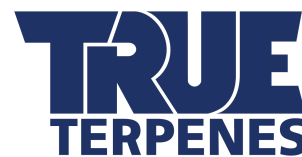


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1. Identification

Product Description	Delta 3 Carene
CAS #	13466-78-9
FEMA Number	3821
True Terpenes Item #	RM10006
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
Company	True Terpenes (888) 954-8550 TrueTerpenes.com
Emergency Contact	Poison Control Helpline: 1 (800) 222-1222

2. Hazard(s) Identification



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Physical Hazards	Flammable liquids	Category 3
Health Hazards	Acute toxicity, oral	Category 5
	Skin corrosion/irritation	Category 2
	Sensitization, skin	Category 1
	Aspiration hazard	
Environmental Hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

Label Elements



Signal Word

Danger

Hazard Statement

Flammable liquid and vapor. May be harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing mist or vapor. Wash



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	thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage	Store in a well-ventilated place. Keep cool. 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 dermal toxicity. 100% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition / Information on Ingredients

Substances

Chemical Name	Common Name and Synonyms	CAS Number	Percent
---------------	--------------------------	------------	---------



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CARENE DELTA	3,7,7-Trimethylbicyclo(4.1.0)hept-3-ene 4,7,7-trimethyl-3-norcarene	13466-78-9	100
--------------	--	------------	-----

Additional Components

Chemical Name	Common Name and Synonyms	CAS Number	Percent
Blank		Mixture	
CYMENE PARA	1-methyl-4-propan-2-ylbenzene 4-METHYL ISOPROPYL BENZENE DOLCYMENE camphogen	99-87-6	
DIPENTENE	(+/-)-p-Mentha-1,8-diene homopolymer D,L-limonene 1-methyl-4-prop-1-en-2-ylcyclohexene	138-86-3	
PINENE BETA	6,6-dimethyl-2-methylidenebicyclo[3.1.1]heptane (1)-6,6-dimethyl-2-methylenebicyclo(3.1.1)heptane	127-91-3	
P-MENTHA-1(7),2-DIENE	3-methylidene-6-propan-2-ylcyclohexene BETA-PHELLANDRENE 4-isopropyl-1-methylene-2-cyclohexene 2-P-MENTHADIENE	555-10-2	
TERPINENE ALPHA	terpilene p-Mentha-1,3-diene 1-methyl-4-propan-2-ylcyclohexa-1,3-diene 1-Methyl-4-isopropyl-1,3-cyclohexadiene	99-86-5	
TERPINENE GAMMA	4-Isopropyl-1-methyl-1,4-cyclohexadiene p-Mentha-1,4-diene 1,4-p-Menthadiene 1-METHYL-4-(1-METHYLETHYL)-1,4-CYCLOHEXADIENE	99-85-4	
TERPINOLENE	cyclohexene, 1-methyl-4-(1-methylethylidene)-	586-62-9	



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1-METHYL-4-PROPAN-2-YLIDENECYCLOHEXENE
p-Mentha-1,4(8)-diene
P-METH-1-EN-8-YL-FORMATE
1-Methyl-4-isopropylidene-1-cyclohexene

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 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. Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of Immediate

Not available.



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Medical Attentional and Special Treatment Needed

General Advice

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.

5. Fire-Fighting Measures

Suitable Extinguishing Media Water spray, fog, CO₂, 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 facepiece operated in the positive pressure demand mode when fighting fires.

Firefighting 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.



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General Fire Hazards

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

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Keep unnecessary personnel away. Eliminate all sources of ignition. 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.

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.

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.



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Environmental Precautions

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

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

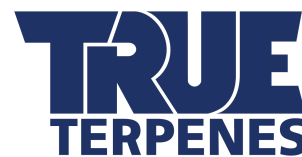
US. ACGIH Threshold Limit Values

Material	Type	Value
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CARENE DELTA (CAS 13466-78-9)	TWA	20 ppm
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Additional Components	Type	Value
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PINENE BETA (CAS 127-91-3)	TWA	20 ppm
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US. Workplace Environmental Exposure Level (WEEL) Guides

Additional Components	Type	Value
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DIPENTENE (CAS 138-86-3)	TWA	165.5 mg/m ³ 30 ppm
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Biological Limit Values

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

Exposure Guidelines

· Components with limit values that require monitoring at the workplace:

