



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 09/19/2002
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Version 1.10

Section 1 - Product and Company Information

Product Name: (+)-2-CARENE, 97%
Product Number: 232386
Brand: Aldrich Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5785
Fax: 800 325 5052
Emergency Phone: 414 273-3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Substance Name: 2-CARENE, 97%
CAS #: 554-61-0
SARA 313 No

Formula
Synonyms

Section 3 - Hazards Identification

Emergency Overview
Flammable, Irritant,
Irritating to eyes, respiratory system, and skin.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.
Eye Exposure
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Explosion Hazards
Vapor may travel considerable distance to source of ignition and flash back.
Flash Point: 101 °F 38 °C

Autoignition Temp: N/A

Extinguishing Media
Suitable
Carbon dioxide, dry chemical powder, or appropriate foam, Water spray.

Firefighting
Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)
Combustible liquid. Vapor may travel considerable distance to source of ignition and flash back.

Exposure Hazard(s)
Material
Irritant.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area.
Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage
Suitable
Keep tightly closed. Keep away from heat and open flame. Store under nitrogen. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.
Personal Protective Equipment
Respiratory
Government approved respirator.
Hand
Compatible chemical-resistant gloves.
Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling. Wash contaminated clothing before reuse.

Molecular Weight: 136.24 AMU

Property	Value	At Temperature or Pressure
pH	N/A	
BP/Boil Range	167 - 168 °C	760 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.862 g/cm ³	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	101 °F	Method: closed cup
Flash Point °C	38 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.476	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

Stability

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information

Route of Exposure

Skin Contact
Causes skin irritation.

Multiple Routes

May be harmful by inhalation, ingestion, or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.

UN#: 3295

Class: 3

Packing Group: Packing Group III

Hazard Label: Flammable liquid

PIH: Not PIH

IATA

Proper Shipping Name: Hydrocarbons, liquid, n.o.s.

IATA UN Number: 3295

Hazard Class: 3

Packing Group: III

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: Xi

Indication of Danger

Irritant.

Risk Statements

R: 10 36/37/38
Flammable, irritating to eyes, respiratory system, and skin.

Safety Statements

S: 16 26 36/37/39 45
Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eyeface protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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US Classification and Label Text

Indication of Danger

Flammable, Irritant.

Risk Statements

Irritating to eyes, respiratory system, and skin.

Safety Statements

Keep away from sources of ignition - no smoking. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eyeface protection.

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United States Regulatory Information

SARA Listed: No

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2002 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.