RICCA CHEMICAL COMPANY®

Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: VeriSpec® QC Standard 7A
1000 ppm K, 500 ppm Si; 100 ppm Al, B, Ba, Na , Manufactured and Tested in an ISO 17025/Guide 34 Fac

Product Number: RV010774

Other Identifying Product Numbers: RV010774-100N

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
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501

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.
H401	Toxic to aquatic life.

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.
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.
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_3	63.01 g/mol	7697-37-2	5.00%
Water	H_2O	18.01 g/mol	7732-18-5	0.95%
Ammonium Hexafluorosilicate (IV)	$(NH_4)_2SiF_6$	178.15 g/mol	16919-19-0	0.32%
Potassium Nitrate	KNO_3	101.10 g/mol	7757-79-1	0.26%
Hydrofluoric Acid	HF	20.00 g/mol	7664-39-3	0.20%
Aluminum Nitrate	$Al(NO_3)_3$	212.99 g/mol	13473-90-0	0.14%
Boric Acid	H_3BO_3	61.83 g/mol	10043-35-3	0.06%
Sodium Nitrate	$NaNO_3$	84.99 g/mol	7631-99-4	0.04%
Barium Nitrate	$Ba(NO_3)_2$	261.33 g/mol	10022-31-8	0.02%
Silver Nitrate	$AgNO_3$	169.87 g/mol	7761-88-8	0.01%

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.

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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 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
Ammonium Hexafluorosilicate (IV) (16919-19-0)	TWA	USA	2.5 mg/m³ TWA (as F) 2.5 mg/m³ TWA (dust)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ammonium Hexafluorosilicate (IV) (16919-19-0)	TLV-TWA	USA	2.5 mg/m³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Barium Nitrate (10022-31-8)	TWA	USA	0.5 mg/m³ TWA (as Ba)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Barium Nitrate (10022-31-8)	TLV-TWA	USA	0.5 mg/m³ TWA (as Ba)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Boric Acid (10043-35-3)	TLV-STEL	USA	6 mg/m³ STEL (inhalable fraction, listed under Borate compounds, inorganic)	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Boric Acid (10043-35-3)	TLV-STEL	USA	6 mg/m³ STEL (inhalable fraction)	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Boric Acid (10043-35-3)	TLV-TWA	USA	2 mg/m³ TWA (inhalable fraction)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Boric Acid (10043-35-3)	TLV-TWA	USA	2 mg/m³ TWA (inhalable fraction, listed under Borate compounds, inorganic)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TWA	USA	3 ppm TWA (as F)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TWA	USA	2.5 mg/m³ TWA (as F) 2.5 mg/m³ TWA (dust)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Hydrofluoric Acid (7664-39-3)	TLV-Ceiling	USA	2 ppm Ceiling (as F)	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	2.5 mg/m³ TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrofluoric Acid (7664-39-3)	TLV-TWA	USA	0.5 ppm TWA (as F)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
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)
Silver Nitrate (7761-88-8)	TWA	USA	0.01 mg/m³ TWA (as Ag)	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Silver Nitrate (7761-88-8)	TLV-TWA	USA	0.01 mg/m³ TWA (as Ag)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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: 1.07

Solubility: Data not available.

Partition Coeffieient (n-Octanol/Water): Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

ExplosiveProperties: 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.

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

Toxic to aquatic life. 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)

Sizes: 100 mL
UN Number: UN3264
Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (Nitric Acid, Hydrofluoric 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, Hydrofluoric Acid)
Hazard Class: 8
Packing Group: II
Hazard Placard Labels:

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

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15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Hydrofluoric Acid (CAS # 7664-39-3): 100 lb EPCRA RQ
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb TPQ
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

Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): 1000 lb final RQ; 454 kg final RQ
Hydrofluoric Acid (CAS # 7664-39-3): 100 lb final RQ; 45.4 kg final RQ
Nitric Acid (CAS # 7697-37-2): 1000 lb final RQ; 454 kg final RQ
Silver Nitrate (CAS # 7761-88-8): 1 lb final RQ; 0.454 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)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): 1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)
Sodium Nitrate (CAS # 7631-99-4): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)
Hydrofluoric Acid (CAS # 7664-39-3): 1.0 % de minimis concentration
Nitric Acid (CAS # 7697-37-2): 1.0 % de minimis concentration
Potassium Nitrate (CAS # 7757-79-1): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)
Silver Nitrate (CAS # 7761-88-8): 1.0 % de minimis concentration (listed under Chemical Category N740)
Silver Nitrate (CAS # 7761-88-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)