- Delta-3-carene (CAS 13466-78-9)
 - Belgium: limit value - 8 hours = 20 ppm
 - Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
 - Sweden: limit value - short term = 300 mg/m³ (50 ppm)
 - United Kingdom and Ireland: none
- beta-Pinene (CAS 127-91-3)
 - Belgium: limit value - 8 hours = 20 ppm
 - Denmark: limit value - 8 hours = 140 mg/m³ (25 ppm)
 - Denmark: limit value - short term = 280 mg/m³ (50 ppm)
 - Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
 - Sweden: limit value - short term = 300 mg/m³ (50 ppm)
- Dipentene (dl-limonene - CAS 138-86-3)
 - Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
 - Sweden: limit value - short term = 300 mg/m³ (50 ppm)
- D-limonene (CAS 5989-27-5) - one of the two isomers of dipentene (CAS 138-86-3)
 - Germany (AGS): limit value - 8 hours = 110 mg/m³ (20 ppm)
 - Germany (AGS): limit value - short term = 220 mg/m³ (40 ppm)



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Germany (DFG): limit value - 8 hours = 28 mg/m³ (5 ppm)

Germany (DFG): limit value - short term = 112 mg/m³ (20 ppm)

Paracymene (CAS 99-87-6)

Belgium: limit value - 8 hours = 100 mg/m³ (20 ppm)

Denmark: limit value - 8 hours = 135 mg/m³ (25 ppm)

Denmark: limit value - short term = 270 mg/m³ (50 ppm)

Sweden: limit value - 8 hours = 140 mg/m³ (25 ppm)

Sweden: limit value - short term = 190 mg/m³ (35 ppm)

Terpenes

Austria: limit value - 8 hours = 560 mg/m³ (100 ppm)

Austria: limit value - short term = 560 mg/m³ (100 ppm)

Denmark : limit value - 8 hours = 140 mg/m³ (25 ppm)

Denmark : limit value - short term = 280 mg/m³ (50 ppm)

Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)

Sweden: limit value - short term = 300 mg/m³ (50 ppm)

· DNEL (Derived No-Effect Level): Workers - Acute/short-term exposure

Local effects - dermal:

161 µg/cm²

· DNEL (Derived No-Effect Level): Workers - Long-term exposure Systemic effects - inhalation:

5.98 mg/m³

· DNEL (Derived No-Effect Level): General population - Acute/short-term exposure

Local effects - dermal: 81 µg/cm²

· DNEL (Derived No-Effect Level): General population - Long-term exposure

Systemic effects - inhalation: 1.06 mg/m³

Systemic effects - oral: 0.31 mg/kg bw/day

· PNEC (Predicted No-Effect Concentration) aqua (freshwater): 50 µg/L

· PNEC (Predicted No-Effect Concentration) aqua (marine water): 5 µg/L

· PNEC (Predicted No-Effect Concentration) Sewage Treatment Plant: 3.26 mg/L

· PNEC (Predicted No-Effect Concentration) sediment (freshwater): 11.88 mg/kg sediment dw

· PNEC (Predicted No-Effect Concentration) sediment (marine water): 1.19 mg/kg sediment dw



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- PNEC (Predicted No-Effect Concentration) soil: 2.48 mg/kg soil dw
- PNEC (Predicted No-Effect Concentration) oral: 1.35 mg/kg food
- Additional information:

This sheet is based on the current valid lists for occupational exposure limit values. The DNELs and PNECs values are derived from the chemical safety assessment conducted for REACH. Occupational exposure limits and DNELs are health-based but they are not necessarily set in the same way.

The primary duty is to comply with risk management measures which enable to limit exposures as much as possible and to be in line with exposure reference levels.

Appropriate Engineering Controls

Use explosion-proof ventilation equipment to stay below exposure limits. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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.



