

# (+)-Camphene

sc-234274

Material Safety Data Sheet



The Power is Question

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

(+)-Camphene

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C10-H16, "bicyclo(2.2.1)heptane, 2, 2-dimethyl-3-methylene-", "2, 2-dimethyl-3-methylenebicyclo[2.2.1]heptane", "2, 2-dimethyl-3-methylenebornane", "3, 3-dimethyl-2-methylenenorcamphane", "norbornane, 2, 2-dimethyl-3-methylene", "essential oil constituent", "camphor substitute"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability:	3	
Toxicity:	2	
Body Contact:	2	
Reactivity:	2	
Chronic:	2	

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Harmful by inhalation.

May cause SENSITISATION by skin contact.

Irritating to eyes, respiratory system and skin.

Highly flammable.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## POTENTIAL HEALTH EFFECTS

### ACUTE HEALTH EFFECTS

#### SWALLOWED

■ Accidental ingestion of the material may be damaging to the health of the individual.

■ Terpenes and their oxygen-containing counterparts, the terpenoids, produce a variety of physiological effects.

Pine oil monoterpenes, for example, produce a haemorrhagic gastritis characterised by stomach pain and bleeding and vomiting.

■ Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness.

Serious poisonings may result in respiratory depression and may be fatal.

#### EYE

■ This material can cause eye irritation and damage in some persons.

#### SKIN

■ This material can cause inflammation of the skin on contact in some persons.

■ The material may accentuate any pre-existing dermatitis condition.

■ Open cuts, abraded or irritated skin should not be exposed to this material.

■ It is likely that older pine oils become irritants from the build up of peroxides of delta-3-carene and limonene etc.

■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.

Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

#### INHALED

■ Inhalation of vapors, aerosols (mists, fumes) or dusts, generated by the material during the course of normal handling, may be harmful.

■ The material can cause respiratory irritation in some persons.

The body's response to such irritation can cause further lung damage.

■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

■ Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas.

Vapor is heavier than air and may displace and replace air in breathing zone, acting as a simple asphyxiant.

■ The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing.

Before starting consider control of exposure by mechanical ventilation.

## CHRONIC HEALTH EFFECTS

■ Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.

Skin contact with the material is more likely to cause a sensitization reaction in some persons compared to the general population.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.

Essential oils and isolates derived from the Pinacea family, including Pinus and Abies genera, should only be used when the level of peroxides is kept to the lowest practicable level, for instance by adding antioxidants at the time of production. Such products should have a peroxide value of less than 10 millimoles peroxide per liter. Based on the published literature mentioning sensitising properties when containing peroxides (Food and Chemical Toxicology 11,1053(1973); 16,843(1978); 16,853(1978).

In the presence of air, a number of common flavour and fragrance chemicals can form peroxides surprisingly fast. Antioxidants can in most cases minimise the oxidation.

Fragrance terpenes are generally easily oxidised in air. Non-oxidised limonene, linalool and caryophyllene turned out to be very weak sensitizers, however after oxidation limonene hydroperoxide and linalool hydroperoxide are strong sensitizers. Of the patients tested 2.6% showed positive reaction to oxidised limonene, 1.3% to oxidised linalool, 1.1% to linalool hydroperoxide, 0.5% to oxidised caryophyllene, while testing with caryophyllene oxide and oxidised myrcene resulted in few positive patch tests. 2/3 of the patients reacting positive to oxidised terpenes had fragrance related contact allergy and/or positive history for adverse reactions to fragrances.

As well as the hydroperoxides produced by linalol, limonene and delta-3-carene other oxidation and resinification effects progressively causes other fairly major changes in essential oil quality over time. Autoxidation of fragrance terpenes contributes greatly to fragrance allergy, which emphasizes the need of testing with compounds that patients are actually exposed to and not only with the ingredients originally applied in commercial formulations.

There is limited evidence that, skin contact with this product is more likely to cause a sensitization reaction in some persons compared to the general population.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
camphene	79-92-5	>98

## Section 4 - FIRST AID MEASURES

## SWALLOWED

· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

## EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

## SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

## INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

## NOTES TO PHYSICIAN

■ Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not available.
Specific Gravity (water=1):	0.8422
Lower Explosive Limit (%):	Not available.

## EXTINGUISHING MEDIA

■ For SMALL FIRES:

Dry chemical, CO<sub>2</sub>, water spray or foam.

For LARGE FIRES:

Water-spray, fog or foam.

## FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.

· Wear breathing apparatus plus protective gloves.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 1000 metres in all directions.

## GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

· Flammable solid which burns and propagates flame easily, even when partly wetted with water.

· Any source of ignition, i.e. friction, heat, sparks or flame, may cause fire or explosion.

Combustion products include: carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

## FIRE INCOMPATIBILITY

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

## PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

Respirator:

Particulate dust filter.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

· Remove all ignition sources.

· DO NOT touch or walk through spilled material.

### MAJOR SPILLS

■ CARE: Absorbent material wet with occluded oil must be wet with water as they may auto-oxidize, become self heating and ignite.

Some oils slowly oxidize when spread in a film and oil on cloths, mops, absorbents may auto-oxidize and generate heat, smoulder, ignite and burn. In the workplace oily rags should be collected and immersed in water.

· Clear area of personnel and move upwind.

· Alert Emergency Responders and tell them location and nature of hazard.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

■ Contains low boiling substance:

Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.

· Check for bulging containers.

· Vent periodically.

· Avoid all personal contact, including inhalation.

· Wear protective clothing when risk of overexposure occurs.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers.

- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

## RECOMMENDED STORAGE METHODS

- For low viscosity materials and solids: Drums and jerricans must be of the non-removable head type. Where a can is to be used as an inner package, the can must have a screwed enclosure.

## STORAGE REQUIREMENTS

- FOR MINOR QUANTITIES:

- Store in an indoor fireproof cabinet or in a room of noncombustible construction

- Provide adequate portable fire-extinguishers in or near the storage area.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

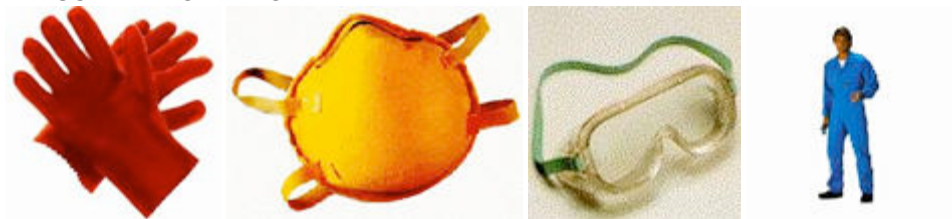
### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
Canada - Alberta Occupational Exposure Limits	camphene (Turpentine and selected monoterpenes)	20	111						
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	camphene (Turpentine and selected monoterpenes)	20		30					SEN
US ACGIH Threshold Limit Values (TLV)	camphene (Particles (Insoluble or Poorly Soluble) [NOS] Respirable particles)		3						See Appendix B current TLV/BEI Book
US ACGIH Threshold Limit Values (TLV)	camphene (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10						See Appendix B current TLV/BEI Book
Canada - Ontario Occupational Exposure Limits	camphene (Specified (PNOS))		3 (R)						
Canada - British Columbia Occupational Exposure Limits	camphene (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))		10 (N)						
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	camphene (Particulates Not Otherwise Classified (PNOC))		10						
US - Washington Permissible exposure limits of air contaminants	camphene (Particulates not otherwise regulated - Respirable fraction)		5		10				

US - Washington Permissible exposure limits of air contaminants	camphene (Particulates not otherwise regulated - Total particulate)	10	20	
Canada - Nova Scotia Occupational Exposure Limits	camphene (Particles (Insoluble or Poorly Soluble) [NOS] Respirable particles)	3		See Appendix B current TLV/BEI Book
Canada - Nova Scotia Occupational Exposure Limits	camphene (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)	10		See Appendix B current TLV/BEI Book
US - California Permissible Exposure Limits for Chemical Contaminants	camphene (Particulates not otherwise regulated Respirable fraction)	5		(n)
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	camphene (Particulates not otherwise regulated Respirable fraction)	5		
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	camphene (Particulates not otherwise regulated (PNOR)(f)- Respirable fraction)	5		
US - Michigan Exposure Limits for Air Contaminants	camphene (Particulates not otherwise regulated, Respirable dust)	5		
Canada - Prince Edward Island Occupational Exposure Limits	camphene (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)	10		See Appendix B current TLV/BEI Book

ENDOELTABLE

## PERSONAL PROTECTION



## RESPIRATOR

BR2

Consult your EHS staff for recommendations

## EYE

- Safety glasses with side shields.
- Chemical goggles.

## HANDS/FEET

■ NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:

- frequency and duration of contact,

- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Wear physical protective gloves, eg. leather.

