SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product name: Citronella Essential Oil
1.2 Product code: 302-101X

1.3 Supplier:
Majestic Mountain Sage Inc
2490 S 1350 W
Nibley, 84321 - United States of America
T 435.755.0863 - F 435.755.2108
www.TheSage.com

1.4 Emergency telephone number
No additional information available

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
- Acute Oral Toxicity Category 5
- Acute Dermal Toxicity Category 5
- Skin Corrosion / Irritation Category 2
- Serious Eye Damage/Irritation Category 2A
- Skin Sensitization Category 1
- Acute Aquatic Toxicity Category 2
- Chronic Aquatic Toxicity Category 2
- Flammable Liquids Category 4

Classification according to EU Directives 67/548/EEC or 1999/45/EC
For the full text of the R-phrases mentioned in this Section, see Section 16

Symbol(s)
Xi - Irritant
N - Dangerous for the environment

R-code(s)
Xi; R41 - Xi; R38 - R43 - N; R51-53
2.2 Label Elements

- Signal Word: Warning

2.3 Hazard Statements

- H303: May be harmful if swallowed
- H313: May be harmful in contact with skin
- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H319: Causes serious eye irritation
- H411: Toxic to aquatic life with long lasting effects
- H227: Combustible liquid

2.4 Precautionary Statements

- P321: Specific treatment (see ? on this label)
- P403+P235: Store in a well ventilated place. Keep cool
- P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
- P210: Keep away from heat / sparks / open flames / hot surfaces - No smoking
- P280: Wear protective glove/eye protection/face protection

2.5 Other information

- No data available
### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC-No</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification according to Directive 67/548/EEC or 1999/45/EC</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citronellal</td>
<td>203-376-6</td>
<td>106-23-0</td>
<td>30-50%</td>
<td>Xi; R38, Xi; R43, N; R51/53</td>
<td>Aquatic Acute 2 (H401) Skin Sens. 1 (H317) Eye Irrit. 1 (H319) Skin Irrit. 2 (H316) Aquatic Chronic 2 (H411) Acute Tox. 5 (H303) Flam. Liq. 4 (H227)</td>
<td>No data available</td>
</tr>
<tr>
<td>Geraniol</td>
<td>203-377-1</td>
<td>106-24-1</td>
<td>20-30%</td>
<td>Xi; R38, Xi; R41, Xi; R43</td>
<td>Aquatic Acute 3 (H402) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Skin Irrit. 2 (H315) Acute Tox. 5 (H303)</td>
<td>No data available</td>
</tr>
<tr>
<td>Citronellol</td>
<td>203-375-0</td>
<td>106-22-9</td>
<td>10-15%</td>
<td>Xi; R38, Xi; R43, N; R51/53</td>
<td>Aquatic Acute 2 (H401) Skin Sens. 1 (H317) Skin Irrit. 2 (H316) Acute Tox. 5 (H303) Acute Tox. 5 (H313)</td>
<td>No data available</td>
</tr>
<tr>
<td>Geranyl Acetate</td>
<td>203-341-5</td>
<td>105-87-3</td>
<td>1-5%</td>
<td>N; R51/53</td>
<td>Aquatic Acute 2 (H401) Skin Irrit. 3 (H316) Aquatic Chronic 2 (H411)</td>
<td>No data available</td>
</tr>
<tr>
<td>Limonene</td>
<td>227-813-5</td>
<td>5989-27-5</td>
<td>1-5%</td>
<td>R10, Xi; R38, Xi; R43, N; R50/53</td>
<td>Aquatic Acute 1 (H400) Skin Sens. 1 (H317) Skin Irrit. 2 (H316) Asp. Tox. 1 (H304) Aquatic Chronic 1 (H410) Flam. Liq. 3 (H226)</td>
<td>No data available</td>
</tr>
<tr>
<td>Linalool</td>
<td>201-134-4</td>
<td>78-70-6</td>
<td>1-5%</td>
<td>Xi; R38</td>
<td>Aquatic Acute 3 (H402) Skin Irrit. 2 (H316) Acute Tox. 5 (H303) Flam. Liq. 4 (H227)</td>
<td>No data available</td>
</tr>
<tr>
<td>Farnesol</td>
<td>225-004-1</td>
<td>4602-84-0</td>
<td>1-5%</td>
<td>Xi; R36/38, Xi; R43</td>
<td>Skin Sens. 1 (H317) Eye Irrit. 1 (H319) Skin Irrit. (H316)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

*For the full text of the R-phrases mentioned in this Section, see Section 16*
SECTION 4: First aid measures

4.1 Description of first aid measures

General Advice  If symptoms persist, call a physician.

