



## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** HydroSpec<sup>®</sup> Water Standard 10.0 mg/g  
Standard for Volumetric Karl Fischer Titration

**Product Number:** RK430000

**Other Identifying Product Numbers:** RK430000-10x5R, RK430000-5R

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 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

# Safety Data Sheet

## 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 2	H315	P264, P280, P302+P352, P321, P332+P313, P362
Eye Damage / Irritation	Category 2	H319	P264, P280, P305+P351+P338, P337+P313
Carcinogenicity	Category 2	H351	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Aspiration Hazard	Category 1	H304	P301+P310, P331, P405, P501
Flammable Liquids	Category 3	H226	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501

### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.

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**Precautionary Statements:**

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash arms, hands and face thoroughly after handling.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical attention.
P321	Specific treatment (Wash areas of contact with water.).
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P362	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
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.

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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%
1-Butanol	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> OH	74.12 g/mol	71-36-3	50.00
Xylene	C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	106.16 g/mol	1330-20-7	40.00
Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	106.16 g/mol	100-41-4	5.00
Formamide	HCONH <sub>2</sub>	45.04 g/mol	75-12-7	4.00
Water	H <sub>2</sub> O	18.01 g/mol	7732-18-5	1.00

## 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. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

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

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May result in drying and cracking, which can lead to secondary infections and dermatitis.

**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician immediately.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May damage fertility or the unborn child. Flammable liquid. Harmful or fatal if swallowed. Contact may cause dryness and cracking of the skin. May cause irritation of the respiratory system. Causes irritation to the eyes. If ingested, give large quantity of water. Do not induce vomiting (aspiration of vomitus can cause serious damage to lung tissue). Call a physician. Wash areas of contact with water. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: May result in drying and cracking, which can lead to secondary infections and dermatitis.

### 4.3. Medical Attention or Special Treatment Needed

Specific treatment (Wash areas of contact with water.). Irrigate immediately with large quantity of water for at least 15 minutes. Do not allow victim to keep eyes tightly shut. Call a physician. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Observe 48 hours for lung effects. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician immediately.



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### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Use water spray, dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Water spray can be used to dilute spills to non-flammable mixtures.

#### 5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Flammable liquid. Vapors are heavier than air and may travel to a source of ignition and flash back. Liquid floats on water and may travel to a source of ignition and spread fire. Combustion may produce irritants and toxic gases.

#### 5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and positive pressure self-contained breathing apparatus. Polyvinyl alcohol or Viton barrier recommended.

### SECTION 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

#### 6.2. Cleanup and Containment Methods and Materials

Eliminate all ignition sources. Stop or control the leak, if this can be done without undue risk. Use appropriate foam to blanket release and suppress vapors. Control runoff and isolate discharged material for proper disposal.

### SECTION 7: Handling and Storage

#### 7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

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### SECTION 8: Exposure Controls / Personal Protection

#### 8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Ethylbenzene (100-41-4)	TWA	USA	100 ppm TWA; 435 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Ethylbenzene (100-41-4)	TLV-TWA	USA	20 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Xylene (1330-20-7)	TWA	USA	100 ppm TWA; 435 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Xylene (1330-20-7)	TLV-TWA	USA	20 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
1-Butanol (71-36-3)	TLV-TWA	USA	20 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
1-Butanol (71-36-3)	TWA	USA	100 ppm TWA; 300 mg/m <sup>3</sup> TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Formamide (75-12-7)	TLV-TWA	USA	1 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

#### 8.2. Exposure Controls

**Engineering Controls:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

**Respiratory Protection:** If the exposure limit is exceeded, a full facepiece respirator equipped with organic vapor cartridge should be worn.

**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

#### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. If the exposure limit is exceeded, a full facepiece respirator equipped with organic vapor cartridge should be worn. Chemical resistant gloves. Safety glasses or goggles.



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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Clear, colorless liquid

**Physical State:** Liquid

**Odor:** Xylenes

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** -76°C estimated

**Initial Boiling Point/Range:** 115°C - 140°C

**Flash Point:** 26°C

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** 9.18 hPa estimated

**Vapor Density:** Data not available.

**Relative Density:** 0.85

**Solubility:** Data not available.

**Partition Coefficient:** Data not available.

**Auto-Ignition Temperature:** 753°F (401°C) estimated

**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

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Strong oxidizers (chlorine, bromine, fluorine), heat, sparks, open flame. Will attack some forms of plastics, rubber and coatings.

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### 10.4. Hazardous Decomposition Products

Will not occur.

## 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:

LD50, Oral, Rat: (Xylene) 4300 mg/kg, liver and kidney effects cited. LD50, Dermal, Rabbit: (Xylene) >1700 mg/kg, LC50, Inhalation, Rat: (Xylene) 5000 ppm/4H, details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: (Ethylbenzene) 3500 mg/kg. LD50, Oral, Rat: (n-Butyl Alcohol) 790 mg/kg. LD50, Oral, Rat: (Formamide) 6 g/kg.

#### 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.). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

#### 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:

Suspected of causing cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

#### Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.





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

Not applicable.

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

Not applicable.

**Aspiration Hazard:**

May be fatal if swallowed and enters airways. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**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.