15.5. Massachusetts Right-to-Know Substance List

Barium Nitrate (CAS # 10022-31-8): Present
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present
Sodium Nitrate (CAS # 7631-99-4): Present
Hydrofluoric Acid (CAS # 7664-39-3): Extraordinarily hazardous
Nitric Acid (CAS # 7697-37-2): Extraordinarily hazardous
Potassium Nitrate (CAS # 7757-79-1): Present
Silver Nitrate (CAS # 7761-88-8): Present

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Barium Nitrate (CAS # 10022-31-8): Environmental hazard
Barium Nitrate (CAS # 10022-31-8): Present
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Environmental hazard
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present
Sodium Nitrate (CAS # 7631-99-4): Present
Hydrofluoric Acid (CAS # 7664-39-3): Environmental hazard
Hydrofluoric Acid (CAS # 7664-39-3): Present
Nitric Acid (CAS # 7697-37-2): Environmental hazard
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): Present
Potassium Nitrate (CAS # 7757-79-1): Present
Silver Nitrate (CAS # 7761-88-8): Environmental hazard
Silver Nitrate (CAS # 7761-88-8): Present

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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)
Boric Acid (CAS # 10043-35-3): sn 0240
Aluminum Nitrate (CAS # 13473-90-0): sn 0061
Aluminum Nitrate (CAS # 13473-90-0): sn 3722
Aluminum Nitrate (CAS # 13473-90-0): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): sn 0101
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): sn 0936
Sodium Nitrate (CAS # 7631-99-4): sn 3722
Sodium Nitrate (CAS # 7631-99-4): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Hydrofluoric Acid (CAS # 7664-39-3): corrosive
Hydrofluoric Acid (CAS # 7664-39-3): sn 0936
Hydrofluoric Acid (CAS # 7664-39-3): sn 3759
Hydrofluoric Acid (CAS # 7664-39-3): SN 3759 100 lb TPQ; SN 1014 500 lb TPQ (Hydrogen fluoride gas only)
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)
Potassium Nitrate (CAS # 7757-79-1): sn 1574
Potassium Nitrate (CAS # 7757-79-1): sn 3722
Potassium Nitrate (CAS # 7757-79-1): SN 3722 500 lb TPQ (water dissociable, Category Code N511)
Silver Nitrate (CAS # 7761-88-8): corrosive
Silver Nitrate (CAS # 7761-88-8): sn 1672
Silver Nitrate (CAS # 7761-88-8): sn 3008
Silver Nitrate (CAS # 7761-88-8): SN 3008 500 lb TPQ (Category Code N740. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Silver Nitrate (CAS # 7761-88-8): sn 3722
Silver Nitrate (CAS # 7761-88-8): SN 3722 500 lb TPQ (water dissociable, Category Code N511)

15.8. California Proposition 65

Not listed.

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

Barium Nitrate (CAS # 10022-31-8): Present (DSL)
Boric Acid (CAS # 10043-35-3): Present (DSL)
Aluminum Nitrate (CAS # 13473-90-0): Present (DSL)
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present (DSL)
Sodium Nitrate (CAS # 7631-99-4): Present (DSL)
Hydrofluoric Acid (CAS # 7664-39-3): Present (DSL)
Nitric Acid (CAS # 7697-37-2): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Potassium Nitrate (CAS # 7757-79-1): Present (DSL)
Silver Nitrate (CAS # 7761-88-8): Present (DSL)

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

Barium Nitrate (CAS # 10022-31-8): Present
Boric Acid (CAS # 10043-35-3): Present
Aluminum Nitrate (CAS # 13473-90-0): Present
Ammonium Hexafluorosilicate (IV) (CAS # 16919-19-0): Present
Sodium Nitrate (CAS # 7631-99-4): Present
Hydrofluoric Acid (CAS # 7664-39-3): Present [T]
Nitric Acid (CAS # 7697-37-2): Present
Water (CAS # 7732-18-5): Present
Potassium Nitrate (CAS # 7757-79-1): Present
Silver Nitrate (CAS # 7761-88-8): 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.

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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. Toxic to aquatic life.

Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. 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 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.

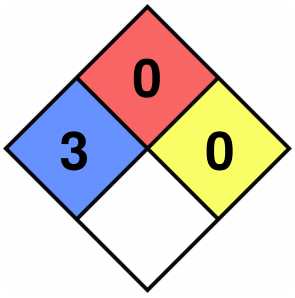
Dispose of contents in accordance with local, state, federal and international regulations.

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:



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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.