

## SAFETY DATA SHEET

### SECTION I: IDENTIFICATION

**Product:** CT 7000

**Description:** d-Limonene

**Company Identification:** Chemtech, Inc.  
1621 N. 1st St.  
Winterset, IA 50273  
Phone: 888-570-5333  
Website: www.chemtechus.com



**Company Emergency Telephone Number:** CHEMTREC 1-800-424-9300

### SECTION II: HAZARD(S) IDENTIFICATION

#### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

**Flame:** Flam. Liq. 3 - H226 Flammable Liquid and Vapor.

**Health Hazard:** Asp. Tox. 1 - H304 May be fatal if swallowed and enters airways.

**Skin Irritant:** Skin Irrit. - H315 Causes skin irritation.

**Skin Sensitivity:** Skin Sens. 1 - H317 May cause an allergic skin reaction.

**Additional Information:** Repeated exposure may cause skin dryness or cracking. There are no other hazards not otherwise classified that have been identified. 0% of the mixture consists of ingredient(s) of unknown toxicity.

#### GHS LABEL ELEMENTS

**Hazard Pictograms:**

**GHS02**



**GHS07**



**GHS08**



**Signal Word:** **Danger**

**Hazard-Determining Components of Labeling:** d-Limonene

**Hazard Statements:** Flammable liquid and vapor. - H226  
May be fatal if swallowed and enters airways. - H304  
Causes skin irritation. - H315  
May cause an allergic skin reaction. - H317

#### PRECAUTIONARY STATEMENTS

**Prevention:** Keep away from heat, sparks, open flames and hot surfaces. NO SMOKING. - P210  
Avoid breathing mist, vapors or spray. - P261  
Wash thoroughly after handling. - P264  
Wear protective gloves / eye protection / face protection. - P280  
Keep container tightly closed. - P233

**Response:** If swallowed: Immediately call a poison center / doctor. - P301+310  
IF ON SKIN (or hair): Remove / take off immediately all contaminated clothing. Rinse skin with water or shower. - P303+361+353  
Take off all contaminated clothing and wash before reuse. - P362

If skin irritation or rash occurs: Get medical advice / attention. - P333+313  
DO NOT INDUCE vomiting. - P331  
In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray. - P370+378

**Storage:** Store in a well-ventilated place. Keep cool. - P403+235

**Disposal:** Dispose of contents / container in accordance with local / regional / national and international regulations. - P501

**Additional Information:** Rags, steel wool or waste soaked with product may spontaneously ignite if improperly handled or discarded.

### SECTION III: COMPOSITION / INFORMATION ON INGREDIENTS

#### Chemical Characterization:

Chemical Name	CAS #	Weight - %
d-Limonene	5989-27-5	> 94.0%

Specific chemical identity and/or exact percentage of mixture has been withheld as a trade secret.

### SECTION IV: FIRST AID MEASURES

#### DESCRIPTION OF FIRST AID MEASURES

**General Information:** Immediately remove any clothing soiled by this product. Move affected person to fresh air.

**After Inhalation:** Supply fresh air and consult doctor in case of complaints.

**After Skin Contact:** Immediately wash with soap and water and rinse thoroughly. If skin irritation continues, consult a doctor.

**After Eye Contact:** Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist consult a doctor.

**After Swallowing:** Rinse out mouth and then drink plenty of water. Do Not induce vomiting. Immediately call for medical help.

#### INFORMATION FOR DOCTOR

**Most Important Symptoms and Effects, both Acute and Delayed:** Allergic reactions. Irritant to skin and mucous membranes. Dizziness. Breathing difficulty. Gastric or intestinal disorders.

**Danger:** Danger of impaired breathing. Repeated exposure may cause skin dryness or cracking. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Danger of pulmonary edema. Danger of pneumonia.

#### **Indication of any Immediate Medical Attention and Special Treatment Needed:**

If swallowed, gastric irrigation with added, activated carbon. If swallowed or in case of vomiting, danger of entering lungs. If necessary oxygen respiration treatment. Later observation for pneumonia and pulmonary edema. Treat skin and mucous membrane with antihistamine and corticoid preparations. Contains d-Limonene. May cause an allergic reaction.

### SECTION V: FIRE-FIGHTING MEASURES

**Suitable Extinguishing Agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

**For Safety Reasons Unsuitable Extinguishing Media:** Water stream.

**Special Hazards Arising from the Substance or Mixture:** Formation of toxic gases is possible during heating or in case of fire.

**Protective Equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Additional information:** Eliminate all ignition sources if safe to do so. Cool endangered receptacles with water fog.

## SECTION VI: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures:

Use respiratory device against the effects of fumes / dust and aerosol. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat.

**Environmental Precautions:** Do Not allow to enter sewers, surface or ground water. Prevent from spreading (e.g. by damming-in or oil barriers).

