



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Pineapple (Natural)

Product Number: RCCT1001

Other Identifying Product Numbers: RCCT1001-100C6, RCCT1001-20C6, RCCT1001-750C6

1.2. Recommended Use and Restrictions on Use

Concentrated flavor and fragrance ingredient suitable for use in food products according to FDA GRAS guidelines

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

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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 - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
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
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, 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
Hazardous to the Aquatic Environment (Acute)	Category 1	H400	P273, P391, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H412	P273, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
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.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
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.
P321	Specific treatment (Wash areas of contact with water.).
P330	Rinse mouth.
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.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P391	Collect spillage.
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%
Limonene	C ₁₀ H ₁₆	136.23 g/mol	5989-27-5	80 - 100
Allyl caproate	C ₉ H ₁₆ O ₂	156.22 g/mol	123-68-2	5 - 10
Ethyl hexanoate	C ₈ H ₁₆ O ₂	144.21 g/mol	123-66-0	3 - 7
Citral	C ₁₀ H ₁₆ O	152.23 g/mol	5392-40-5	1 - 5
Ethyl butyrate	C ₆ H ₁₂ O ₂	116.15 g/mol	105-54-4	1 - 5
Grapefruit mercaptan	C ₁₀ H ₁₈ S	170.31 g/mol	71159-90-5	< 0.1

Exact percentage (concentration) of composition has been withheld as a trade secret.

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. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

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 cause skin irritation.

Ingestion: IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Dilute immediately with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: May cause skin irritation. INHALATION: May cause irritation. INGESTION: May cause nausea, diarrhea.

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. Remove to fresh air. G artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Dilute immediately with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Carbon dioxide, dry chemical, alcohol foam, water spray.



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5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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

Remove all sources of ignition. Contain spill. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

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
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	5 ppm TWA (inhalable fraction and vapor)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Citral (5392-40-5)	TLV-TWA	USA	"5 ppm TWA (inhalable fraction and vapor)" As Citral [5392-40-5]	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: Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves, PVA or Nitrile rubber.

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

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn. Chemical resistant gloves, PVA or Nitrile rubber. Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Clear, Colorless to Pale Yellow Liquid

Physical State: Liquid

Odor: Pineapple

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: 0.85

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

May form flammable/explosive vapour-air mixture.

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. Direct sunlight, extremely high or low temperatures, heat, sparks, open flame, strong acids and strong bases.



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10.4. Hazardous Decomposition Products

Carbon oxides may form upon decomposition.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral (calculated): 6294 mg/kg
Contains ingredients with unknown oral toxicity.

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:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water.). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

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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

Very toxic to aquatic life. Avoid release to the environment. Collect spillage. 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)

Sizes: 0.75 K, 1 K, 20 g, 100 g

UN Number: UN2319

Proper Shipping Name: Terpene hydrocarbons, n.o.s.

Hazard Class: 3

Packing Group: III

Hazard Label(s):



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

Sizes: 0.75 K, 1 K, 20 g, 100 g

UN Number: UN2319

Proper Shipping Name: Terpene hydrocarbons, n.o.s.

Hazard Class: 3

Packing Group: III

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 0.75 K, 1 K, 20 g, 100 g

UN Number: UN2319

Proper Shipping Name: TERPENE HYDROCARBONS, N.O.S.

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

Not listed.

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

Not listed.

15.5. Massachusetts Right-to-Know Substance List

Ethyl butyrate (CAS # 105-54-4): "Present" As Ethyl butyrate [105-54-4]

Ethyl butyrate (CAS # 105-54-4): Present

Ethyl hexanoate (CAS # 123-66-0): "Present" As Ethyl caproate [123-66-0]

Ethyl hexanoate (CAS # 123-66-0): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Ethyl butyrate (CAS # 105-54-4): "Present" As Butanoic acid, ethyl ester [105-54-4]

Ethyl butyrate (CAS # 105-54-4): Present

Ethyl hexanoate (CAS # 123-66-0): "Present" As Hexanoic acid, ethyl ester [123-66-0]

Ethyl hexanoate (CAS # 123-66-0): Present

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

Ethyl butyrate (CAS # 105-54-4): "corrosive; flammable - third degree" As Ethyl butyrate [105-54-4]