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General Hygiene Considerations

When using do not smoke. Keep away from food and drink. 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	Refer to Spec Sheet
Physical State	Liquid
Form	Liquid
Color	Refer to Spec Sheet
Odor	Characteristic
Odor Threshold	Not available
pH	Not available
Melting Point / Freezing Point	< -112 °F (< -80 °C)
Initial Boiling Point and Boiling Range	338 °F (170 °C)
Flash Point	117.0 °F (47.2 °C) Closed Cup
Evaporation Rate	Not available



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Flammability (solid, gas) Not applicable

Upper / Lower Flammability or Explosive Limits

Flammability Limit - Lower (%) Not available

Flammability Limit - Upper (%) Not available

Explosive Limit - Lower (%) Not available

Explosive Limit - Upper (%) Not available

Vapor Pressure Not available

Vapor Density Not available

Relative Density 0.87 at 20 °C

Solubility(ies)

Solubility (water) Insoluble

Partition Coefficient (n-octanol/water) log Kow = 4.38 (37°C)

Auto-ignition Temperature Not available

Decomposition Temperature Not available

Viscosity < 7 mm²/s at 20 °C Kinematic
1.3 - 1.6 mm²/s at 25 °C Dynamic

Other Information

Explosive Properties Not explosive

Molecular Formula C₁₀H₁₆



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Oxidizing Properties

Not oxidizing

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 Reaction

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.

11. Toxicological Information



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Information on Likely Routes of Exposure

Inhalation	Prolonged inhalation may be harmful.
Skin Contact	Causes skin irritation. May cause an allergic skin reaction.
Eye Contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May be harmful if swallowed. 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. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Information on Toxicological Effects

Acute Toxicity May be fatal if swallowed and enters airways.

Product	Species	Test Results
CARENE DELTA (CAS 13466-78-9)		

Acute

Oral LD50	Rat	4800 mg/kg
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Additional Components	Species	Test Results
------------------------------	----------------	---------------------

CYMENE PARA (CAS 99-87-6)		
---------------------------	--	--

Acute

Dermal LD50	Rabbit	> 5000 mg/kg
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DIPENTENE (CAS 138-86-3)

Acute

Dermal LD50	Rabbit	5 g/kg
-------------	--------	--------

Oral LD50	Rat	5 g/kg
-----------	-----	--------

PINENE BETA (CAS 127-91-3)

Acute

Oral LD50	Rat	4700 mg/kg
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TERPINENE ALPHA (CAS 99-86-5)

Acute

Oral LD50	Rat	1680 mg/kg
-----------	-----	------------

TERPINENE GAMMA (CAS 99-85-4)

Acute

Oral LD50	Rat	3650 mg/kg
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TERPINOLENE (CAS 586-62-9)

Acute

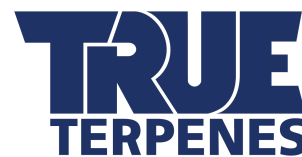
Dermal LD50	Rat	> 5 ml/kg
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Oral LD50	Rat	4390 mg/kg
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Skin Corrosion / Irritation

Causes skin irritation.

An in vitro irritation study on reconstructed human epidermis was conducted with the substance. The classification criteria were met.

Serious Eye Damage / Eye Irritation

Direct contact with eyes may cause temporary irritation.

The substance is not classified as only reversible effects were observed in an eye irritation study in rabbit (OECD 405).

Respiratory or Skin Sensitization

Respiratory Sensitization

Not a respiratory sensitizer.

Skin Sensitization

May cause an allergic skin reaction.

Skin sensitization effects were observed with the substance in the Guinea Pig Maximisation Test (GPMT - OECD 406), leading to the classification of the substance as skin sensitizer 1B.

Germ Cell Mutagenicity

Results of tests conducted with the substance and structurally related substances show that

delta-3-carene has no genotoxic potential:

- no mutagenicity observed in the Ames test (OECD 471) with the substance and gum turpentine oil (UVCN substance containing delta-3-carene),
- no genotoxicity observed in vitro in mammalian cells with gum turpentine oil (mammalian chromosome aberration test - OECD 473 and mammalian cell gene mutation test - OECD 476),
- no genotoxicity observed in vivo in mouse with alpha-pinene (erythrocyte micronucleus test - OECD 474).

Carcinogenicity

Based on a 90-day toxicity study in rat conducted with a structurally related substance alpha-pinene, the substance is not expected to be carcinogenic for humans.



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IARC Monographs. Overall Evaluation of Carcinogenicity

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

Based on available data from structurally related substances, no toxic effects for reproduction are expected from delta-3-carene based on the following results:

- no effects were observed on reproductive organs in a 90-day inhalation repeated toxicity study in rat, conducted with alpha-pinene;
- no effects were found in a teratogenicity/postnatal development study conducted in rat with an UVCB substance (rowachol) containing delta-3-carene.

