1. IDENTIFICATION

Product Description: PATCHOULI OIL MOLECULAR DISTILLED

CAS #
MIXTURE

FEMA Number
2838

Other means of identification

Vigon Item #
507477

Recommended use
Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

Recommended restrictions
For Manufacturing Use Only

Company
Vigon International, Inc.

24 Hour Emergency Response Information
INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

For information call: 570-476-6300
Web Site: www.vigon.com

Manufacturer/Importer/Supplier/Distributor information

Company name
Vigon International, Inc.

Address
127 Airport Road
E. Stroudsburg, PA 18301
United States

Telephone
For information call: 570-476-6300

Website
www.vigon.com

E-mail
Not available.

Emergency phone number
INFOTRAC (ACCT# 78928);
1-800-535-5053 WITHIN THE U.S.A.
1-352-323-3500 OUTSIDE THE U.S.A.

2. HAZARD(S) IDENTIFICATION

Physical hazards
Not classified.

Health hazards
Skin corrosion/irritation
Category 3
Aspiration hazard
Category 1

Environmental hazards
Not classified.

Label elements

Signal word
Danger

Hazard statement
May be fatal if swallowed and enters airways. Causes mild skin irritation.
Precautionary statement

Prevention
Observe good industrial hygiene practices.

Response
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention.

Storage
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
39.5% of the mixture consists of component(s) of unknown acute oral toxicity. 3.5% of the mixture consists of component(s) of unknown acute inhalation toxicity. 39.5% of the mixture consists of component(s) of unknown acute dermal toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATCHOULI ALCOHOL</td>
<td>1,6- methanonapthalen-1(2H)-ol, octahydro-4,8a,9 octahydrotetramethyl methano-1-naphthol</td>
<td>5986-55-0</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 35</td>
</tr>
<tr>
<td>ALPHA-PATCHOULENE</td>
<td>2,3,6,7,8,8alpha - hexahydro-1,4,9,9-tetramethyl-1H-3alpha,7-methanoazulene</td>
<td>560-32-7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 10</td>
</tr>
<tr>
<td>CARYOPHYLLENE BETA</td>
<td>(1R,4E,9S)-4,11,11-trimethyl- 8-methylidenecyclo[7.2.0]undec-4-ene</td>
<td>87-44-5</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 5</td>
</tr>
<tr>
<td>BETA-PATCHOULENE</td>
<td>1,4,9,9- tetramethyl-1,2,3,4,5,6,7,8-octahydro-4,7-methanoazulene 4,7- methanoazulene, 1,2,3,4,5,6,7,8-octahydro-1,4,9,9-tetramethyl-</td>
<td>514-51-2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>

Other components below reportable levels
50 - < 60

4. FIRST-AID MEASURES

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact
Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.

Eye contact
Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.

Ingestion
Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Most important symptoms/effects, acute and delayed
Aspiration may cause pulmonary edema and pneumonitis. Mild skin irritation.

Indication of immediate medical attention and special treatment needed
Not available.
5. FIRE-FIGHTING MEASURES

| Suitable extinguishing media | Water spray, fog, CO2, dry chemical, or alcohol resistant foam. |
| Unsuitable extinguishing media | Do not use a solid water stream as it may scatter and spread fire. |
| Specific hazards arising from the chemical | Fire may produce irritating, corrosive and/or toxic gases. |
| Special protective equipment and precautions for firefighters | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control. |
| Specific methods | Use water spray to cool unopened containers. |
| General fire hazards | Static charges generated by emptying package in or near flammable vapor may cause flash fire. |

6. ACCIDENTAL RELEASE MEASURES

| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. |
| Methods and materials for containment and cleaning up | Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. |

The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. Collect and dispose of spillage as indicated in section 13 of the SDS.

The product is immiscible with water and will spread on the water surface.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid release to the environment. Retain and dispose of contaminated wash water. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE
Precautions for safe handling
Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Occupational exposure limits
This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

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

Appropriate engineering controls
Use explosion-proof ventilation equipment to stay below exposure limits.

Individual protection measures, such as personal protective equipment
Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection: Chemical resistant gloves.
Other: Not available.

Respiratory protection
Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
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
Refer to Spec Sheet
Physical state
Liquid.
Form
Liquid.
Color
Refer to Spec Sheet
Odor
Characteristic.
Odor threshold
Not available.
pH
Not available.
Melting point/freezing point
Not available.
Initial boiling point and boiling range
Not available.
Flash point
> 200.0 °F (> 93.3 °C) Closed Cup
Evaporation rate
Not available.
Flammability (solid, gas)
Not applicable.
SAFETY DATA SHEET
507477 PATCHOULI OIL MOLECULAR DISTILLED

Revision Date: 01-31-2017
Version # 01

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: Not available.
Vapor density: Not available.
Relative density: 0.96 at 25 °C
Solubility(ies)
- Solubility (water): Insoluble
- Partition coefficient (n-octanol/water): Not available.

Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

Other information
- Explosive properties: Not explosive.
- Molecular formula: Not applicable
- Oxidizing properties: Not oxidizing.

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: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products if stored and handled as indicated.

11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure
- Inhalation: No adverse effects due to inhalation are expected.
- Skin contact: Causes mild skin irritation.
- Eye contact: Direct contact with eyes may cause temporary irritation.
- Ingestion: Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics
- Aspiration may cause pulmonary edema and pneumonitis. Mild skin irritation.
SAFETY DATA SHEET
507477 PATCHOULI OIL MOLECULAR DISTILLED

Revision Date: 01-31-2017
Version # 01

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components Species Test Results
CARYOPHYLLENE BETA (CAS 87-44-5)

Acute
Dermal
LD50 Rabbit > 5000 mg/kg
Oral
LD50 Rat > 5000 mg/kg

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

Skin corrosion/irritation Causes mild skin irritation.
Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization
Respiratory sensitization Not a respiratory sensitizer.
Skin sensitization This product is not expected to cause skin sensitization.
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

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.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not available.
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 May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability No data is available on the degradability of this product.
Bioaccumulative potential No data available.
Mobility in soil No data available.
13. DISPOSAL CONSIDERATIONS

Disposal instructions
Do not discharge into drains, water courses or onto the ground. 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
Not established.

Waste from residues / unused products
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

ADN
Not regulated as dangerous goods.

ADR
Not regulated as dangerous goods.

RID
Not regulated as dangerous goods.

DOT

BULK
Not regulated as dangerous goods.

DOT

NON-BULK
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

15. REGULATORY INFORMATION

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

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not available.
**SAFETY DATA SHEET**

507477 PATCHOULI OIL MOLECULAR DISTILLED

**Revision Date:** 01-31-2017
**Page 8 of 9**

- Not regulated.
**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
- Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<table>
<thead>
<tr>
<th>Hazard categories</th>
<th>Immediate Hazard - Yes</th>
<th>Delayed Hazard - No</th>
<th>Fire Hazard - No</th>
<th>Pressure Hazard - No</th>
<th>Reactivity Hazard - No</th>
</tr>
</thead>
</table>

**SARA 302 Extremely hazardous substance**
- Not listed.

**SARA 311/312 Hazardous chemical**
- No

**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.

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*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: 01-31-2017
Revision date: 01-31-2017
Version # 01

HMIS® ratings
- Health: 1*
- Flammability: 1
- Physical hazard: 0

Disclaimer
Vigon International, Inc. 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. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon’s knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.