

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: D-Limonene Technical Grade

Synonyms: D-Limonene

CAS Number: 5989-27-5

Grade/Purity: Technical Grade

Product Type: Solvents

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

Information: 512-365-6838 | www.alliancechemical.com

Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H226	Flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust, fume, gas, mist, vapours or spray.
P264	Wash hands and face thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, and eye/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P321	Specific treatment (see first-aid information on this label).
P331	Do NOT induce vomiting.
P333+P313	If skin irritation or rash occurs: Get medical advice or attention.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
D-Limonene	94.5	95.5	5989-27-5	227-813-5	C10H16	136.23 g/mol

4. FIRST-AID MEASURES

Eyes	EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.
Skin	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Inhalation	INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.
Ingestion	INGESTION: DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

5. FIRE-FIGHTING MEASURES

Suitable Media	Alcohol-resistant foam, CO2, dry chemical powder. Water spray may be used to cool fire-exposed containers.
Unsuitable Media	Do not use a solid water stream — may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area away from heat, sparks, and open flame. Keep away from incompatible materials (see Section 10). Keep containers tightly closed. Ground and bond containers when transferring material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

No established occupational exposure limits.

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use a NIOSH-approved respirator with organic vapor cartridges. For confined spaces or exposures above the OEL, use supplied-air respiratory protection.

Exposure limits sourced from NIOSH Pocket Guide and OSHA 29 CFR 1910.1000. Hazard classification from ECHA Classification and Labelling Inventory (CLP Annex VI).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to pale yellow liquid, citrus-like odor
Odor	Characteristic
Median Particle Size	Not Applicable
Particle Size Distribution	Not Applicable
Particle Shape	Not Applicable
Surface Area	Not Applicable
Dustiness	Not Applicable
Hygroscopicity	Not Applicable
pH	Not Available
Melting Point	-96°C (-140.8°F)
Boiling Point	175°C (347°F)
Flash Point	48°C (118.4°F)
Vapor Pressure	Not Available
Specific Gravity	Not Available
Solubility	Insoluble in water, soluble in organics
Molecular Formula	C ₁₀ H ₁₆
Molecular Weight	136.23 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong oxidizing agents, sources of ignition, heat.
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Daphnia EC50: 0.577 mg/L (48 h, Daphnia magna (flow-through); static EC50 7.85 mg/L also reported); Fish LC50: 0.702 mg/L (96 h, Pimephales promelas)
Persistence	Resistant to hydrolysis; rapid atmospheric degradation — 73% ThBOD (activated sludge, MITI)
Bioaccumulation	log Kow 4.57, BCF 480 (estimated; high)
Mobility in Soil	Very low mobility in soil (estimated Koc 1120)

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	UN2319, Terpene hydrocarbons, N.O.S., 3, PG III
IMDG	UN2319, Terpene hydrocarbons, N.O.S., 3, PG III
IATA/ICAO	UN2319, Terpene hydrocarbons, N.O.S., 3, PG III
Marine Pollutant	No

15. REGULATORY INFORMATION

Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.

SARA 311/312	See Section 2 for hazard classifications.
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16. OTHER INFORMATION

Revision Date: 07/01/2026

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