# SECTION 1: Identification

### 1.1. Identification

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>VALENCENE tech</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td>ENEV4450</td>
</tr>
<tr>
<td><strong>Product form</strong></td>
<td>Substance</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Formula</strong></td>
<td>C15H24</td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
<td>(2R)-8,8,8A-TRIMETHYL-2-PROP-1-EN-2-YL-1,2,3,4,6,7-HEXAHYDRONAPHTHALENE</td>
</tr>
<tr>
<td><strong>Chemical family</strong></td>
<td>HYDROCARBON</td>
</tr>
</tbody>
</table>

### 1.2. Recommended use and restrictions on use

**Recommended use**: Chemical intermediate

### 1.3. Supplier

**GELEST, INC.**
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

**1.4. Emergency telephone number**

**Emergency number**: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

# SECTION 2: Hazard(s) Identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

<table>
<thead>
<tr>
<th><strong>Skin corrosion/irritation</strong></th>
<th>Category 2</th>
<th>H315</th>
<th>Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skin sensitization, Category 1</strong></td>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
<td></td>
</tr>
<tr>
<td><strong>Hazardous to the aquatic environment - Chronic Hazard Category 1</strong></td>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
<td></td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

- **Hazard pictograms (GHS US)**: 
- **Signal word (GHS US)**: Warning
- **Hazard statements (GHS US)**: H315 - Causes skin irritation
- **Precautionary statements (GHS US)**: P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  - P261 - Avoid breathing vapors.
  - P264 - Wash hands thoroughly after handling.
  - P272 - Contaminated work clothing must not be allowed out of the workplace.
  - P273 - Avoid release to the environment.
  - P302+P352 - If on skin: Wash with plenty of soap and water
  - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
  - P362+P364 - Take off contaminated clothing and wash it before reuse.
  - P363 - Wash contaminated clothing before reuse.
  - P391 - Collect spillage.
  - P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable
SECTION 3: Composition/Information on ingredients

3.1. Substances

Name: VALENCE tech
CAS-No.: 4630-07-3

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valencene</td>
<td>(CAS-No.) 4630-07-3</td>
<td>75 - 85</td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>Orange Extractives</td>
<td>(CAS-No.) 8028-48-6</td>
<td>15 - 25</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1, H317</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation: No information available.
Symptoms/effects after skin contact: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: No information available.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


Unsuitable extinguishing media: None known.

5.2. Specific hazards arising from the chemical

Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Wear protective equipment as described in Section 8.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
6.3. Methods and material for containment and cleaning up

For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up: Collect spillage. Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors.

Hygiene measures: Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed.

Incompatible materials: Strong acids. Strong oxidizing agents.

Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls: Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: Liquid.

Molecular mass: 204.35 g/mol

Color: Colorless to pale yellow.

Odor: Citrus Aroma.

Odor threshold: No data available

Refractive index: 1.49 - 1.51

pH: No data available

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: 123 °C @ 11 mm Hg

Flash point: > 93 °C

Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: < 2 mm Hg @ 25°C
Relative vapor density at 20 °C: No data available
Relative density: 0.9 - 0.924
Solubility: Insoluble in water.
Log Pow: No data available
Log Kow: No data available
Viscosity: kinematic: No data available
Viscosity: dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosion limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials
Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products
Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified
Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified

Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: Not classified
Specific target organ toxicity – repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after inhalation: No information available.
Symptoms/effects after skin contact: Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: No information available.

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability
No additional information available
12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.
Effect on the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
Not regulated for transport.
14.2. UN proper shipping name
Dangerous for the environment: Yes
Marine pollutant: Yes

14.3. Additional information
Other information: No supplementary information available.

Transport by sea
No additional information available
Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Valencene (4630-07-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations
CANADA
Valencene (4630-07-3)
Listed on the Canadian DSL (Domestic Substances List)
Orange Extractives (8028-48-6)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
Valencene (4630-07-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Orange Extractives (8028-48-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
VALENCENE tech
Safety Data Sheet

Valencene (4630-07-3)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Orange Extractives (8028-48-6)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Korean ECL (Existing Chemicals List)

15.3. US State regulations
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

| H226 | Flammable liquid and vapor |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H410 | Very toxic to aquatic life with long lasting effects |

Abbreviations and acronyms:
- Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OEC: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating
- Health: 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & III A)
- Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 06/05/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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