

01 – Identification

Product identifier:	D'Limonene
Other means of identification:	1-methyl-4-(1-methylethenyl) cyclohexene; p-mentha-1,8-diene
Recommended use and restrictions:	For use as a raw material in manufacturing in accordance with relevant legal regulations and guidelines. Not for direct personal use or consumption.
Supplier identification:	Cedarome Canada Inc. 21 rue Paul-Gauguin Candiac, Quebec J5R 3X8 +1 (450)659-8000 www.cedarome.com
Emergency contact number:	CANUTEC: +1 (613)996-6666 (worldwide) 1-888-CAN-UTEC (Canada and US) *666 (from a cell phone)

02 – Hazards Identification

Hazard classification - GHS:



Flammable liquid, category 3
Aspiration hazard, category 1
Skin irritation, category 2
Skin sensitization, category 1
Hazardous to the aquatic environment (acute + chronic), category 1

Signal word: DANGER

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.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/ equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P281 - Use personal protective equipment as required.
P321 - Specific treatment (see information on this label).

P331 - Do NOT induce vomiting.
P362 - Take off contaminated clothing and wash before reuse.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or a doctor
P302 + P352 - IF ON SKIN: Wash with plenty of water/soap
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P332 + P313 - If skin irritation occurs: Get medical advice/attention.
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
P370 + P378 - In case of fire: Use recommended media to extinguish.
P403 + P235 - Store in a well-ventilated place. Keep cool.

03 – Composition / Information on ingredients

CAS name	CAS no.	Other identification
D' Limonene	5989-27-5	EC no.: 227-813-5 FEMA: 2633

04 – First-aid measures

General information: Ensure medical personnel are contacted and involved. Show this safety data sheet to all medical personnel to ensure their safety and protection. Move to a safe area, free from hazardous materials.

Skin contact: Symptoms: Irritation (immediate or delayed). May cause an allergic skin reaction.
Response: Wash with large quantities of water (or water + soap). Remove contaminated clothes and shoes. If irritation persists or any sign of tissue damage is apparent, obtain medical advice

Eye contact: Symptoms: Serious irritation and damage may occur (immediate), with burning, redness, pain
Response: Remove contact lenses. Irrigate copiously with water for at least fifteen minutes
Obtain medical advice if irritation or evidence of tissue damage persists

Ingestion: Symptoms: Irritation (immediate), variable effects (delayed)
Response: Rinse mouth with water. Obtain immediate medical advice. Do not induce vomiting

Inhalation: Symptoms: Mild to severe irritation of airways (immediate)
Response: Remove the person to fresh air and keep at rest. Obtain medical advice immediately

05 – Firefighting measures

Extinguishing media: Recommended: Carbon dioxide, special liquid or dry powder extinguishers
Usable: Foam extinguishers
Inadvisable: Direct water jet

Specific fire and explosion hazards: Closed containers may build up pressure at elevated temperatures
If possible, containers should be cooled with a water spray

Special protective equipment and precautions for first responders: Protective clothing, face protection and gloves should be worn

06 – Accidental release measures

Personal precautions: Avoid open flames or other sources of ignition. Avoid inhalation of vapors

Environmental precautions: To avoid a possible contamination of the environment, contain spilled material

Methods and materials for

containment and clean-up: Cover with an inert, inorganic, non-combustible absorbent material, sweep up and remove to an approved disposal container.
Dispose of in accordance with federal/national, state/provincial and local environmental regulations

07 – Handling and storage

Handling: Measures should be taken to prevent materials from being splashed into the eyes or on the skin
This should include the wearing of eye shields and protective clothing
Smoking should not be permitted in areas where they are handled
Spontaneous combustion of certain product soaked rags has been reported
Maintain adequate air circulation in the working area

Storage: Store in tightly sealed and preferably full containers in a cool, dry location. Protect from light.
Check quality before use if stored for more than 6 months. Keep in suitable or original container.
Storage details are in the product specifications sheet

08 – Exposure controls / Personal protection

Control parameters

Occupational exposure limits: Chemical components requiring monitoring in the workplace

