



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** VeriSpec® Elan DRC Plus Tuning Solution II

10 ppb: Ba; 1 ppb: Be, Ce, Co, In, Fe, Pb, Mg, Th, U , Manufactured and Tested in an ISO 17025/Guide

**Product Number:** RV010878

**Other Identifying Product Numbers:** RV010878-100N, RV010878-500N

#### 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.*

This product is not categorized as hazardous in any GHS hazard class.

#### 2.2. GHS Label Elements

**Pictograms:** None required.

**Signal Word:** None required.

**Hazard Statements:** None required.

**Precautionary Statements:** None required.



## Safety Data Sheet

### 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%
Nitric Acid	$\text{HNO}_3$	63.01 g/mol	7697-37-2	0.50%
Thorium Nitrate	$\text{Th}(\text{NO}_3)_4$	712.09 g/mol	13823-29-5	0.00%
Beryllium Nitrate	$\text{Be}(\text{NO}_3)_2$	133.02 g/mol	13597-99-4	0.00%
Indium (III) Nitrate Hydrate	$\text{In}(\text{NO}_3)_3 \cdot x\text{H}_2\text{O}$	300.83 g/mol (anhydrous basis)	13465-14-0	0.00%
Ferric Nitrate	$\text{Fe}(\text{NO}_3)_3$	241.85 g/mol	10421-48-4	0.00%
Magnesium Nitrate	$\text{Mg}(\text{NO}_3)_2$	148.31 g/mol	10377-60-3	0.00%
Cerium (III) Nitrate Hexahydrate	$\text{Ce}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$	326.13 g/mol	10294-41-4	0.00%
Cobalt (II) Nitrate	$\text{Co}(\text{NO}_3)_2$	182.94 g/mol	10141-05-6	0.00%
Lead Nitrate	$\text{Pb}(\text{NO}_3)_2$	331.20 g/mol	10099-74-8	0.00%
Barium Nitrate	$\text{Ba}(\text{NO}_3)_2$	261.33 g/mol	10022-31-8	0.00%

## SECTION 4: First-Aid Measures

### 4.1. General First Aid Information

**Eye Contact:** No action required to be taken. If necessary, rinse eyes with water.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** No action required to be taken. If necessary, wash areas of contact with 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

Not expected to require special treatment.



## Safety Data Sheet

### 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 appropriate PPE for the size and nature of the spill. As a general rule, wear safety glasses and gloves.

#### 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

Protect from freezing and physical damage.

### SECTION 8: Exposure Controls / Personal Protection

#### 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:** No specific controls are needed.

**Eye Protection:** No specific controls are needed.

#### 8.3. Personal Protective Equipment

As a general rule, wear safety glasses and gloves.



## 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:** 1.07

**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.



## 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:**

Not applicable.

**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.

**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.



## Safety Data Sheet

### 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

Not regulated according to IATA Regulations.

### 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)

#### 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

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

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 (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)

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

Cobalt (II) Nitrate (CAS # 10141-05-6): 0.1 % de minimis concentration (listed under Chemical Category N096)

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

Ferric Nitrate (CAS # 10421-48-4): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)

Beryllium Nitrate (CAS # 13597-99-4): 0.1 % de minimis concentration (listed under Chemical Category N050)

Thorium Nitrate (CAS # 13823-29-5): 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



## Safety Data Sheet

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

Barium Nitrate (CAS # 10022-31-8): 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  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Thorium Nitrate (CAS # 13823-29-5): 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  
Barium Nitrate (CAS # 10022-31-8): 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  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Ferric Nitrate (CAS # 10421-48-4): Environmental hazard  
Ferric Nitrate (CAS # 10421-48-4): Present  
Beryllium Nitrate (CAS # 13597-99-4): Environmental hazard  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Thorium Nitrate (CAS # 13823-29-5): Present  
Nitric Acid (CAS # 7697-37-2): Environmental hazard  
Nitric Acid (CAS # 7697-37-2): Present





## Safety Data Sheet

### 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)

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)

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)

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)

Magnesium Nitrate (CAS # 10377-60-3): sn 1143

Magnesium Nitrate (CAS # 10377-60-3): sn 3722

Magnesium Nitrate (CAS # 10377-60-3): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Ferric Nitrate (CAS # 10421-48-4): sn 0924

Ferric Nitrate (CAS # 10421-48-4): sn 3722

Ferric Nitrate (CAS # 10421-48-4): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

Beryllium Nitrate (CAS # 13597-99-4): carcinogen

Beryllium Nitrate (CAS # 13597-99-4): sn 0225

Beryllium Nitrate (CAS # 13597-99-4): sn 2163

Beryllium Nitrate (CAS # 13597-99-4): SN 2163 500 lb TPQ (Category Code N050)

Beryllium Nitrate (CAS # 13597-99-4): sn 3722

Beryllium Nitrate (CAS # 13597-99-4): SN 3722 500 lb

### 15.8. California Proposition 65

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

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



## Safety Data Sheet

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

Barium Nitrate (CAS # 10022-31-8): 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)  
Ferric Nitrate (CAS # 10421-48-4): Present (DSL)  
Beryllium Nitrate (CAS # 13597-99-4): Present (NDSL)  
Thorium Nitrate (CAS # 13823-29-5): Present (DSL)  
Nitric Acid (CAS # 7697-37-2): Present (DSL)

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

Barium Nitrate (CAS # 10022-31-8): Present  
Lead Nitrate (CAS # 10099-74-8): Present  
Cobalt (II) Nitrate (CAS # 10141-05-6): Present  
Cerium (III) Nitrate Hexahydrate (CAS # 10294-41-4): Present  
Magnesium Nitrate (CAS # 10377-60-3): Present  
Ferric Nitrate (CAS # 10421-48-4): Present  
Beryllium Nitrate (CAS # 13597-99-4): Present  
Thorium Nitrate (CAS # 13823-29-5): Present  
Nitric Acid (CAS # 7697-37-2): 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

### 16.2. Miscellaneous Hazard Classes

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

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

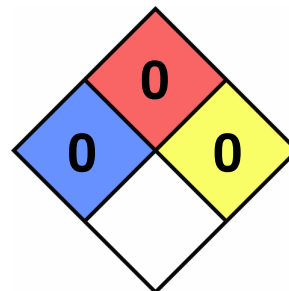
**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.  
Not Applicable.



## Safety Data Sheet

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

Health: 0  
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.