1. Identification of the substance | preparation | company | undertaking

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Product name</th>
<th>Other means of identification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alpha Phellandrene</td>
<td>Product code: ISO-APH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UN/ID no: N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Synonyms: N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Registration number(s): N/A</td>
</tr>
</tbody>
</table>

Recommended use of the chemical and restrictions on use

- **Recommended Use**: Industry Use
- **Uses advised against**: No information available

Details of the supplier of the safety data sheet

324 Airport Industrial Dr. Ypsilanti, MI 48198

---

2. Hazard Identification

**Classification**

<table>
<thead>
<tr>
<th>Aspiration toxicity</th>
<th>Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

**Label Elements**

EMERGENCY OVERVIEW

**DANGER**

**Hazard Statements:**
May be fatal if swallowed and enters airways.
Flammable liquid and vapor
Precautionary Statements - Prevention
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/..? /equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/eye protection/face protection

Precautionary Statements - Response
IF exposed or if you feel unwell
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information
• Causes mild skin irritation
100 % of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

<table>
<thead>
<tr>
<th>Botanical Species</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>alpha-Phellandrene</td>
<td>99-83-2</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Description of first aid measures

Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water. Wash off immediately with plenty of water. Wash contaminated clothing before reuse. Consult a physician if necessary.

Inhalation
Remove to fresh air. If breathing is difficult, give oxygen. Move to fresh air in case of accidental inhalation of vapors. If not breathing, give artificial respiration.

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms
No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians
Treat symptomatically.
5. Fire-Fighting Measures

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media.

Specific hazards arising from the chemical
FLAMMABLE.

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion, or decomposition.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special protective actions for fire-fighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes and inhalation of vapors. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling
Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation, especially in confined areas. Wash thoroughly after handling. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities
Storage Conditions
Store locked up. Protect from sunlight. Store in a well-ventilated place. Keep cool. Keep away from heat.

Incompatible materials
None known based on information supplied.

8. Exposure Controls/Personal Protection

Control parameters
Exposure guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls
Engineering controls

- Showers
- Eyewash stations
- Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**

Wear safety glasses with side shields (or goggles). Avoid contact with eyes.

**Skin and Body Protection**

Avoid contact with skin. Wear protective gloves and protective clothing.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. Ensure adequate ventilation, especially in confined areas.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. When using do not eat, drink or smoke. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended. Avoid breathing (dust, vapor, mist, gas).

### 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Clear</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Colorless</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic Odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
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<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Melting point / freezing point</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>46 °C / 115 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
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<td></td>
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<tr>
<td><strong>Upper flammability limit:</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Lower flammability limit:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
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</tr>
<tr>
<td><strong>Water solubility</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition Temperature</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
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<tr>
<td><strong>Kinematic viscosity</strong></td>
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<tr>
<td><strong>Dynamic viscosity</strong></td>
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<tr>
<td><strong>Explosive properties</strong></td>
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<tr>
<td><strong>Oxidizing properties</strong></td>
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**Other Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Softening point</strong></td>
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<tr>
<td><strong>Molecular weight</strong></td>
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<td><strong>VOC content (%)</strong></td>
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<tr>
<td><strong>Density</strong></td>
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</tr>
<tr>
<td><strong>Bulk Density</strong></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Extremes of temperature and direct sunlight. Heat, flames and sparks.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

11. Toxicological Information

Information on likely routes of exposure

Product Information
- Inhalation: Avoid breathing vapors or mists.
- Eye Contact: Avoid contact with eyes.
- Skin contact: Avoid contact with skin. Causes mild skin irritation.
- Ingestion: May be fatal if swallowed and enters airways.

Information on toxicological effects

Symptoms: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Skin corrosion/irritation: Causes mild skin irritation.
- Sensitization: Not expected to cause skin sensitization.
- Germ cell mutagenicity: Not classified.
- Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
- Reproductive toxicity: This product does not contain any known or suspected reproductive hazards above the threshold value.
- STOT - single exposure: Not classified.
- STOT - repeated exposure: Not classified.
- Aspiration hazard: May be fatal if swallowed and enters airways.

Numerical measures of toxicity - Product Information

Unknown acute toxicity: 100 % of the mixture consists of ingredient(s) of unknown toxicity

12. Ecological Information

Ecotoxicity
100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment
Persistence and degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects
No information available

13. Disposal Considerations

Waste treatment methods

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

14. Transport Information

DOT

<table>
<thead>
<tr>
<th>UN/ID no</th>
<th>2319</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Terpenes, Hydrocarbons, n.o.s.</td>
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<tr>
<td>Hazard Class</td>
<td>3</td>
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<td>Packing group</td>
<td>III</td>
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<tr>
<td>Description</td>
<td>(alpha-Phellandrene)</td>
</tr>
</tbody>
</table>

15. Regulatory Information

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |
| Fire Hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations.

**U.S. EPA Label information**

EPA Pesticide registration number Not applicable

---

### 16. Other Information

<table>
<thead>
<tr>
<th>Issue date</th>
<th>24-Jan-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>24-Jan-2017</td>
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<tr>
<td>Revision note</td>
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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Classification and labeling according to the IFRA/IOFI Labeling Manual 2016.

**End of Safety Data Sheet**