



# SAFETY DATA SHEET

## CARYOPHYLLENE BETA NATURAL

Version # 01

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### 1. IDENTIFICATION

**Product Description:** CARYOPHYLLENE BETA NATURAL

**CAS #** 87-44-5

**FEMA Number** 2252

**Recommended use**

Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

**Recommended restrictions** For Manufacturing Use Only

**24 Hour Emergency Response Information**

INFOTRAC (ACCT# 78928);  
1-800-535-5053 WITHIN THE U.S.A.  
1-352-323-3500 OUTSIDE THE U.S.A.

Web Site:

[www.foggflavors.com](http://www.foggflavors.com)

Company:

Fogg Flavor Labs, LLC  
319 Newburyport Turnpike  
Rowley, MA 01969  
1-888-822-7364

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

Fogg Flavor Labs, LLC  
319 Newburyport Turnpike  
Rowley, MA 01969  
United States

1-888-822-7364

**Emergency phone number** INFOTRAC (ACCT# 78928);  
1-800-535-5053 WITHIN THE U.S.A.  
1-352-323-3500 OUTSIDE THE U.S.A.

**E-mail** [support@foggflavors.com](mailto:support@foggflavors.com)

**Website** [www.foggflavors.com](http://www.foggflavors.com)



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## 2. HAZARD(S) IDENTIFICATION

### Physical hazards

Not classified.

### Health hazards

**Skin corrosion/irritation**

Category 3

**Sensitization, skin**

Category 1

**Aspiration hazard**

Category 1

### Environmental hazards

**Hazardous to the aquatic environment, acute hazard**

Category 3

### Label elements



### Signal word

Danger

### Hazard statement

May be fatal if swallowed and enters airways. Causes mild skin irritation. May cause an allergic skin reaction.

### Precautionary statement

#### Prevention

Avoid breathing mist or vapor. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.



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### Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

### Storage

Store locked up.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

100% of the mixture consists of component(s) of unknown acute oral toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity. 100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.



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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

Chemical name	Common name and synonyms	CAS number	%
CARYOPHYLLENE BETA	(1R,4E,9S)-4,11,11-trimethyl-8-methylidenebicyclo[7.2.0]undec-4-ene	87-44-5	100

### 4. FIRST-AID MEASURES

#### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

#### Skin contact

Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

#### Eye contact

Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and



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persists. Promptly wash eyes with plenty of water while lifting the eye lids.

#### **Ingestion**

Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

#### **Most important symptoms/effects, acute and delayed**

Aspiration may cause pulmonary edema and pneumonitis. Mild skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

#### **Indication of immediate medical attention and special treatment needed**

Not available.

#### **General information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

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## 5. FIRE-FIGHTING MEASURES

#### **Suitable extinguishing media**

Water spray, fog, CO<sub>2</sub>, dry chemical, or alcohol resistant foam.

#### **Unsuitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

#### **Specific hazards arising from the chemical**

Fire may produce irritating, corrosive and/or toxic gases.

#### **Special protective equipment and precautions for firefighters**

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full



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facepiece operated in the positive pressure demand mode when fighting fires.

### **Fire fighting equipment/instructions**

In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.

### **Specific methods**

Use water spray to cool unopened containers.

### **General fire hazards**

Static charges generated by emptying package in or near flammable vapor may cause flash fire.

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## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition.

### **Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.

The product is immiscible with water and will spread on the water surface.



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**Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers.

**Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

### Conditions for safe storage, including any incompatibilities

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

This substance has no PEL, TLV, or other recommended exposure limit.



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### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Use explosion-proof ventilation equipment to stay below exposure limits. Adequate ventilation should be provided so that exposure limits are not exceeded.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles). Face shield is recommended.

#### Skin protection

##### Hand protection

Chemical resistant gloves.

##### Other

Use of an impervious apron is recommended.

#### Respiratory protection

Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless liquid
Physical state	Liquid.
Form	Liquid.
Color	Colorless





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<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	381.2-386.6 °F (194-197 °C) 101.325 kPa
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Closed Cup
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	.01 mm Hg at 25 °C
<b>Vapor density</b>	7.1
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	492.8 - 498.2 °F (256 - 259 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	0.86 g/cm <sup>3</sup> estimated at 20 °C
<b>Explosive properties</b>	Not explosive.
<b>Flammability class</b>	Flammable IIIA estimated
<b>Molecular formula</b>	C <sub>15</sub> H <sub>24</sub>
<b>Molecular weight</b>	204.36 g/mol
<b>Oxidizing properties</b>	Not oxidizing.
<b>Specific gravity</b>	0.9 at 25 °C



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## 10. STABILITY AND REACTIVITY

### Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

### Chemical stability

Material is stable under normal conditions.

### Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

### Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

No hazardous decomposition products if stored and handled as indicated.



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### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Inhalation**

No adverse effects due to inhalation are expected.

**Skin contact**

Causes mild skin irritation. May cause an allergic skin reaction.

**Eye contact**

Direct contact with eyes may cause temporary irritation

**Ingestion**

Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

#### Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary edema and pneumonitis. Mild skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

#### Information on toxicological effects

**Acute toxicity**

May be fatal if swallowed and enters airways.

**Skin corrosion/irritation**

Causes mild skin irritation.

**Serious eye damage/eye irritation**

Direct contact with eyes may cause temporary irritation

**Respiratory or skin sensitization**

**Respiratory sensitization**

Not a respiratory sensitizer.

**Skin sensitization**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

**IARC Monographs. Overall Evaluation of Carcinogenicity**



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Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not available.

**Reproductive toxicity**

This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**

Not classified.

**Specific target organ toxicity - repeated exposure**

Not classified.

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

No data is available on the degradability of this substance.



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**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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## 13. DISPOSAL CONSIDERATIONS

**Disposal instructions**

Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

Not established.

**Waste from residues / unused products**

Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.



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## 14. TRANSPORT INFORMATION

### ADN

Not regulated as dangerous goods.

### ADR

Not regulated as dangerous goods.

### RID

Not regulated as dangerous goods.

### DOT

#### BULK

Not regulated as dangerous goods.

### DOT

#### NON-BULK

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

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## 15. REGULATORY INFORMATION

### US federal regulations



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This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not available.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

Not regulated.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical**

Yes

**Classified hazard categories**

Respiratory or skin sensitization

Aspiration hazard

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**

Not regulated.

**US state regulations**

**California Proposition 65**



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**California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
New Zealand	New Zealand Inventory	Yes





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Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Issue date** 07-15-2019

**Revision date** 07-15-2019

**Version** # 01

**HMIS® ratings**

**Health:** 1

**Flammability:** 1

**Physical hazard:** 0

Fogg Flavor Labs, LLC. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe



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handling, use, processing, storage, transportation, and disposal and should not be considered as a guarantee or quality specification. This product has not been evaluated for safe use in e-cigarettes or any vaping application where the product(s) is/are intentionally vaporized and inhaled. Fogg Flavor Labs, LLC

International, Inc. has performed no testing on these products in e-cig/vaping applications. It is the sole responsibility of the individual(s) purchasing this product to assess its' safety in the final application. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Fogg Flavor Labs, LLC's knowledge as of the date of this document. It is

the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.

### Disclaimer

Revision information This document has undergone significant changes and should be reviewed in its entirety.