Eye Contact  Rinse immediately and thoroughly with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin Contact  Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Immediate medical attention is not required.

Ingestion  Do NOT induce vomiting. Rinse mouth with water and drink plenty of water afterwards. Immediate medical attention is not required. Never give anything by mouth to an unconscious person. Call a physician.

Inhalation  If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors or decomposition products.

Self-protection of the first aider  Use personal protective equipment.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians  May cause sensitization in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media  Use Dry chemical, Carbon dioxide CO₂, Water spray, Alcohol-resistant foam.
SECTION 6: Accidental release measures

5.2 Special hazards arising from the substance or mixture

Special Hazard

None

5.3 Advice for firefighters

Special protective equipment

Wear self-contained breathing apparatus for

for fire-fighters

fire fighting if necessary.

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with eyes and skin. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Pay attention to flashback. Take precautionary measures against static discharges.

See Section 12 for additional Ecological Information

6.2 Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3 Methods and material for containment and cleaning up

Soap up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use personal protective equipment as required. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from heat, sparks and open flame. No smoking. Take necessary action to avoid static electricity discharge (which might causes ignition of organic vapors).
7.2 Conditions for safe storage, including any incompatibilities

7.3 Specific end use(s)
Exposure scenario N/A
Other Guidelines N/A

SECTION 8: Exposure controls/personal protection

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
<th>The United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MAK: 20 ppm MAK: 110 mg/m³ Ceiling / Peak: 40 ppm Ceiling / Peak: 220 mg/m³ TWA: 20 ppm TWA: 110 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Italy</th>
<th>Portugal</th>
<th>The Netherlands</th>
<th>Finland</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td></td>
<td></td>
<td></td>
<td>TWA: 25 ppm TWA: 140 mg/m³ STEL: 50 ppm STEL: 280 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Austria</th>
<th>Sweden - Occupational Exposure limits - TLVs (LLVs)</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td></td>
<td>STEL: 40 ppm STEL: 220 mg/m³ MAK: 20 ppm MAK: 110 mg/m³</td>
<td></td>
<td></td>
<td>TWA: 25 ppm TWA: 140 mg/m³ STEL: 37.5 ppm STEL: 175 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Derived No Effect Level (DNEL)</th>
<th>Predicted No Effect Concentration (PNEC)</th>
<th>No information available</th>
</tr>
</thead>
</table>

8.2 Exposure controls
Engineering Controls Ensure adequate ventilation, especially in confined areas.
8.3 Personal Protective Equipment

- **Eye Protection**
  - Tightly fitting safety goggles

- **Hand Protection**
  - Protective gloves

- **Skin/Body Protection**

- **Respiratory Protection**
  - When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

- **General Hygiene**
  - When using, do not eat, drink or smoke. Wash contaminated clothing before reuse. Provide regular cleaning of equipment, work area and clothing.

**Environmental Exposure**

- Do not allow material to contaminate ground water system.

---

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>clear</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>lemon-like</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>light yellow to brown</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point/boiling range:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>79°C / 175°F</td>
<td>Closed Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td></td>
<td>FCC Method</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
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<td></td>
</tr>
<tr>
<td>Vapor pressure mm Hg 20°C:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Relative density:</td>
<td>No information available</td>
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</tr>
<tr>
<td>Specific gravity @ 25°C:</td>
<td>0.850 - 0.920</td>
<td>FCC Method</td>
</tr>
<tr>
<td>Specific gravity @ 20°C:</td>
<td>0.853 - 0.923</td>
<td>FCC Method</td>
</tr>
<tr>
<td>Refractive Index:</td>
<td>1.445 - 1.500</td>
<td>FCC Method</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>n-octanol/water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1 Reactivity
None

10.2 Chemical stability
Stable under normal conditions

10.3 Possibility of hazardous reactions
None

10.4. Conditions to avoid
Heat, flames and sparks

10.5 Incompatible Materials
No materials to be especially mentioned

10.6 Hazardous Decomposition Products
None under normal use conditions

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Inhalation:  There is no data available for this product.
Eye contact: There is no data available for this product.
Skin contact: There is no data available for this product.
Ingestion:  There is no data available for this product.