**Methods and Material for Containment and Cleaning Up:** Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders). Pick up mechanically. Send for recovery or disposal in suitable receptacles.

**Reference to Other Sections:** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

## SECTION VII: HANDLING AND STORAGE

**Precautions for Safe Handling:** Prevent formation of aerosols. Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Keep away from heat and direct sunlight. Rags, metal wools, cuttings, shavings and waste papers soaked with product must be placed in a sealed metal container rated for flammable waste.

**Information about Protection Against Explosions and Fires:** Keep ignition sources away. Do Not smoke. Protect against electrostatic charges. Flammable gas-air mixtures may be formed in empty receptacles. The product forms flammable fumes when heated.

**Conditions for Safe Storage, Including any Incompatibilities:** Provide ventilation for receptacles. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Keep receptacle tightly sealed. Protect from heat and direct sunlight.

**Specific End-use(s):** No further relevant information available.

## SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

**Information About Design of Technical Systems:** No further data. See Section 7.

### CONTROL PARAMETERS

**Components with Limit Values that Require Monitoring at the Workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**General Protective and Hygiene Measures:** The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do Not inhale gases / fumes or aerosols. Avoid contact with the eyes and skin.

**Engineering Controls:** No further relevant information available

**Breathing Equipment:** Not required under normal conditions of use. Use suitable respiratory protective device in case of insignificant ventilation. Use suitable respiratory protective device when aerosol or mist is formed. NIOSH or EN approved organic vapor respirator equipped with a dust / mist prefilter should be used.

**Protection of Hands:** Protective gloves. The glove material has to be impermeable and resistant to the product, the substance and the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of Gloves:** Nitrile rubber, NBR. Neoprene gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to

manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and therefore should be checked prior to application.

**Penetration Time of Glove Material:** The exact break-through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye Protection:** Safety glasses.

**Body Protection:** Protective work clothing.

**Limitation and Supervision of Exposure Into the Environment:** No further relevant information available.

**Risk Management Measures:** See Section 7 for additional information.

## SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance / Color</b>	Liquid / Clear to Straw color
<b>Odor</b>	Citrus
<b>pH</b>	7.0 - 8.5
<b>Melting Point / Freezing Point</b>	(-99 <sup>0</sup> C) (-141 <sup>0</sup> F)
<b>Boiling Point / Boiling Range</b>	176 <sup>0</sup> C (349 <sup>0</sup> F)
<b>Flash Point</b>	46 <sup>0</sup> C (115 <sup>0</sup> F)
<b>Evaporation Rate</b>	No information available
<b>Flammability (Solid, gas)</b>	No information available
<b>Upper Flammability Limit</b>	No information available
<b>Lower Flammability Limit</b>	No information available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available
<b>Specific Gravity</b>	0.84 @ 20 <sup>0</sup> C (68 <sup>0</sup> F)
<b>Solubility(ies)</b>	Not miscible or difficult to mix
<b>Partition Coefficient</b>	No information available
<b>Autoignition Temperature</b>	237 <sup>0</sup> C (459 <sup>0</sup> F)
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	No information available

## SECTION X: STABILITY AND REACTIVITY

**Thermal Decomposition / Conditions to be Avoided:** No decomposition if used and stored according to specifications.

**Possibility of Hazardous Reaction:** Flammable. Used empty containers may contain product gases which form explosive mixtures with air. Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized. Toxic fumes may be released if heated above decomposition point.

**Conditions to Avoid:** Keep ignition sources away. Do Not smoke. Store away from oxidizing agents.

**Incompatible Material:** No further relevant information available.

**Hazardous Decomposition:** Carbon monoxide and carbon dioxide.

## SECTION XI: TOXICOLOGICAL INFORMATION

### INFORMATION ON TOXICOLOGICAL EFFECTS

**Acute Toxicity:**

<b>Chemical Name</b>	<b>Oral LD50</b>	<b>Dermal LD50</b>
d-Limonene (CAS# 5989-27-5)	4,400 mg/kg (Rat)	> 94

### PRIMARY IRRITANT EFFECT

**On the Skin:** Irritant to skin and mucous membrane.

**On the Eye:** Not classified as a primary irritant. Slight irritant effect on eyes.

**Sensitization:** Sensitizing effect through inhalation is possible with prolonged exposure. Sensitizing possible through skin contact.

**Subacute to Chronic Toxicity:** Inhalation of concentrated vapors as well as oral intake will lead to anesthesia-like conditions and headache, dizziness, etc. May be fatal if swallowed and enters airways.

**Additional Toxicological Information:** Irritant. Danger through skin absorption. Toxic and/or corrosive effects may be delayed up to 24 hours.

#### **CARCINOGENIC CATEGORIES**

**NTP (National Toxicology Program):** Substance not listed.

**OSHA-Ca (Occupational Safety & Health Administration):** Substance not listed.

**Probable Routes of Exposure:** Inhalation, eye contact, skin contact, ingestion.

**Acute Effects (Acute Toxicity, Irritation and Corrosivity):** Irritation to skin. May be fatal if swallowed and enters airways.

