01. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING

1.1 Product Identifier

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Spruce Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Definition</td>
<td>Picea Abies Leaf Oil is the volatile oil expressed from the needles of the Norway Spruce, <em>Picea abies</em> (L.), <em>Pinaceae</em></td>
</tr>
<tr>
<td>INCI Name</td>
<td>Picea Abies Leaf Oil</td>
</tr>
<tr>
<td>Synonyms &amp; Trade Names</td>
<td>Abies Oil</td>
</tr>
<tr>
<td>CAS-No</td>
<td>91770-69-3</td>
</tr>
<tr>
<td>EC No.</td>
<td>294-855-9</td>
</tr>
<tr>
<td>EINECS No.</td>
<td>294-855-9</td>
</tr>
</tbody>
</table>

1.2 Relative identified uses of the substance or mixture and uses advised against

No additional data available.

1.3 Details of the supplier of the safety data sheet

Oils4life Limited, 26 Blake Drive, Bradwell, Great Yarmouth, Norfolk, NR31 9GW

1.4 Emergency Tel. No. 01493 600045

02. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The Full Text for all Hazard Statements are Displayed in Section 16.

Classification (EC 1272/2008)

| Flam. Liq. 3 (H226) |
| Asp. Tox. 1 (H304) |
| Eye Irrit. 2 (H319) |
| Skin Sens. 1 (H317) |
| Aqu. Chron. 1 (H410) |

2.2 Label Elements

Label in accordance with (EC) No 1272/2008

| GHS08 | GHS09 | GHS07 | GHS02 |

Signal Word Danger

Contains Delta-3-Carene, alpha-Pinene, beta-Pinene, Limonene, Camphene.

Hazard Statements

- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H319 Causes serious eye irritation.
- H317 May cause an allergic skin reaction.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P305+P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 Wear protective gloves/protective clothing and eye/face protection.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P310 Immediately call a POISON CENTER or doctor/physician.
P273 Avoid release to the environment.
P501 Dispose of contents/container to regional, national regulation.

Supplementary Precautionary Statements

None

2.3 Other Hazards

PBT or vPvB according to Annex XIII No additional data available
Adverse physio-chemical properties No additional data available
Adverse effects on human health No additional data available

03. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

15-30% Limonene CAS-No.: 5989-27-5 EC No.: 227-813-5

Classification (EC 1272/2008) Flam. Liq. 3 – H226, Skin Irrit 2 – H315 Asp Tox. 1 – H304, Skin Sens. 1 – H317,
Aquatic Acute 1 – H400, Aquatic Chronic 1 – H410

15-25% Camphene CAS-No 79-92-5, EC 201-234-8

Classification (EC 1272/2008); Flam. Sol. 1 – H228, Eye Irrit 2 – H319, Aquatic Acute 1 – H400

10-20% alpha-Pinene CAS-No.: 80-56-8 EC No.: 201-291-9


2-5% beta-Pinene Cas. No: 127-91-3 EC No: 204-872-5

Classification (EC 1272/2008); Danger, Flam. Liq. 3 – H226, Skin Sens. 1 – H317, Asp Tox. 1 – H304, Aquatic Chronic 1 – H410

1-5% delta-3-Carene CAS-No.: 13466-78-9 EC No.: 236-719-3

Classification (EC 1272/2008) Danger Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Sens. 1, H317

04. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation Do not leave affected person unattended, Remove victim out of the danger area. Provide fresh air.

Ingestion If swallowed rinse mouth. Do NOT induce vomiting.

Skin Contact After contact with skin, wash immediately with plenty of water and soap. Remove contaminated clothing immediately

Eye Contact In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
4.2 Most important symptoms and effects, both acute and delayed

Observe risk of aspiration if vomiting occurs.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

- Foam
- Extinguishing powder
- Carbon dioxide (CO2)
- Avoid full water jet

5.2 Special hazards arising from the product

- B (Fires of liquids or liquid turning substances).
- In case of fire toxic fumes like carbon monoxide and carbon dioxide may be liberated
- Burning produces heavy smoke.

5.3 Advice for firefighters

- Move undamaged containers from immediate hazard area if it can be done safely.
- Use suitable breathing apparatus.
- Regard to self protection

06. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- Wear personal protection equipment.
- Avoid contact with skin, eye and clothing.
- Remove all sources of ignition.
- Provide adequate ventilation.
- Give a warning to persons in the hazard area

6.2 Environmental Precautions

- Do not allow to enter into surface water or drains.
- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3 Methods and material for containment and cleaning up.

- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

6.4 Reference to other sections

- See protective measures under point 7 and 8.

07. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Provide earthing of containers, equipment, pumps and ventilation facilities.
- Take precautionary measures against static discharges.
- Wear personal protective clothing (see chapter 8).
- Do not breathe gas/fume/vapour/spray
- Use only in well-ventilated areas.
- When using do not eat, drink, smoke, sniff.

7.2 Conditions for safe storage, including any incompatibilities

- Keep container tightly closed.
### 7.3 Specific end use(s)

No additional data available.

### 08. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

No additional data available.

