

## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Terpinolene, Natural Isolate

**Product Number:** RCCT9002

**Other Identifying Product Numbers:** RCCT9002-100C6, RCCT9002-20C6, RCCT9002-3C6, RCCT9002-750C6

#### 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

### 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 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 1 | H410              | P273, P391, P501   |

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### 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.         |
| H317          | May cause an allergic skin reaction.                  |
| H400          | Very toxic to aquatic life.                           |
| H410          | Very toxic 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.   |
| 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.                                 |
| 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. |
| P321                 | Specific treatment (Wash areas of contact with water.).                                      |
| P331                 | Do NOT induce vomiting.  |
| P332+P313            | If skin irritation occurs: Get medical attention.  |
| 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.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

| Chemical Name | Formula                         | Molecular Weight | CAS Number | Weight% |
|---------------|---------------------------------|------------------|------------|---------|
| Terpinolene   | C <sub>10</sub> H <sub>16</sub> | 136.23 g/mol     | 586-62-9   | 100.00  |



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### SECTION 4: First-Aid Measures

#### 4.1. General First Aid Information

**Eye Contact:** 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: Immediately call a POISON CENTER or physician. 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

May be fatal if swallowed and enters airways. May cause an allergic skin reaction. 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.

#### 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. Give 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.

#### 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.

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## 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.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1 Control Parameters

| Chemical Name       | Limit Type | Country Exposure Limit | Information Source |
|---------------------|------------|------------------------|--------------------|
| Data not available. |            |                        |                    |

### 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.

**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. Safety glasses or goggles.



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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Colorless to pale yellow liquid

**Physical State:** Liquid

**Odor:** Piney, mild, sweet, citrus

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** Data not available.

**Initial Boiling Point/Range:** 185°C - 185°C

**Flash Point:** 148°F

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

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

**Vapor Pressure:** <2.0 mmHg at 20°C

**Vapor Density:** 4.7

**Relative Density:** 0.87

**Solubility:** Insoluble in water, soluble in alcohol

**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:**

Not applicable.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral (calculated): 4390 mg/kg

**Skin Corrosion and Irritation:**

Not applicable.

**Serious Eye Damage and Irritation:**

Not applicable.

**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.

**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.

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**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. Very toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. 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.

## SECTION 14: Transportation Information

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

**Sizes:** 0.75 K, 3 K, 20 g, 100 g

**UN Number:** UN2541

**Proper Shipping Name:** Terpinolene

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**





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

**Sizes:** 0.75 K, 3 K, 20 g, 100 g

**UN Number:** UN2541

**Proper Shipping Name:** Terpinolene

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



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

**Sizes:** 0.75 K, 3 K, 20 g, 100 g

**UN Number:** UN2541

**Proper Shipping Name:** TERPINOLENE

**Hazard Class:** 3

**Packing Group:** III

**Hazard Label(s):**



## 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

Not listed.

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

Not listed.

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

Terpinolene (CAS # 586-62-9): flammable - third degree

Terpinolene (CAS # 586-62-9): sn 1785

### 15.8. California Proposition 65

Not listed.

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

Terpinolene (CAS # 586-62-9): 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.

Terpinolene (CAS # 586-62-9): Present (ACTIVE)

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

Terpinolene (CAS # 586-62-9): 209-578-0

## 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. May cause an allergic skin reaction. Very toxic 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. 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. Specific treatment (Wash areas of contact with water.). Do NOT induce vomiting. If skin irritation occurs: Get medical attention. Wash contaminated clothing 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.

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### 16.2. Miscellaneous Hazard Classes

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

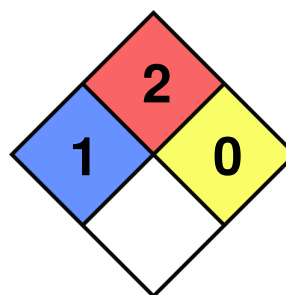
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**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:**



### 16.4. Document Revision

**Last Revision Date:** 2023-10-19

## 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.