## OTHER

- Overalls.
- Eyewash unit.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

## ENGINEERING CONTROLS

■ For large scale or continuous use:

- Spark-free, earthed ventilation system, venting directly to the outside and separate from usual ventilation systems
- Provide dust collectors with explosion vents.

Care: Atmospheres in bulk storages and even apparently empty tanks may be hazardous by oxygen depletion. Atmosphere must be checked before entry.

Requirements of State Authorities concerning conditions for tank entry must be met. Particularly with regard to training of crews for tank entry; work permits; sampling of atmosphere; provision of rescue harness and protective gear as needed.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.

- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Does not mix with water.

Floats on water.

State	DIVIDED SOLID	Molecular Weight	136.23
Melting Range (°F)	123.8- 125.6	Viscosity	Not Applicable
Boiling Range (°F)	316.4.5- 318.2.5	Solubility in water (g/L)	Immiscible
Flash Point (°F)	93.992	pH (1% solution)	Not applicable
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not available.	Specific Gravity (water=1)	0.8422
Lower Explosive Limit (%)	Not available.	Relative Vapor Density (air=1)	>1
Volatile Component (%vol)	Not available.	Evaporation Rate	Not available

### APPEARANCE

Moist white waxy solid with insipid odour; does not mix with water. Soluble in ether, cyclohexanone, cyclohexene, dioxane, chloroform and alcohol. Volatilises on exposure to air. Occurs as the dl-, d- and l- form (variously +/-, + or - ).

log Kow 4.02

Material	Value
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## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.

### STORAGE INCOMPATIBILITY

■ HAZARD: Rags wet / soaked with unsaturated hydrocarbons / drying oils auto oxidize; may generate heat and in-time smoulder and ignite.

Oily cleaning rags should be collected regularly and immersed in water.

Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

CAMPHENE

### TOXICITY AND IRRITATION

CAMPHENE:

■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
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Inhalation (Rat) LC50: 17100 mg/m<sup>3</sup>/4h

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's edema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

#### For bicyclic terpenes:

Acute toxicity: The literature abounds with clinical reports of accidental and intentional acute poisoning with pinene-based turpentine.

Rat oral LD50 values are available for alpha-pinene, beta-pinene, camphene and turpentine oil and indicate these materials to be very low in oral acute toxicity with LD50 values in the range from 3388 mg/kg to greater than 5000 mg/kg. Rabbit dermal LD50 values similarly indicate very low toxicities with values greater than the limit doses of 2000 or 5000 mg/kg.

Acute inhalation toxicity has been measure in different animal species. The acute LC50 was reported to be 13,500 mg/m<sup>3</sup> in rats, 13,500 mg/m<sup>3</sup> in guinea pigs, and 9000 mg/m<sup>3</sup> in mice. The acute inhalation LC50 of commercial grade turpentine in Wistar rats is reported to be in the range of 12,000-20,000 mg/m<sup>3</sup> for 1 to 6 hour exposures and the LC50 for a 2-hour exposure in Swiss-Webster mice is 29,000 mg/m<sup>3</sup>. Based on these results the acute oral, dermal, and inhalation toxicities of bicyclic terpene hydrocarbons is concluded to be low.

Repeat dose toxicity: A 28-day repeat dose study has been performed with camphene according to an OECD Guideline 407 in both sexes of Wistar rats. Animals of both sexes at the 1000 mg/kg bw/day dose exhibited vacuolization of hepatocytes and increase liver weights. Male rats also exhibited alpha-2-microglobulin-type nephrotoxicity at all dose levels.

Subsequent investigations have shown that the alpha-2-microglobulin nephropathy found in the F344/N male rat does not develop in mammals that do not express the hepatic form of alpha-2-microglobulin (e.g. other strains of rats, mice, dogs, humans). Therefore, the nephrotoxicity observed in the camphene study in male F344 rats is not relevant to the human health risk assessment. Based on liver toxicity, the NOAEL for this study is concluded to be 250 mg/kg bw/day

Reproductive toxicity: In the a-animal species study, no reproductive effects were observed when dose levels of up to 260 to 600 mg/kg bw of an essential oil predominantly composed of bicyclic terpene hydrocarbons (alpha-pinene, beta-pinene, and sabinene) was administered daily to mice, rats, or hamsters during gestation. When this data is combined with the fact that no adverse effects were observed to the reproductive organs in a 28-day study with camphene at dose levels up to 250 mg/kg bw/day, it is concluded that bicyclic terpene hydrocarbons including alpha-pinene and beta-pinene are not reproductive toxicants