#### 8.2 Exposure controls

**Protective Equipment**

<table>
<thead>
<tr>
<th>Process Conditions</th>
<th>Technical measures and the application of suitable work processes have priority over personal protection equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Measures</td>
<td>No additional data available.</td>
</tr>
<tr>
<td>Respiratory Equipment</td>
<td>If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.</td>
</tr>
<tr>
<td>Hand Protection</td>
<td>Use solvent and acid resistant protection gloves according to EN 374. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Take recovery periods for skin regeneration.</td>
</tr>
<tr>
<td>Eye Protection</td>
<td>Use protection goggles according to EN166.</td>
</tr>
<tr>
<td>Other Protection</td>
<td>Wear appropriate clothing to prevent any possibility of skin contact.</td>
</tr>
<tr>
<td>Hygiene Measures</td>
<td>Good personal hygiene practices are always advisable, especially when working with chemicals / oils.</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>Use personal protection according to Directive 89/686/EEC.</td>
</tr>
<tr>
<td>Skin Protection</td>
<td>Protective work clothing solvent resistant (should be checked regularly).</td>
</tr>
<tr>
<td>Environmental Exposure Controls</td>
<td>Avoid discharging into drainage water. Only remove via authorised companies.</td>
</tr>
</tbody>
</table>

### 09. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

| Appearance | liquid |
| Colour | Colourless to slightly yellow |
| Odour | Characteristic |
| Relative Density | 0.875 - 0.898 @ 20°C |
| Flash Point (°C) | 42°C |
| Refractive Index | 1.460 - 1.480 @ 20°C |
| Melting Point (°C) | No additional data available. |
| Boiling Point (°C) | No additional data available. |
| Vapour Pressure | No additional data available. |
| Solubility in Water @20°C | Insoluble in water. |
| Auto-ignition temperature (°C) | No additional data available. |

#### 9.2 Other information

No additional data available.
10. STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reactions known

10.2 Chemical stability
Product is stable at room temperature.

10.3 Possible hazardous reactions
No dangerous reactions expected if used according to specifications.

10.4 Conditions to Avoid
Temperatures more than room temperature will benefit the transfer from liquid to vapour phase and formation of explosive atmospheres.
Storing the product in open containers will benefit the formation of peroxides and derogate the quality.

10.5 Incompatible materials
No additional data available.

10.6 Hazardous Decomposition Products
No dangerous decomposition products known.

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>LD50 (oral) in mg/kg: &gt; 5000</td>
</tr>
<tr>
<td></td>
<td>LD50 (dermal) in mg/kg: &gt; 5000</td>
</tr>
<tr>
<td>Skin corrosion / irritation</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Serious eye damage / irritation</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No additional data available</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No additional data available</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Photo-toxicity</td>
<td>No additional data available</td>
</tr>
<tr>
<td>Other Information</td>
<td>No additional data available</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No additional data available

12.2 Persistence & degradability
No additional data available

12.3 Bioaccumulation Potential
No additional data available

12.4 Mobility in soil
No additional data available

12.5 Results of PBT and vPvB Assessment
No additional data available
### 12.6 Other adverse effects

No additional data available.

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Hazardous waste according to waste regulation
Dispose according to legislation.
Delivery to an approved waste disposal company.
Non-contaminated packages may be recycled.

### 14. TRANSPORT INFORMATION

#### 14.1 UN number

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN No. Road</td>
<td>1272</td>
</tr>
<tr>
<td>UN No. SEA</td>
<td>1272</td>
</tr>
<tr>
<td>UN No. AIR</td>
<td>1272</td>
</tr>
</tbody>
</table>

#### 14.2 UN proper shipping name

PINE OIL

#### 14.3 Transport hazard class(es)

ADR/RID/ADN Class: 3
ADR/RID/ADN Class: 3
IMDG Class 3
ICAO Class/Division

Transport Labels

- FLAMMABLE

EAC – 3Y
HIN – 30

#### 14.4 Packing group

<table>
<thead>
<tr>
<th>ADR/RID/ADN Packing group</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG Packing group</td>
<td>III</td>
</tr>
<tr>
<td>ICAO Packing group</td>
<td>III</td>
</tr>
</tbody>
</table>

#### 14.5 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

#### 14.6 Special precautions for user

...
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Packed and transferred according to transport regulations.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Statutory Instruments

Guidance Notes
Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

EU Legislation

15.2 Chemical safety assessment

No additional information available.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Hazard and/or Precautionary Statements in Full</th>
<th>H226</th>
<th>Flammable liquid and vapour.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H228</td>
<td></td>
<td>Flammable Solid</td>
</tr>
<tr>
<td>H304</td>
<td></td>
<td>May be fatal if swallowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and enters airways.</td>
</tr>
<tr>
<td>H315</td>
<td></td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td></td>
<td>May cause an allergic skin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reaction</td>
</tr>
<tr>
<td>H319</td>
<td></td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H410</td>
<td></td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with long lasting effects.</td>
</tr>
<tr>
<td>H411</td>
<td></td>
<td>Toxic to aquatic life with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>long lasting effects.</td>
</tr>
</tbody>
</table>

Other Information
None

Revision Date
08/07/15

Reason for revision
New SDS

Rev No/Repl, SDS Generated
01

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