

1. Identification

Product identifier 1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

Other means of identification

BRI Product Code 160

CAS number 3391-86-4

FEMA number 2805

Synonyms 1-Octen-3-ol * Matsutake alcohol * Mushroom Alcohol * Pentyl vinyl carbinol * Vinyl pentyl carbinol

Recommended use flavors and fragrances
For Manufacturing Use Only

Recommended restrictions Not for use in Tobacco or Nicotine delivery device applications and/or products.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Bedoukian Research

Address 6 Commerce Drive
Danbury, CT 06810
United States

Telephone 1-203-830-4000

Website www.bedoukian.com

E-mail customerservice@bedoukian.com

Contact person Joseph Bania

Emergency phone number Chemtrec (North America) 1-800-424-9300
Chemtrec (International) 1-703-527-3887

2. Hazard(s) identification

Physical hazards Flammable liquids Category 4

Health hazards Acute toxicity, oral Category 3
Acute toxicity, inhalation Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 2
Hazardous to the aquatic environment, long-term hazard Category 3

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Combustible liquid. Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from flames and hot surfaces-No smoking. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

| | |
|--|---|
| Response | If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. |
| Storage | Store in a well-ventilated place. Keep cool. Store locked up. |
| Disposal | Dispose of contents/container in accordance with relevant area regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Substances

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|------------|-----|
| 1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC | 1-Octen-3-ol Matsutake alcohol Mushroom Alcohol Pentyl vinyl carbinol Vinyl pentyl carbinol | 3391-86-4 | 100 |

Stabilizers

| Chemical name | Common name and synonyms | CAS number | % |
|----------------------------|--------------------------|------------|-----|
| synthetic alpha tocopherol | | 10191-41-0 | 0.1 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Occupational Exposure Limits for stabilizers are listed in Section 8.

4. First-aid measures

| | |
|---|--|
| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| Most important symptoms/effects, acute and delayed | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| 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. |

5. Fire-fighting measures

| | |
|--|--|
| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Combustible liquid. |

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS). Recommended Packaging: Glass, Plastic or Phenolic Lined Steel. Store tightly sealed under inert gas 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.

Biological limit values

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

Appropriate engineering controls

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. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

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.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

| | |
|---|---|
| Color | colorless to pale yellow |
| Odor | powerful herbaceous and mushroom odor. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | 356.56 °F (180.31 °C) US EPA. 2014. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. US EPA, Washington, DC, USA. |
| Flash point | 145 °F (63 °C) Closed Cup |
| Evaporation rate | Not available. |
| 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 | 0.15 mmHg at 20°C; US EPA. 2014. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. US EPA, Washington, DC, USA. |
| Vapor density | 4.4 Relative to air; air = 1 |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | 2.6 US EPA. 2014. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. US EPA, Washington, DC, USA. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Density | 0.831 - 0.839 g/cm ³ |
| Explosive properties | Not explosive. |
| Flammability class | Combustible IIIA estimated |
| Molecular formula | C ₈ H ₁₆ O |
| Molecular weight | 128.21 |
| Oxidizing properties | Not oxidizing. |
| Specific gravity | 0.831 - 0.839 at 25°C |

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 | Hazardous polymerization does not occur. |
| 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 are known. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | No adverse effects due to inhalation are expected. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye irritation. |

Ingestion Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Toxic if swallowed.

| Product | Species | Test Results |
|---|---------|--------------|
| 1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC (CAS 3391-86-4) | | |
| Acute | | |
| Dermal | | |
| <i>Liquid</i> | | |
| LD50 | Rabbit | 3300 mg/kg |
| Inhalation | | |
| <i>Mist</i> | | |
| LD50 | Rat | 3.72 mg/l |
| Oral | | |
| <i>Liquid</i> | | |
| LD50 | Rat | 175 mg/kg |

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Irritation Corrosion - Skin

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

10 % Patch test, Vehicle Petrolatum.
 Result: No irritation observed.
 Species: Human
 Organ: Skin
 Notes: RIFM

100 % OECD 404, Slight to well-defined erythema and slight edema noted in 3/3 animals. All effects reversible by day 7.
 Result: Irritation noted.
 Species: Rabbit
 Organ: Skin
 Test Duration: 4 hours
 Severity: mild
 Notes: BRI study

Serious eye damage/eye irritation Causes serious eye irritation.