Specific Target Organ Toxicity - Single Exposure

No specific target organ toxicity was observed in the LD₅₀ determination studies.

Specific Target Organ Toxicity - Repeated Exposure

The substance is not classified based on results from a 90-day inhalation toxicity study conducted in mice with a structurally related substance alpha-pinene: NOAEC = 283.24 mg/m³ (effects on urinary bladder).

Aspiration Hazard

May be fatal if swallowed and enters airways.
If swallowed accidentally, the product may enter the lungs due to its low viscosity.

Chronic Effects

Prolonged inhalation may be harmful.



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12. Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

· Toxicity to aquatic microorganisms:

Sewage containing the substance can be treated by a municipal sewage treatment plant (taking

into account the PNEC sewage treatment plant given in section 8).

This PNEC is based on the following result: $EC_{50}(3\text{ h}) = 326\text{ mg/L}$ (respiration rate - OECD 209)

Product

CARENE DELTA (CAS 13466-78-9)

Species

Test Results

Aquatic

Acute

Crustacea EC50

Daphnia magna

0.797 mg/l, 48 hours (measured concentration - OECD 202)

Additional Components

CYMENE PARA (CAS 99-87-6)

Species

Test Results

Other EC50

Pseudokirchnerella subcapitata

5.8 mg/l, 72 hours

Aquatic



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Crustacea LC50	Water flea (<i>Daphnia magna</i>)	> 4.3 - < 10 mg/l, 48 hours
Fish LC50	Fish	2 mg/l, 96 hours (<i>Oryzias latipes</i>)
	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	> 36 - < 64 mg/l, 96 hours
NOEC	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	10 mg/l, 96 hours

DIPENTENE (CAS 138-86-3)

Aquatic

Fish LC50	Carp (<i>Leuciscus idus melanotus</i>)	34 mg/l, 48 hours
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TERPINOLENE (CAS 586-62-9)

Aquatic

Crustacea LC50	<i>Daphnia magna</i>	2.55 mg/l, 48 h
Fish LC50	<i>Pimephales promelas</i>	0.72 mg/l, 96 h

Persistence and Degradability

Readily biodegradable [based on results from alpha-pinene and beta-pinene].
alpha-Pinene and beta-Pinene
Biodegradation achieved in 28 days for both substances: 76% (oxygen consumption - assay conducted according to the OECD 301 D guideline - activated sludge, domestic, non-adapted).
· vPvB: The substance is not considered to be very Persistent and very Bioaccumulative (vPvB).



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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.

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

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Transport Hazard Class(es)	3
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	Yes
Labels Required	3

ADR

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Transport Hazard Class(es)	3
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	Yes
Labels Required	3



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RID

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Transport Hazard Class(es)	3
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	Yes
Labels Required	3
Special Precautions for User	Read safety instructions, SDS and emergency procedures before handling.

DOT BULK

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Hazard Class(es)	3
Packing Group	III
Environmental Hazards	
Marine Pollutant	Yes
Packaging Exceptions	150
Packaging Bulk	242
Labels Required	3



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DOT NON-BULK

Not regulated as dangerous goods.

IATA

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Transport Hazard Class(es)	3
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	No
Labels Required	3

IMDG

UN Number	2319
UN Proper Shipping Name	TERPENE HYDROCARBONS, N.O.S. (DELTA-3-CARENE)
Transport Hazard Class(es)	3
Subsidiary Class(es)	-
Packing Group	III
Environmental Hazards	
Marine Pollutant	Yes
Labels Required	3
Transport in bulk according to	Not applicable.



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Annex II of MARPOL 73/78 and
the IBC Code

ADN; ADR; DOT BULK; IATA; IMDG; RID



Marine Pollutant



15. Regulatory Information

US Federal Regulations

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.



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Delta 3 Carene



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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

Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Skin corrosion or irritation
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



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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

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

Not listed.

International Inventories

Country(s) or Region	Inventory Name	On Inventory (yes/no)*
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	Yes



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Substances (ENCS)

Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Toxic Chemical Substances (TCS)	Yes
United States and 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

Issue Date	11/01/2018
Revision Date	New Document
Version #	00
HMIS® Ratings	
Health	2



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Flammability 2

Physical Hazard 0

Disclaimer

True Terpenes 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 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. True Terpenes 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 True Terpenes 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.