Ethyl butyrate (CAS # 105-54-4): "sn 0862" As Ethyl butyrate [105-54-4]

Ethyl butyrate (CAS # 105-54-4): corrosive; flammable - third degree

Ethyl butyrate (CAS # 105-54-4): sn 0862

Ethyl hexanoate (CAS # 123-66-0): "sn 0858" As Ethyl caproate [123-66-0]

Ethyl hexanoate (CAS # 123-66-0): sn 0858

Limonene (CAS # 5989-27-5): "sn 0792" As Dipentene [138-86-3]

Limonene (CAS # 5989-27-5): sn 0792

15.8. California Proposition 65

Not listed.

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

Ethyl butyrate (CAS # 105-54-4): "Present" As Ethyl butyrate [105-54-4] (DSL)
Ethyl butyrate (CAS # 105-54-4): Present (DSL)
Ethyl hexanoate (CAS # 123-66-0): "Present" As Ethyl hexanoate [123-66-0] (DSL)
Ethyl hexanoate (CAS # 123-66-0): Present (DSL)
Allyl caproate (CAS # 123-68-2): Present (DSL)
Citral (CAS # 5392-40-5): "Present" As Citral [5392-40-5] (DSL)
Citral (CAS # 5392-40-5): Present (DSL)
Limonene (CAS # 5989-27-5): "Present" As D-Limonene [5989-27-5] (DSL)
Limonene (CAS # 5989-27-5): Present (DSL)
Grapefruit mercaptan (CAS # 71159-90-5): 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.

Ethyl butyrate (CAS # 105-54-4): "Present (ACTIVE)" As Butanoic acid, ethyl ester [105-54-4]
Ethyl butyrate (CAS # 105-54-4): Present (ACTIVE)
Ethyl hexanoate (CAS # 123-66-0): "Present (ACTIVE)" As Hexanoic acid, ethyl ester [123-66-0]
Ethyl hexanoate (CAS # 123-66-0): Present (ACTIVE)
Allyl caproate (CAS # 123-68-2): Present (ACTIVE)
Citral (CAS # 5392-40-5): "Present (ACTIVE)" As 2,6-Octadienal, 3,7-dimethyl- [5392-40-5]
Citral (CAS # 5392-40-5): Present (ACTIVE)
Limonene (CAS # 5989-27-5): "Present (ACTIVE)" As Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)- [5989-27-5]
Limonene (CAS # 5989-27-5): Present (ACTIVE)
Grapefruit mercaptan (CAS # 71159-90-5): Present [PMN] (ACTIVE)

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

Ethyl butyrate (CAS # 105-54-4): "203-306-4" As Ethyl butyrate [105-54-4]
Ethyl butyrate (CAS # 105-54-4): 203-306-4
Ethyl hexanoate (CAS # 123-66-0): "204-640-3" As Ethyl hexanoate [123-66-0]
Ethyl hexanoate (CAS # 123-66-0): 204-640-3
Allyl caproate (CAS # 123-68-2): 204-642-4
Citral (CAS # 5392-40-5): "226-394-6" As Citral [5392-40-5]
Citral (CAS # 5392-40-5): 226-394-6
Limonene (CAS # 5989-27-5): "227-813-5" As (R)-p-Mentha-1,8-diene [5989-27-5]
Limonene (CAS # 5989-27-5): 205-341-0
Limonene (CAS # 5989-27-5): 227-813-5
Grapefruit mercaptan (CAS # 71159-90-5): 275-223-1

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

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. Avoid breathing fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. 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. Specific treatment (Wash areas of contact with water.). Rinse mouth. 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. Collect spillage.

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.

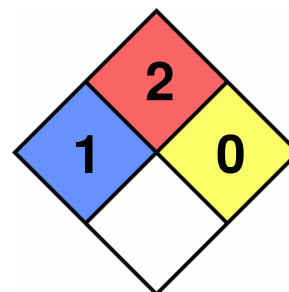
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

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

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 1
Flammability: 2
Reactivity: 0
Special Hazard:





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16.4. Document Revision

Last Revision Date: 2025-01-30

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.