

Material Safety Data Sheet Carene

Section 1 - Chemical Product and Company Identification

Synonyms : 3-Carene, Delta-3-carene, Car-3-ene
 Molecular Weight : 136.24 g/mol
 Chemical Formula : C₁₀H₁₆
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Section 2 - Composition and Information on Ingredients

Composition:

Chemical Name	CAS No	Purity, %
3-Carene	13466-78-9	min. 90.0

Section 3 – Hazards Identification

3.1 Classification of the substance according to GHS

Flammable liquid (Category 3)

H226: Flammable liquid and vapour

Acute toxicity, Oral (Category 5)

H303: May be harmful if swallowed

Skin corrosion/irritation (Category 1)

H317: May cause an allergic skin reaction




Serious eye damage/eye irritation (Category 2)

H319: Causes serious eye irritation

Acute and chronic aquatic toxicity (Category 1)

H410: Very toxic to aquatic life with long lasting effects

3.2. GHS Label elements, including precautionary statements

 Warning GHS: Flammable	 Warning GHS: Exclamation mark	 Warning GHS09: Environmental hazards
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P273: Avoid release to the environment.

P280: Wear protective gloves

P501: Dispose of contents/ container to approved waste disposal plant

3.3. Other hazards which do not result in classification

Not applicable.

Potential health effects

Eye contact

May cause eye irritation.

Skin contact

May be harmful if absorbed through skin. May cause skin irritation.

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion

May be harmful if swallowed.

Section 4 – First-Aid Measures

4.1. Description of first aid measures

Skin contact

Wash immediately with plenty of water and soap. Consult a physician.

Eye contact

Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an ophthalmologist.

Inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Consult a physician.

Ingestion

Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth if unconscious. Consult a physician.

Note to physicians

Treat symptomatically.

4.2. Most important symptoms and effects, both acute and delayed

N.A.

4.3. Indication of any immediate medical attention and special treatment needed

N.A.

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products formed under fire conditions. - Carbon oxides

5.3. Special protective actions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4 Fire-fighting/Further advice

Wear self contained breathing apparatus for fire fighting if necessary.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

6.4. Further accidental release measures

Collect in closed and suitable containers for disposal. Clear contaminated areas thoroughly. Ventilate affected area.

Section 7 – Handling and Storage

7.1. Precautions for safe handling

Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

7.2. Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Air sensitive. Handle under inert gas. Protect from moisture.

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

Components	CAS-No.	Value	Control parameters	Basis
3-Carene	13466-78-9	TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Central Nervous System impairment, Upper Respiratory Tract irritation, Lung damage, Skin irritation			

8.2. Appropriate engineering controls

- Showers
- Eyewash stations
- Ventilation systems

8.3. Individual protection measures, such as personal protective equipment (PPE)

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand Protection

Wear compatible chemical-resistant gloves to prevent skin exposure.

Eye Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Advice on Safe Handling

Wash contaminated clothing before reuse. Wear appropriate protective clothing to prevent exposure. Wash hands before breaks and at the end of workday.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance : Colorless liquid

Odour : Sweet and pungent

Odour threshold : N.A.

pH @ 20°C : N.A.

Melting point : N.A.

Boiling point : 169 °C

Flash point : 46°C

Evaporation rate : N.A.

Flammability : N.A.

Upper/lower flammability or explosive limits : no data available

Vapour pressure : Negligible @ 20°C

Vapour density : N.A.

Relative density : N.A.

Solubility in water : insoluble

Partition coefficient: n-octanol/water : N.A

Auto-ignition temperature : N.A.

Decomposition temperature : N.A.

Viscosity : N.A.

9.2. Other information

Molecular weight : 136.24

Specific gravity : 0.863

Section 10 – Stability and Reactivity

10.1. Reactivity

N.A.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal processing

10.4. Conditions to avoid:

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong oxidizers

10.6. Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide

Section 11 – Toxicological Information

11.1. Information on likely routes of exposure

Inhalation: Mouse – 49000 mg/m³

Eye contact: No data available.

Skin contact: Rabbit – 500mg/24H

Oral Ingestion: LD₅₀ Oral – rat – 4,800 mg/kg

11.2. Information on toxicological effects

Symptoms: No information available.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity: No information available.

11.4. Numerical measures of toxicity – Product Information

Unknown acute toxicity: 100% of the mixture consists of ingredient(s) of unknown toxicity.

Section 12 – Ecological Information

Ecotoxicity: May cause long lasting harmful effects to aquatic life

Persistence and degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

Section 13 – Disposal Considerations

13.1. Disposal methods

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, highly flammable. Offer surplus to licensed disposal company. Packaging to be disposed as unused product. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14 – Transport Information

14.1. UN number : 2319

14.2. UN proper shipping name : Terpene hydrocarbons, n.o.s.

14.3. Transport of hazard classes : 3

14.4. Packing group : III

14.5. Emergency Response Guide Number: 128

Section 15 – Regulatory Information

15.1. International Inventories

All of the components in the product are on the following Inventory lists:

- TSCA (United States)
- Canada (DSL/NDSL)
- Europe (EINECS/ELINCS/NLP)
- Australia (AICS)
- South Korea (KECL)
- China (IECSC)
- ENCS (Japan)
- Philippines (PICCS)

15.2. US Federal Regulations

15.2.1. SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2.2. SARA 311/312 Hazard Categories

Acute health hazard: Yes

Chronic Health Hazard: No

Fire hazard: Yes

Sudden release of pressure hazard: No

Reactive hazard: No

15.2.3. CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

15.3 US State Regulations

California Proposition 65: This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations: This product contains 3-carene (CAS-No. 13466-78-9), regulated by Pennsylvania and New Jersey right-to-know regulations.

Section 16 : Additional Information

References: Not available.

Other Special Considerations: Not available.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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