

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name	Beta Caryophyllene, Natural
Product Number	0225200
CAS-No.	87-44-5

1.2 Product Recommended Use

Flavorings

1.3 Preparation Information

Company	Aurochemicals 7 Nicoll Street Washingtonville, NY 10992 - USA
Telephone	845-496-6065
Fax	845-496-6248

1.4 Emergency Telephone Number

1-800-535-5053
International - 1-352-323-3500 collect

Section 2: HAZARD(s) IDENTIFICATION

2.1 Classification of substance or mixture

GHS Classification (OSHA HCS)	Not a hazardous substance or mixture
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2.2 GHS Label Elements, Including precautionary statements

2.3 HNOC (Hazards not otherwise classified or not covered by GHS)

None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Chemical characterization	Natural Product
Synonyms	(-)-trans-Caryophyllene Trans-(1R,9S)-8-Methylene-4,11,11-trimethylbicyclo[7.2.9]undec-4-ene
Formula	C ₁₅ H ₂₄
Molecular Weight	136.19 g/mol
CAS-No	87-44-5
EC-No.	201-746-1

Hazardous Components

Component	Classification	Concentration
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No ingredients are hazardous according to OSHA criteria

No components need to be disclosed according to the applicable regulations

Section 4: FIRST AID MEASURES

- 4.1 Description of first aid measures**
- Inhalation: Provide fresh air, keep at rest and at a comfortable position to breathe.
- Contact with skin: Remove contaminated clothing. Rinse skin with cool water then wash with mild soap and warm water.
- Contact with eyes: Rinse thoroughly with plenty of water for at least 15 as a precaution.
- Ingestion: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.
- Clothing contamination: Remove contaminated clothing and wash before reuse.
- 4.2 Most important symptoms and effects both acute and delayed**: See section 2.2 and or section 11
- 4.3 Indication of any immediate medical attention and special treatment needed.**: No data available

Section 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing Media**
Suitable Extinguishing Media: Use water spray, alcohol resistant foam, dry chemicals or carbon dioxide
- 5.2 Special hazards arising from the substance or mixture**: Carbon oxides
- 5.3 Advice for fire fighters**: Wear self contained breathing apparatus for firefighting if necessary.
- 5.4 Further information**: No data available

Section 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**: Avoid breathing vapors, mist or gas
- 6.2 Environment precautions**: Prevent further leakage or spillage if safe to do so. Do not allow to enter drains or sewage system.
- 6.3 Methods and materials for containment and clean up**: Take up with liquid absorbent material. Place in appropriate container and keep closed until disposal.
- 6.4 Ventilate area**: After clean up, wash spill area and ventilate the area well.

Section 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**: Avoid inhalation of vapor or mist. Use explosion proof equipment. Keep away from

sources of ignition-No smoking. Take measures to prevent the buildup of electrostatic charge.

7.2 Conditions for Safe storage

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.

7.3 Specific End use(s)

Flavors

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substance with workplace control parameters

8.2 Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practices

Personal protective equipment

These recommendations are advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. They should not be construed as offering an approval for any specific use scenario

Eye/face protection Wear appropriate tightly fitting safety goggles. Face shield (8-inch minimum) NIOSH tested and approved.

Skin protection Wear chemically resistant gloves of Nitrile rubber

Body protection Complete suite protecting against chemicals, made of flame retardant antistatic material should be selected specifically for the work place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection Respiratory protection not required. For nuisance exposures use type OV/AG respirator cartridges tested and approved by NIOSH.

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a	Appearance	Liquid, Colorless
b	Odor	Terpene odor; midway between that of cloves and turpentine
c	Odor Threshold	No data available
d	pH	No data available
e	Melting Point/ Freezing Point	No data available
f	Boiling Point	262-264°C
g	Flash Point	93°C
h	Evaporation Rate	No data available
i	Flammability (Solid, Gas)	No data available
j	Upper/lower Flammability Limit	No data available
k	Vapor pressure	No data available

Safety Data Sheet

l	Vapor density	No data available
m	Specific Gravity @ 25°C:	0.899-0.908
n	Solubility	Soluble in oils, ether and ethanol, Insoluble in water
o	Auto-ignition Temp.	No data available
p	Decomposition Temp,	No data available
q	Viscosity	No data available
r	Explosive properties	No data available
s	Oxidizing properties	No data available

9.2 Other Safety Information

No data available

Section 10: STABILITY AND REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions
10.3	Possibility of Hazardous reactions	No data available
10.4	Conditions to avoid	No data available
10.5	Incompatible materials	Strong oxidizing agents
10.6	Hazardous decomposition products	No data available
10.7	Further Information	No data available

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	No data available
LD50-Oral	No data available
LC50-Inhalation	No data available
LD50-Dermal	No data available
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ Cell mutagenicity	No data available
Carcinogenicity	No data available
IARC	No component of this product, present levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component 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 component 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 component of this product, present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	No data available
Teratogenicity	No data available
Specific target organ toxicity-single exposure (GHS)	No data available
Specific target organ toxicity-repeated exposures (GHS)	No data available
Aspiration Hazards	No data available
Potential Health effects	
Signs and Symptoms of Exposure	To the best of our knowledge, the chemical, physical, and toxicological properties have

Synergistic effects not been thoroughly investigated
 RTECS: No data available
 DT8400000

Section 12: ECOLOGICAL INFORMATION

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	No data available
12.6 Other adverse effects	No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods	
Product:	According to local regulations
Packaging	According to local regulations

Section 14: TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

Section 15: REGULATORY INFORMATION

SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.		
SARA 313 Components	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.		
SARA 311/312 Hazards	No SARA hazards		
OSHA Hazards	No known OSHA hazards		
Massachusetts Right to Know components	No components are subject to the Massachusetts Right to Know Act		
Pennsylvania Right to Know components	Caryophyllene	CAS# 87-44-5	Rev. Date:
New Jersey Right to Know components	Caryophyllene	CAS# 87-44-5	Rev. Date:
California Prop. 65 components	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.		

Section 16: OTHER INFORMATION

HMIS Rating
 Health hazard 0
 Chronic Health Hazard
 Flammability 1
 Reactive Hazard 0

Aurochemicals provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Aurochemicals makes no representations or warranties, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Aurochemicals will not be responsible, nor held liable, for damages resulting from use of or reliance upon this information.

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