Acute toxicity: 12.8% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 1, 2005).

Oral:  3,091.00 mg/kg
Dermal: 3,190.00 mg/kg

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citronellal</td>
<td>2420 mg/kg (Rat)</td>
<td>2500 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>Geraniol</td>
<td>3600 mg/kg (Rat)</td>
<td>5000 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>Citronellol</td>
<td>3450 mg/kg (Rat)</td>
<td>2650 mg/kg (Rabbit)</td>
</tr>
<tr>
<td>Geranyl Acetate</td>
<td>6330 mg/kg (Rat)</td>
<td></td>
</tr>
</tbody>
</table>
**SECTION 12: Ecological information**

### 12.1 Toxicity

**Ecotoxicity effects**
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia &amp; other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limonene</td>
<td></td>
<td>0.619-0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td></td>
</tr>
<tr>
<td>Linalool</td>
<td>88.3: 96 h Desmodesmus subspicatus mg/L EC50</td>
<td>22-46: 96 h Leuciscus idus mg/L LC50 static</td>
<td>20: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability
No information available.

### 12.3 Bioaccumulative potential
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linalool</td>
<td>3.1</td>
</tr>
</tbody>
</table>

### 12.4 Mobility in soil
No information available.
12.5 Results of PBT and vPvB assessment
No information available.

12.6 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste Treatment Methods

Waste from residues/ unused products
Dispose of in accordance with local regulations

Contaminated packaging
Empty containers should be take to an approved waste handling site for recycling or disposal.

Other Information:
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific Waste Codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

14.1 Transport Information

DOT
No information available

IMDG/IMO
Proper Shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Limonene, Linalool)
Hazard Class: 9
UN / ID No: 3082
Packing Group: III
Marine Pollutant: This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO.

ICAO/IATA
Not regulated
SECTION 15: Regulatory information

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

WGK Classification

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citronellal 106-23-0</td>
<td>Hazard Class 1</td>
</tr>
<tr>
<td>Citronellol 106-22-9</td>
<td>Hazard Class 1</td>
</tr>
<tr>
<td>Linalool 78-70-6</td>
<td>Hazard Class 1</td>
</tr>
</tbody>
</table>

International Inventories
All of the components in the product are on the following Inventory lists: United States of America (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), China (IECSC), Japan (ENCS), Philippines (PICCS).

International Inventories

<table>
<thead>
<tr>
<th></th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Complies</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:
TSCA: United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS: European Inventory of Existing Chemical Substances/
    European List of Notified Chemical Substances
DSL/NDSL: Canadian Domestic Substances List/Non-Domestic Substances List
PICCS: Philippines Inventory of Chemicals and Chemical Substance
ENCS: Japan Existing and New Chemical Substances
IECSC: China Inventory of Existing Chemical Substances
AICS: Australian Inventory of Chemical Substances
KECL: Korean Existing and Evaluated Chemical Substances

15.2 Chemical Safety Assessment
No information available
SECTION 16: Other information

Risk Combination Phrases
  R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  R36/38 - Irritating to eyes and skin.

Full text of H-Statements referred to under sections 2 and 3
  H401 - Toxic to aquatic life, H316 - Causes mild skin irritation, H411 - Toxic to aquatic life with long lasting effects, H317 - May cause an allergic skin reaction, H303 - May be harmful if swallowed, H313 - May be harmful in contact with skin, H319 - Causes serious eye irritation, H227 - Combustible liquid, H402 - Harmful to aquatic life, H318 - Causes serious eye damage, H315 - Causes skin irritation, H400 - Very toxic to aquatic life, H304 - May be fatal if swallowed and enters airways, H410 - Very toxic to aquatic life with long lasting effects, H226 - Flammable liquid and vapor

Date: July 25, 2016

The information contained within this Material Safety Data Sheet is based on our present knowledge. The data here does not guarantee any specific product features or suitability of this product for user's application. User should satisfy themselves that information is complete. No warranty is expressed or implied with respect to completeness or continuing accuracy of the information given here.