Irritation Corrosion - Eye

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

100 % OECD 405, 3 animals tested. Moderate redness and chemosis. Corneal effects resolved by day 6 in 2 and day 7 in 1.
 Result: Irritation noted.
 Species: Rabbit
 Organ: Eye
 Severity: moderate
 Notes: BRI study

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Skin sensitization

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

10 % Patch test, Vehicle Petrolatum.
 Result: Not sensitizing.
 Species: Human
 Organ: Skin
 Notes: RIFM

Skin sensitization

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

100 % OECD 406, Tested at 10%, 25%, 50%, and 100%.
 Vehicle for dilutions 80% Ethanol/Water.
 Result: Not sensitizing.
 Species: Guinea pig
 Organ: Skin

Germ cell mutagenicity

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

Germ cell mutagenicity: Ames test

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

20 - 5000 µg/plate Plate incorporation, Strain WP2uvrA with and without metabolic activation. Vehicle DMSO.
 Result: Not mutagenic.
 Species: Escherichia coli
 Notes: RIFM

20 - 5000 µg/plate Plate incorporation, Strains TA 1535, TA 1537, TA 98, TA 100 with and without metabolic activation. Vehicle DMSO.
 Result: Not mutagenic.
 Species: Salmonella typhimurium
 Notes: RIFM

4 - 2500 µg/plate Preincubation, Strain WP2uvrA with and without metabolic activation. Vehicle DMSO.
 Result: Not mutagenic.
 Species: Escherichia coli
 Notes: RIFM

4 - 2500 µg/plate Preincubation, Strains TA 1535, TA 1537, TA 98, TA 100 with and without metabolic activation. Vehicle DMSO.
 Result: Not mutagenic.
 Species: Salmonella typhimurium
 Notes: RIFM

Carcinogenicity

Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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.

Aspiration hazard

Not an aspiration hazard.

12. Ecological information**Ecotoxicity**

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Product | Species | Test Results |
|---|---------|-----------------------------------|
| 1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC (CAS 3391-86-4) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Algae | EC10 | Algae 1.51 mg/l, 72 hr OECD 201 |
| | EC50 | Algae 7.05 mg/l, 72 hr OECD 201 |
| Crustacea | EC10 | Daphnia 4.07 mg/l, 48 hr OECD 202 |
| | EC50 | Daphnia 8.02 mg/l, 48 hr OECD 202 |
| Fish | LC50 | Fish 1.76 mg/l, 96 hr OECD 203 |
| | NOEC | Fish 0.464 mg/l, 96 hr OECD 203 |

* Estimates for product may be based on additional component data not shown.

Persistence and degradability The product is readily biodegradable.

Biodegradability

Percent degradation (Aerobic biodegradation-ready)

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

OECD 301F, 30 mg/L. 10-day criteria fulfilled.

Result: Readily biodegradable.

Species: Activated sludge of a predominantly domestic sewage

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

1-OCTEN-3-OL, (AMYL VINYL CARBINOL) FCC

2.6, US EPA. 2014. Estimation Programs Interface Suite™ for Microsoft® Windows, v 4.11. US EPA, Washington, DC, USA.

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

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. 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.

14. Transport information

DOT

UN number

UN2810

UN proper shipping name

Toxic liquid, organic, n.o.s. (1-Octen-3-ol)

Transport hazard class(es)

Class

6.1(PGIII)

Subsidiary risk

-

Label(s)

6.1

Packing group

III

Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.

Special provisions

IB3, T7, TP1, TP28

Packaging exceptions

153

Packaging non bulk

203

Packaging bulk

241

IATA

UN number

UN2810

UN proper shipping name

Toxic liquid, organic, n.o.s. (1-Octen-3-ol)

Transport hazard class(es)

Class

6.1(PGIII)

Subsidiary risk

-

Packing group

III

Environmental hazards

No.

ERG Code

6L

Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft

Allowed with restrictions.

Cargo aircraft only

Allowed with restrictions.

IMDG

UN number

UN2810

UN proper shipping name TOXIC LIQUID, ORGANIC, N.O.S. (1-Octen-3-ol)

Transport hazard class(es)

Class 6.1(PGIII)

Subsidiary risk -

Packing group III

Environmental hazards

Marine pollutant No.

EmS F-A, S-A

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations

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

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

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 Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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 Substances (ENCS) | Yes |
| 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 & 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 25-May-2015

Revision date 23-October-2018

Version # 06

Disclaimer Bedoukian Research 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.

Revision information Hazard(s) identification: Disposal
Toxicological Information: Toxicological Property Data
GHS: Classification