Two ninety day inhalation studies have been performed for alpha-pinene in which a full complement of male and female sex organs and tissues were subjected to histopathological examination. Both studies reported no microscopic changes that could be associated with exposure to the test substance. Taking into account the lack of any effects to females in a earlier teratology study, the absence of any maternal or developmental effects in a reproductive/developmental study of a pinene-based oil and for a structurally related monoterpene hydrocarbon, myrcene, it can be concluded that the members of this category show no significant reproductive or developmental toxicity

Developmental toxicity: Based on the NOAELs for maternal and developmental toxicity in studies with camphene (250 and 1000 mg/kg bw/day) and a terpene hydrocarbon mixture containing alpha- and beta-pinene and camphene (688 mg/kg bw/day), and the lack of any signs of maternal or developmental toxicity in a mice,

rats, or hamsters given 260 to 600 mg/kg bw/day of a mixture composed primarily (>80%) of alpha- and beta-pinene and sabinene, it is concluded that bicyclic terpene hydrocarbons are not maternal or developmental toxicants.

#### Genotoxicity:

In vitro: In vitro genotoxicity assays available for alpha-pinene, beta-pinene and camphene demonstrate that these substances have a little, if any, genotoxic potential. In standard Ames assays of alpha-pinene, beta-pinene and camphene, Salmonella typhimurium strains TA97, TA98, TA100, TA1535, TA1537, and TA1538 provided no evidence of mutagenicity at any dose tested.

In vivo: Based on the lack of any evidence of genotoxicity in numerous in vitro assays with and without metabolic activation, it is unlikely that any of these bicyclic terpenes would exhibit a significant genotoxic potential in vivo.

No significant acute toxicological data identified in literature search.

## Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

#### Ecotoxicity

Ingredient  
camphene

Persistence: Water/Soil  
HIGH

Persistence: Air

Bioaccumulation  
LOW

Mobility  
MED



## Section 13 - DISPOSAL CONSIDERATIONS

### US EPA Waste Number & Descriptions

#### A. General Product Information

Ignitability characteristic: use EPA hazardous waste number D001 (waste code I)

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

! Puncture containers to prevent re-use and bury at an authorized landfill.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

## Section 14 - TRANSPORTATION INFORMATION



DOT:

Symbols: G Hazard class or Division: 4.1

Identification Numbers: UN1325 PG: II

Label Codes: 4.1 Special provisions: A1, IB8,

IP2, IP4,

T3, TP33

Packaging: Exceptions: 151 Packaging: Non- bulk: 212

Packaging: Exceptions: 151 Quantity limitations: 15 kg

Passenger aircraft/rail:

Quantity Limitations: Cargo 50 kg Vessel stowage: Location: B aircraft only:

Vessel stowage: Other: None

Hazardous materials descriptions and proper shipping names:

Flammable solids, organic, n.o.s.

### Air Transport IATA:

ICAO/IATA Class: 4.1 ICAO/IATA Subrisk: None

UN/ID Number: 1325 Packing Group: II

Special provisions: A3

Cargo Only

Packing Instructions: 417 Maximum Qty/Pack: 50 kg

Passenger and Cargo Passenger and Cargo

Packing Instructions: 415 Maximum Qty/Pack: 15 kg

Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity

Packing Instructions: Y415 Maximum Qty/Pack: 5 kg

Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S. \*(CONTAINS CAMPHENE)

### Maritime Transport IMDG:

IMDG Class: 4.1 IMDG Subrisk: None

UN Number: 1325 Packing Group: II

EMS Number: F-A , S-G Special provisions: 274 915

Limited Quantities: 1 kg Marine Pollutant: Yes

Shipping Name: FLAMMABLE SOLID, ORGANIC, N.O.S.

## Section 15 - REGULATORY INFORMATION

**camphene (CAS: 79-92-5, 5794-03-6, 5794-04-7) is found on the following regulatory lists;**

"Canada Domestic Substances List (DSL)", "International Fragrance Association (IFRA) Survey: Transparency List", "OECD Representative List of High Production Volume (HPV) Chemicals", "OSPAR List of Substances of Possible Concern", "US - Maine Chemicals of High Concern List", "US - New Jersey Right to Know Hazardous Substances", "US EPA High Production Volume Program Chemical List", "US Food Additive



## Section 16 - OTHER INFORMATION

### ND

Substance CAS Suggested codes camphene 79- 92- 5 camphene 5794- 03- 6 camphene 5794- 04- 7

### Ingredients with multiple CAS Nos

Ingredient Name CAS camphene 79-92-5, 5794-03-6, 5794-04-7

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■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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