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:** 1.06

**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.

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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 fumes, mist, vapors, or spray. 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.). 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 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.). 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.

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

Not applicable.

**Aspiration Hazard:**

Not applicable.

**Additional Toxicology Information:**

Data not available.

### SECTION 12: Ecological Information

#### 12.1. Ecotoxicity

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

#### 12.2. Persistence and Degradability

Data not available.

#### 12.3. Bioaccumulative Potential

Data not available.

#### 12.4. Mobility in Soil

Data not available.

#### 12.5. Other Adverse Ecological Effects

Data not available.

### SECTION 13: Disposal Considerations

#### 13.1. Waste Treatment Methods

Data not available.



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### **SECTION 14: Transportation Information**

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

Not regulated according to DOT Regulations.

#### **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.

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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)" As Lead, inorganic compounds [RR-00538-9]

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)

### 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

Lead Nitrate (CAS # 10099-74-8): 10 lb final RQ; 4.54 kg final RQ

Beryllium Nitrate (CAS # 13597-99-4): 1 lb final RQ; 0.454 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

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

Barium Nitrate (CAS # 10022-31-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)" As Barium compounds [RR-00555-0];

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

Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (includes any unique chemical substance that contains Barium as part of that chemical's infrastructure except for Barium sulfate CAS 7727-43-7, listed under Chemical Category N040)

Barium Nitrate (CAS # 10022-31-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

Lead Nitrate (CAS # 10099-74-8): "0.1 % Supplier notification limit (includes any unique chemical substance that contains Lead as part of that chemical's infrastructure, listed under Chemical Category N420)" As Inorganic lead compounds [RR-00538-9];

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

Lead Nitrate (CAS # 10099-74-8): "100 lb RT" As Lead compounds [RR-00630-4]

Lead Nitrate (CAS # 10099-74-8): 0.1 % Supplier notification limit (includes any unique chemical substance that contains Lead as part of that chemical's infrastructure, listed under Chemical Category N420)

Lead Nitrate (CAS # 10099-74-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, listed under Chemical Category N511)

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

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

Barium Nitrate (CAS # 10022-31-8): Present  
Rhodium (III) Chloride (CAS # 10049-07-7): Present  
Lead Nitrate (CAS # 10099-74-8): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present  
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous

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

Barium Nitrate (CAS # 10022-31-8): "Environmental hazard" As Barium compounds [RR-00555-0]  
Barium Nitrate (CAS # 10022-31-8): "Present" As Barium compounds [RR-00555-0]  
Barium Nitrate (CAS # 10022-31-8): Environmental hazard  
Barium Nitrate (CAS # 10022-31-8): Present  
Lead Nitrate (CAS # 10099-74-8): "Environmental hazard" As Lead compounds [RR-00630-4]  
Lead Nitrate (CAS # 10099-74-8): "Present" As Lead compounds [RR-00630-4]  
Lead Nitrate (CAS # 10099-74-8): Environmental hazard  
Lead Nitrate (CAS # 10099-74-8): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): "Environmental hazard" As Cobalt compounds [RR-00107-0]  
Cobalt (II) Nitrate (CAS # 10141-05-6): "Present" As Cobalt compounds [RR-00107-0]  
Cobalt (II) Nitrate (CAS # 10141-05-6): Environmental hazard  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Beryllium Nitrate (CAS # 13597-99-4): "Environmental hazard" As Beryllium compounds [RR-00557-2]  
Beryllium Nitrate (CAS # 13597-99-4): "Present" As Beryllium compounds [RR-00557-2]  
Beryllium Nitrate (CAS # 13597-99-4): Environmental hazard  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Environmental hazard  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present  
Nitric Acid (CAS # 7697-37-2): Environmental hazard  
Nitric Acid (CAS # 7697-37-2): Present

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

Barium Nitrate (CAS # 10022-31-8): "SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "SN 2146 500 lb TPQ (except Barium sulfate CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Barium compounds [RR-00555-0];

"SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Barium Nitrate (CAS # 10022-31-8): "sn 2146" As Barium compounds [RR-00555-0]

Barium Nitrate (CAS # 10022-31-8): "SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

Barium Nitrate (CAS # 10022-31-8): "sn 3722" As Nitrate compounds [RR-01770-9]

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 CAS number 7727-43-7, Category Code N040. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Barium Nitrate (CAS # 10022-31-8): sn 3722

Barium Nitrate (CAS # 10022-31-8): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Lead Nitrate (CAS # 10099-74-8): "carcinogen" As Lead compounds [RR-00630-4]

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)" As Lead compounds [RR-00630-4]

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)" As Lead compounds [RR-00630-4];

"SN 3722 500 lb TPQ (water dissociable, Category Code N511)" As Nitrate compounds [RR-01770-9]

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

### 15.8. California Proposition 65

Lead Nitrate (CAS # 10099-74-8): "carcinogen, 10/1/1992" As Lead compounds [RR-00630-4]

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

Beryllium Nitrate (CAS # 13597-99-4): "carcinogen, 10/1/1987" As Beryllium compounds [RR-00557-2]

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

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

Barium Nitrate (CAS # 10022-31-8): Present (DSL)

Rhodium (III) Chloride (CAS # 10049-07-7): Present (DSL)

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

Cobalt (II) Nitrate (CAS # 10141-05-6): Present (DSL)

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

Magnesium Nitrate (CAS # 10377-60-3): Present (DSL)

Indium (III) Nitrate Hydrate (CAS # 13465-14-0): Present (NDSL)

Beryllium Nitrate (CAS # 13597-99-4): Present (NDSL)

Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present (DSL)

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



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### 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.

Barium Nitrate (CAS # 10022-31-8): Present (ACTIVE)  
Rhodium (III) Chloride (CAS # 10049-07-7): Present (ACTIVE)  
Lead Nitrate (CAS # 10099-74-8): Present (ACTIVE)  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present (ACTIVE)  
Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): Present (ACTIVE)  
Magnesium Nitrate (CAS # 10377-60-3): Present (ACTIVE)  
Indium (III) Nitrate Hydrate (CAS # 13465-14-0): Present (ACTIVE)  
Beryllium Nitrate (CAS # 13597-99-4): Present (ACTIVE)  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): Present (ACTIVE)  
Nitric Acid (CAS # 7697-37-2): Present (ACTIVE)

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

Barium Nitrate (CAS # 10022-31-8): 233-020-5  
Rhodium (III) Chloride (CAS # 10049-07-7): 233-165-4  
Lead Nitrate (CAS # 10099-74-8): 233-245-9  
Cobalt (II) Nitrate (CAS # 10141-05-6): 233-402-1  
Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): 233-297-2  
Magnesium Nitrate (CAS # 10377-60-3): 233-826-7  
Indium (III) Nitrate Hydrate (CAS # 13465-14-0): 237-393-5  
Beryllium Nitrate (CAS # 13597-99-4): 237-062-5  
Uranyl Acetate Dihydrate (CAS # 6159-44-0): 208-767-5  
Nitric Acid (CAS # 7697-37-2): 231-714-2

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## 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. Toxic if inhaled. Harmful to aquatic life with long lasting effects.

Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Use only outdoors or in a well-ventilated area. 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.). If eye irritation persists: Get medical attention. Wash contaminated clothing 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.

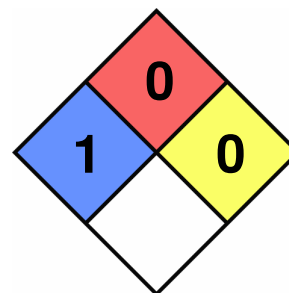
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

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

**Biohazardous Infectious Materials Hazard Class:** Not Applicable.

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

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



### 16.4. Document Revision

**Last Revision Date:** 2023-11-13

## 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.