Component	Type	Value	Basis
D' Limonene (CAS: 5989-27-5)	8-hr TWA	30 ppm 165.5 mg/m ³	AIHA standard

Biological exposure limits: Not applicable

Engineering controls

Ventilation: Provide adequate ventilation; use local exhaust fan if necessary

Personal protective equipment

Respiratory protection: In well-ventilated areas, respiratory protection is not normally required. In confined, poorly ventilated areas, it may be required

Hand protection: The use of chemical resistant gloves is recommended

Eye protection: The use of safety glasses is recommended

Skin protection: Light protective clothing is recommended

09 – Physical and chemical properties

Appearance	Refer to specifications
Odor	Characteristic
Odor threshold	Not determined
pH	Not available
Melting point (freezing point)	-74°C
Boiling point (boiling range)	176°C @101.3 kPa
Flash point (cc) (°C)	51°C
Evaporation rate	Not available
Flammability	Not available
Upper flammability limit	Not available
Lower flammability limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Specific gravity (25°C)	0.844 (typical)
Solubility	Not available

Partition coefficient – “n-octanol/water”	Not available
Auto-ignition temperature	245°C @101.3 kPa
Decomposition temperature	Not available
Viscosity	Not available

10 – Stability and reactivity

Reactivity:	Product may slowly oxidize when in contact with air
Chemical stability:	Stable at normal temperatures and storage conditions
Possibility of hazardous reactions:	Not determined
Condition to avoid:	Excessive heat, open flames or other sources of ignition
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	Not determined

11 – Toxicological information

Route(s) of exposure:	Ingestion: May be harmful if swallowed Inhalation: Liquid may cause irritation of airways Skin: May causes skin irritation and may cause an allergic skin reaction Eyes: May cause eye irritation
Acute toxicity:	LD ₅₀ (oral, rat) = >2000 mg/kg LD ₅₀ (dermal, rabbit) = >5000 mg/kg LC ₅₀ (inhalation) = Not determined
Other toxicological information:	Carcinogenicity: Not listed by IARC, NTP, OSHA and California Prop 65 Teratogenicity: Not determined Reproductive effects: Not determined Mutagenicity: Not mutagenic Specific target organ toxicity: Single exposure: not classified Repeated exposure: not classified Aspiration hazard: May be fatal if swallowed and/or enters airways

12 – Ecological information

Ecotoxicity:	Very toxic to aquatic life with long lasting effects - avoid contamination with the environment.
Persistence and degradability:	Readily biodegradable
Bioaccumulative potential:	Not determined
Mobility in soil:	Not determined
Other environmental adverse effects:	Not determined

13 – Disposal considerations

Dispose of in accordance with local, state/provincial, federal/national and/or international regulations

14 – Transportation information

RTMD*	UN number: 2319 Proper shipping name: Terpenes Hydrocarbons, n.o.s Transportation class: 3 Subsidiary class(es): Not applicable Packing group: III Environmental hazards: Yes Special precautions: No further information
IATA	UN number: 2319 Proper shipping name: Terpenes Hydrocarbons, n.o.s Transportation class: 3 Subsidiary class(es): Not applicable Packing group: III Environmental hazards: Yes Special precautions: No further information
IMDG	UN number: 2319 Proper shipping name: Terpenes Hydrocarbons, n.o.s Transportation class: 3 Subsidiary class(es): Not applicable Packing group: III Marine pollutant: Yes Special precautions: No further information

*RTMD - Règlement sur le transport des marchandises dangereuses (Transportation of Dangerous Goods Regulations)

15 – Regulatory information

Product is present in the following inventory lists

Canada (DSL/NDL), **USA** (TSCA), **European Union** (EINECS/ELINCS/NLP), **China** (IECSC), **New Zealand** (NZIoC), **Japan** (ENCS), **Korea** (KECI), **The Philippines** (PICCS), **Australia** (AICS)

16 – Other information

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Creation date: 2019/05/01
Revision date: 2021/02/19
Version number: 2.0

Disclaimer

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