## Safety Data Sheet

### SECTION 14: Transportation Information

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

**Sizes:** 5 mL, 50 mL

**UN Number:** UN1993

**Proper Shipping Name:** Flammable liquid, n.o.s. (Xylenes, n-Butyl Alcohol)

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



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

**Sizes:** 5 mL, 50 mL

**UN Number:** UN1993

**Proper Shipping Name:** Flammable liquid, n.o.s. (Xylenes, n-Butyl Alcohol)

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



#### 14.3 Transportation of Dangerous Goods (TDG, Canada)

**Sizes:** 5 mL, 50 mL

**UN Number:** UN1993

**Proper Shipping Name:** FLAMMABLE LIQUID, N.O.S. (xylenes, n-butyl alcohol)

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



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### 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

Not listed.

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

Ethylbenzene (CAS # 100-41-4): 1000 lb final RQ; 454 kg final RQ

Xylene (CAS # 1330-20-7): 100 lb final RQ; 45.4 kg final RQ

1-Butanol (CAS # 71-36-3): 5000 lb final RQ; 2270 kg final RQ

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

Ethylbenzene (CAS # 100-41-4): 0.1 % de minimis concentration

Xylene (CAS # 1330-20-7): 1.0 % de minimis concentration

1-Butanol (CAS # 71-36-3): "100 lb RT" As Lead compounds [RR-00630-4]

1-Butanol (CAS # 71-36-3): 1.0 % de minimis concentration

Formamide (CAS # 75-12-7): 1.0 % de minimis concentration

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

Ethylbenzene (CAS # 100-41-4): Present

Xylene (CAS # 1330-20-7): Present

1-Butanol (CAS # 71-36-3): Present

Formamide (CAS # 75-12-7): Present

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

Ethylbenzene (CAS # 100-41-4): Environmental hazard

Ethylbenzene (CAS # 100-41-4): Present

Xylene (CAS # 1330-20-7): Environmental hazard

Xylene (CAS # 1330-20-7): Present

1-Butanol (CAS # 71-36-3): "Environmental hazard" As Lead compounds [RR-00630-4]

1-Butanol (CAS # 71-36-3): "Present" As Lead compounds [RR-00630-4]

1-Butanol (CAS # 71-36-3): Environmental hazard

1-Butanol (CAS # 71-36-3): Present

Formamide (CAS # 75-12-7): Present

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

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

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

Ethylbenzene (CAS # 100-41-4): carcinogen; flammable - third degree

Ethylbenzene (CAS # 100-41-4): sn 0851

Ethylbenzene (CAS # 100-41-4): SN 0851 500 lb TPQ

Xylene (CAS # 1330-20-7): flammable - third degree

Xylene (CAS # 1330-20-7): sn 2014

Xylene (CAS # 1330-20-7): SN 2014 500 lb TPQ

1-Butanol (CAS # 71-36-3): "carcinogen" As Lead compounds [RR-00630-4]

1-Butanol (CAS # 71-36-3): "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]

1-Butanol (CAS # 71-36-3): "sn 2266" As Lead compounds [RR-00630-4]

1-Butanol (CAS # 71-36-3): flammable - third degree

1-Butanol (CAS # 71-36-3): sn 1330

1-Butanol (CAS # 71-36-3): SN 1330 500 lb TPQ

Formamide (CAS # 75-12-7): sn 0947

### 15.8. California Proposition 65

Ethylbenzene (CAS # 100-41-4): 54 µg/day NSRL (inhalation); 41 µg/day NSRL (oral)

Ethylbenzene (CAS # 100-41-4): carcinogen, 6/11/2004

1-Butanol (CAS # 71-36-3): "carcinogen, 10/1/1992" As Lead compounds [RR-00630-4]

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

Ethylbenzene (CAS # 100-41-4): Present (DSL)

Xylene (CAS # 1330-20-7): Present (DSL)

1-Butanol (CAS # 71-36-3): Present (DSL)

Formamide (CAS # 75-12-7): Present (DSL)

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

### 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.**

Ethylbenzene (CAS # 100-41-4): Present (ACTIVE)

Xylene (CAS # 1330-20-7): Present (ACTIVE)

1-Butanol (CAS # 71-36-3): Present (ACTIVE)

Formamide (CAS # 75-12-7): Present (ACTIVE)

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

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

Ethylbenzene (CAS # 100-41-4): 202-849-4

Ethylbenzene (CAS # 100-41-4): 292-694-9

Ethylbenzene (CAS # 100-41-4): 292-695-4

Ethylbenzene (CAS # 100-41-4): 297-401-8

Xylene (CAS # 1330-20-7): 215-535-7

1-Butanol (CAS # 71-36-3): 200-751-6

Formamide (CAS # 75-12-7): 200-842-0

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

## SECTION 16: Other Information

### 16.1. Full Text of Hazard Statements and Precautionary Statements

Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Suspected of causing cancer. May damage fertility or the unborn child.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Specific treatment (Wash areas of contact with water.). Do NOT induce vomiting. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Store in a well-ventilated place. Keep cool. 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.

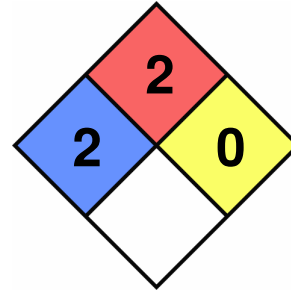
**Biohazardous Infectious Materials Hazard Class:** Not Applicable.



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

Health: 2  
Flammability: 2  
Reactivity: 0  
Special Hazard:



### 16.4. Document Revision

Last Revision Date: 2023-09-11

## 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.