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|--------------|---|
| HEALTH | 2 |
| FLAMMABILITY | 2 |
| REACTIVITY | 0 |

Section 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

| | |
|----------------|--------------------------------|
| Product Name | Delta-3-Carene, Natural |
| Product Number | 0382100 |
| CAS-No. | 13466-78-9 |

1.2 Product Recommended Use **Flavorings**

1.3 Preparation Information

| | |
|---------|--|
| Company | Aurochemicals 7 Nicoll Street Washingtonville, NY 10992- USA |
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| | |
|-----------|--------------|
| 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 the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226

Skin irritation (Category 2), H315

Skin sensitisation (Category 1), H317

Aspiration hazard (Category 1), H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label Elements, Including precautionary statements

Pictogram



Signal Word

Warning

Hazard Statement(s)

| | |
|------|---|
| H226 | Flammable liquid and vapour |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |

Precautionary Statement(s)

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| P210 | Keep away from heat/sparks/open flames/hot surfaces – No smoking |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment |
| P241 | Use explosion proof electrical/ventilating/lighting equipment |

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| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P261 | Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. |
| P264 | Wash skin thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/Physician |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P331 | Do NOT induce vomiting |
| P33+P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| P313 | Specific treatment (see supplemental first aid instructions on this label). If skin irritation occurs: Get medical advice/ attention. |
| P332+P313 | Take off contaminated clothing and wash before reuse. |
| P362 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. |
| P370+P378 | Store in a well-ventilated place. Keep container tightly closed. |
| P403 +P233 | Store in a well-ventilated place. Keep cool. |
| P403 +P235 | Store locked up. |
| P405 | Dispose of contents/container to an approved waste disposal plant |
| P501 | |

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

None

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

| | |
|----------------------|---|
| Synonym | 3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene |
| Formula : C10H16 | Molecular weight : 136.23 g/mol |
| CAS-No. : 13466-78-9 | EC-No. : 236-719-3 |

Hazardous Components

| Component | Classification | Concentration |
|----------------|--|---------------|
| Delta 3-Carene | Flam. Liq. 3; Skin Irrit. 2; Skin Sens. 1; Asp. Tox. 1; H226, H304, H315, H317 | <= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

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| Contact with skin: | Consult a physician. 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 minutes and consult a physician. |
| 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

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| 5.1 Extinguishing Media Suitable Extinguishing Media | For small (incipient) fires, use water spray, alcohol-resistant foam, dry chemical 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 | Use water spray to cool unopened containers. |

Section 6: ACCIDENTAL RELEASE MEASURES

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| 6.1 Personal precautions, protective equipment and emergency procedures | Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. |
| 6.2 Environmental precautions | For personal protection see section 8. Prevent further leakage or spillage. Discharge into the environment must be avoided. Do not allow to enter drains or sewage system. |
| 6.3 Methods and materials for containment and clean up | Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). |
| 6.4 Reference to other sections For disposal see section 13. | |

Section 7: HANDLING AND STORAGE

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| 7.1 Precautions for safe handling | Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. |
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- 7.2 **Conditions for Safe storage** For precautions see section 2.2.
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.
Air sensitive. Handle under inert gas. Protect from moisture.
Storage class (TRGS 510): Flammable liquids.
- 7.3 **Specific End use(s)** Flavorings

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters Components with workplace control parameters

| Component | CAS-No. | Value | Control parameters | Basis |
|----------------|----------------|---|--------------------|---|
| Delta 3 Carene | 13466-78-9 | TWA | 20.000000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Central Nervous System impairment Upper Respiratory Tract irritation Lung damage Skin irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen Sensitizer varies | | |

8.2 Exposure Controls

Appropriate Engineering Controls Handle in accordance with good industrial hygiene and safety practices. Wash hands before breaks and at the end of the workday.

