

D-Limonene

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: D-Limonene

Synonyms/Generic Names: (+)-Dipentene; (+)-Limonene, (R)-(+)-Limonene

Product Number: 1799

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Flammable, Irritant, Target organ effect

Target Organs: Kidney, Liver, Lung

Signal Word: Danger

Pictograms:



GHS Classification:

Flammable liquids	Category 3
Skin irritation	Category 2
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P270	Do not eat, drink or smoke when using the product.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P243	Take action to prevent static discharge.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P391	Collect spillage.
P233	Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P273	Avoid release to the environment.

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May cause respiratory tract irritation.
Skin	May cause skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	2
Flammability	2
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	2
Reactivity	0
Personal	Not Available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
D-Limonene	>99.5	5989-27-5	227-813-5	C ₁₀ H ₁₆	136.24 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is flammable. Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media for adjacent fire. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, and apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, water-white liquid.
Odor	Characteristic.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-74 °C (-101 °F)
Initial boiling point and boiling range	175 - 176 °C (348 - 349 °F)
Flash point	48 °C (118 °F)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	2.1 hPa at 20 °C
Vapor density	Not Available
Specific gravity	0.841

Solubility (ies)	Insoluble in water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	255 °C (491 °F)
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, sparks, open flame, and static discharge
Incompatible Materials	Acids, strong oxidizing agents, strong reducing agents
Hazardous Decomposition Products	Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LD50 Dermal – rabbit – >5 g/kg
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral – rat – 5200 mg/kg LD5 Oral – rat – 4400 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness.
Eyes	Irritation, redness, watering eyes.
Respiratory	Irritation, coughing.
Ingestion	Irritation, nausea, vomiting, diarrhea.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 – Oncorhynchus mykiss – 35 mg/L – 96h LC50 – Pimephales promelas – 0.619-0.796 mg/L – 96h
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN2052, Dipentene, 3, PG III
TDG	UN2052, DIPENTENE, 3, PG III
IMDG	UN2052, DIPENTENE, 3, PG III
Marine Pollutant	No
IATA/ICAO	UN2052, Dipentene, 3, PG III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Not Listed

16. OTHER INFORMATION

Revision	Date
Original	02/27/2019

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