**Repeated Dose Toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.

### **SECTION XII: ECOLOGICAL INFORMATION**

#### **TOXICITY**

**Aquatic Toxicity:** The material is harmful to the environment. Toxic for aquatic organisms.

**Persistence and Degradability:** No further relevant information available.

#### **BEHAVIOR IN ENVIRONMENTAL SYSTEMS**

**Bioaccumulative Potential:** No further relevant information available.

**Mobility in Soil:** No further relevant information available.

**Ecotoxicological Effect:** Very toxic to fish.

#### **ADDITIONAL ECOLOGICAL INFORMATION**

**General Notes:** Due to available data on eliminability / decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded. Avoid transfer into the environment. Very toxic for aquatic organisms. Poisonous for fish and plankton in water bodies.

**Other Adverse Effects:** No further relevant information available.

### **SECTION XIII: DISPOSAL CONSIDERATIONS**

#### **WASTE TREATMENT METHODS**

**Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Can be burned with household garbage after consulting with the waste facility operator, the proper authorities and adhering to the necessary technical regulations. Can be reused after processing. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

**Unclean Packaging:** Disposal must be made according to official regulations.

### **SECTION XIV: TRANSPORT INFORMATION**

**UN-Number:** UN2319

**DOT:** Reclassified as combustible under US DOT regulations. Labeling is only required for single packages  $\geq 119$  US gal / 450 L to include Combustible symbol and Proper Shipping Name. UN2319

**UN Proper Shipping Name:** Limited Quantity for packages less than 30 kg (66 lb) and inner packaging less than 5 L (1.3 gal.).

**DOT:** TERPENE HYDROCARBONS, N.O.S.,

**ADR:** 2319 TERPENE HYDROCARBONS, N.O.S., ENVIRONMENTALLY HAZARDOUS

**IMDG:** TERPENE HYDROCARBONS, N.O.S., MARINE POLLUTANT

**IATA:** TERPENE HYDROCARBONS, N.O.S.,

**DOT**

**Class:** 3 Flammable Liquids

**Label:** 3

**Class:** 3 (F1) Flammable Liquids

**Label:** 3

**Class:** 3 Flammable Liquids

**Label:** 3

**Class:** 3 Flammable Liquids

**Label:** 3

**PACKING GROUP**

**DOT, ADR, AMDG, IATA** III

**ENVIRONMENTAL HAZARDS**

**Marine Pollutant:** YES. Symbol (fish and tree)

**Special Marking (ADR):** Symbol (fish and tree)

**Special Precautions for User:** Warning: Flammable Liquids

**Danger Code (Kemmler):** 30

**EMS Number:** F-E, S-D

**Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:** Not Applicable

**TRANSPORT / ADDITIONAL INFORMATION**

**DOT: Quantity Limitations:** On passenger aircraft / rail: 60 L  
On cargo aircraft only: 220 L

**ADR: Excepted Quantities (EQ):** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

**IMDG: Excepted Quantities (EQ):** Code: E1  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 1000 ml

**UN "Model Regulation":** UN2319 Terpene hydrocarbons, n.o.s.,  
ENVIRONMENTALLY HAZARDOUS, 3, III

## SECTION XV: REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture.

### UNITED STATES (USA)

#### SARA

Section 355 (Extremely Hazardous Substances): Substance is not listed.

Section 313 (Specific Toxic Chemical Listings): Substance is not listed.

TSCA (Toxic Substances Control Act): Substance is not listed.

### PROPOSITION 65 (CALIFORNIA)

Chemicals Known to Cause Cancer: Substance is not listed.

Chemicals Known to Cause Reproductive Toxicity in Females: Substance is not listed.

Chemicals Known to Cause Reproductive Toxicity in Males: Substance is not listed.

Chemicals Known to Cause Developmental Toxicity: Substance is not listed.

### CARCINOGENIC CATEGORIES

EPA (Environmental Protection Agency): Substance is not listed.

IARC (International Agency for Research on Cancer): 5989-27-5 [R]-p-mentha-1,8-diene

TLV (Threshold Limit Value established by ACGIH): Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed.

State Right-to-Know Listings: Substance is not listed.

### CANADA SUBSTANCE LISTINGS

Canadian Domestic Substance List (DSL): Substance is not listed.

Canadian Ingredient Disclosure List (limit 0.1%): Substance is not listed.

Canadian Ingredient Disclosure List (limit 1%): 5989-27-5 [R]-p-mentha-1,8-diene

Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

## SECTION XVI: OTHER INFORMATION

Issue Date: 06/01/15

#### HAZARD RATINGS:

Version #: 1

**NFPA:** Health: 2 Flammability: 3 Instability: 0  
**HMIS:** Health: 2 Flammability: 3 Physical Hazards: 0

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