Personal protective equipment

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

- Eye/face protection** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin protection** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Full contact:**
 Material: Fluorinated rubber
 Minimum layer thickness: 0.7 mm
 Break through time: 480 min
 Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)
- Splash contact:**
 Material: Nature latex/chloroprene
 Minimum layer thickness: 0.6 mm
 Break through time: 30 min
 Material tested: Lapren® (KCL 706 / Aldrich Z677558, Size M)
 data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is

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| | advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. |
| Body protection | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.. |
| Respiratory protection | Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| 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

| | | |
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| a | Appearance | Colorless to pale yellow liquid |
| b | Odor | Citrus sweet |
| c | Odor Threshold | No data available |
| d | pH | No data available |
| e | Melting Point /Freezing Point | < -79.99 °C at 1,013 hPa (760)mmHg) - OECD Test Guideline 102 |
| f | Initial boiling point and boiling range | 168 - 174 °C at 940 hPa (705 mmHg) - lit. |
| g | Flash Point | 46 °C at ca.1,013 hPa (760 mmHg) - closed cup |
| h | Evaporation Rate | No data available |
| i | Flammability (Solid, Gas) | No data available |
| j | Upper/lower Flammability Limit | No data available |
| k | Vapor pressure | 2.73 hPa (2.05 mmHg) at 20 °C (68 °F) - OECD Test Guideline 104 |
| l | Vapor density | No data available |
| m | Relative density @25°C | 0.860-0.868 |
| n | Water Solubility | 0.0005 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - slightly soluble |
| o | Partition coefficient: n-octanol/water | log Pow: 4.38 at 37 °C (99 °F) - OECD Test Guideline 117 |
| p | Auto-ignition Temp. | 260 °C (500 °F) at 998 hPa (749 mmHg) |
| q | Decomposition Temp. | No data available |
| r | Viscosity | No data available |
| s | Explosive properties | No data available |
| t | 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 | Heat, flames and sparks. |

Safety Data Sheet

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|---------------------------------------|---|
| 10.5 Incompatible materials | Strong oxidizing agents |
| 10.6 Hazardous decomposition products | Other decomposition products - No data available In the event of fire: see section 5 |
| 10.7 Further Information | No data available |

Section 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

LD50 Oral - Rat - 4,800 mg/kg

Skin corrosion/irritation No data available

Serious eye damage/eye irritation Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitization Guinea pig

Result: May cause sensitisation by skin contact.

Germ Cell mutagenicity Ames test

S. typhimurium; Result: negative

Carcinogenicity

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

Signs and Symptoms of Exposure Gastrointestinal disturbance, Nausea, Headache, Vomiting

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

Synergistic effects No data available

RTECS: Not available

Section 12: ECOLOGICAL INFORMATION

Safety Data Sheet

| | | |
|------|---|---|
| 12.1 | Toxicity | No data available |
| 12.2 | Persistence and degradability | aerobic - Exposure time 28 d Result: 53 % - Not readily biodegradable. (OECD Test Guideline 301B) |
| 12.3 | Bioaccumulative potential | No data available |
| 12.4 | Mobility in soil | No data available |
| 12.5 | Results of PBT and vPvB assessment | PBT/vPvB assessment not available as chemical safety assessment not required / not conducted |
| 12.6 | Other adverse effects | No data available |

Section 13: DISPOSAL CONSIDERATIONS

| | | |
|------|-------------------------|--|
| 13.1 | Disposal methods | |
| | Product: | Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. |
| | Packaging | Dispose of as unused product |

Section 14: TRANSPORT INFORMATION

| | |
|-----------------|--|
| DOT (US) | UN number: 2319 Class: 3 Packing group: III Proper shipping name: Terpene hydrocarbons, n.o.s. Reportable Quantity (RQ): Poison Inhalation Hazard: No |
| IMDG | UN number: 2319 Class: 3 Packing group: III EMS-No: F-E, S-D Proper shipping name: TERPENE HYDROCARBONS, N.O.S. |
| IATA | UN number: 2319 Class: 3 Packing group: III Proper shipping name: Terpene hydrocarbons, n.o.s. |

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 | Fire Hazard, Acute Health Hazard |
| Massachusetts Right to Know components | No components are subject to the Massachusetts Right to Know Act |
| Pennsylvania Right to Know components | Delta 3-Carene CAS-No.13466-78-9 Revision Date: |
| New Jersey Right to Know components | Delta 3-Carene CAS-No.13466-78-9 Revision Date: |
| California Prop. 65 components | This product does not contain any chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm. |

Section 16: OTHER INFORMATION

Safety Data Sheet

Full text of H-Statements referred to under sections 2 and 3.

Asp. Tox. Aspiration hazard

Flam. Liq. Flammable liquids

H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

Skin Irrit. Skin irritation

Skin Sens. Skin sensitisation

HMIS Rating

Health hazard: 2

Chronic Health Hazard:

Flammability: 2

Physical Hazard 0

NFPA Rating

Health hazard: 2

Fire Hazard: 2

Reactivity Hazard: 0

Further Information

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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