1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Citronella Essential Oil (Ceylon)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botanical name</td>
<td>Cymbopogon nardus</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Citronella Oil</td>
</tr>
<tr>
<td>INCI name</td>
<td>Cymbopogon Nardus Oil</td>
</tr>
<tr>
<td>CAS #</td>
<td>8000-29-1 / 89998-15-2</td>
</tr>
<tr>
<td>Country of Origin</td>
<td>Sri Lanka</td>
</tr>
<tr>
<td>EINECS #</td>
<td>289-753-6 / 289-753-6</td>
</tr>
<tr>
<td>Product use</td>
<td>Domestic and Industrial</td>
</tr>
<tr>
<td>Supplier</td>
<td>New Directions Aromatics Inc.</td>
</tr>
<tr>
<td>Address</td>
<td>6781 Columbus Road, Mississauga, Ontario, CANADA L5T 2G9</td>
</tr>
<tr>
<td>Fax</td>
<td>905-362-1926</td>
</tr>
<tr>
<td>Telephone number</td>
<td>905-362-1915</td>
</tr>
<tr>
<td>Emergency phone number</td>
<td>(613)-996-6666 CANUTEC 24 HOUR EMERGENCY</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

**Emergency Overview**

**GHS Classification**

- Flammable liquids - Category 4
- Aspiration Hazard - Category 1
- Acute toxicity, dermal - Category 5
- Skin corrosion/irritation - Category 2
- Skin Sensitization - Category 1
- Serious eye damage/eye irritation - Category 1
- Hazardous to aquatic environment - Acute - Category 2
- Hazardous to the aquatic environment, long-term hazard - Category 2

**GHS Label elements, including precautionary statements**

- Signal: Danger

**Hazard statement(s)**
Combustible liquid.

May be fatal if swallowed and enters airways.

May be harmful in contact with skin.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

Toxic to aquatic life.

Toxic to aquatic life with long-lasting effects.

Precautionary statement(s)

P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261  Avoid breathing dust/fumes/gas/mist/vapours/spray.

P264  Wash SKIN thoroughly after handling.

P272  Contaminated work clothing should not be allowed out of the workplace.

P273  Avoid release to the environment.

P280  Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310  IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P302+P352  IF ON SKIN: Wash with plenty of water.

P321  Specific treatment (see SECTION 4 on this label).

P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P310  Immediately call a POISON CENTER/doctor.

P331  Do NOT induce vomiting.

P333+P313  If skin irritation or a rash occurs: Get medical advice/attention.

P362  Take off contaminated clothing.

P363  Wash contaminated clothing before reuse.

P370+P378  In case of fire: Use appropriate fire extinguishers to extinguish.

P403+P235  Store in a well ventilated place. Keep cool.

P405  Store locked up.

P501  Dispose of contents/container according to local regulations.

3. COMPOSITION / INFORMATION INGREDIENTS

<table>
<thead>
<tr>
<th>Product Name</th>
<th>CAS NO</th>
<th>EC NO</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cymbopogon Nardus Oil</td>
<td>8000-29-1 / 89998-15-2</td>
<td>289-753-6 / 289-753-6</td>
<td>100 %</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Eye contact**

Immediately flush eyes with plenty of cool water for at least 15 minutes. Get medical attention if irritation occurs.

**Skin contact**

Remove contaminated clothing. Wash area with soap and water. If irritation occurs, get medical attention.

**Inhalation**

If inhaled, removed to fresh air. Get medical attention if symptoms appear.

**Ingestion**
5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Unsuitable extinguishing media
Water spray, water jet.

Special protective equipment and precautions for fire-fighters
Wear proper protective equipment. Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Special hazards arising from the substance or its combustible products
Hazardous decomposition products may be formed at extreme heat or if burned.

Resulting gases
Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures.
Equip clean crew with proper protection. Respiratory protection equipment may be necessary.

Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and materials for containment and cleaning up
Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers.

7. HANDLING AND STORAGE

Precautions for safe handling
No direct lighting. No smoking. Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

Conditions for safe storage, including any incompatibilities
Provide local exhaust or general room ventilation to minimize dust and/or vapour concentrations. Keep container closed when not in use.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure controls
Odor is inadequate to warn of overexposure.

Eyes
Use tightly sealed goggles.

Skin
If skin contact or contamination of clothing is likely, protective clothing should be worn. Use protective gloves.

Respiratory
In case of insufficient ventilation, wear suitable respiratory equipment.

Ingestion
Not for ingestion.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Pale yellow to yellowish brown liquid.</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic citronella-like odor.</td>
</tr>
<tr>
<td>Flash point</td>
<td>81 °C</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.893 to 0.910 @ 25 °C</td>
</tr>
<tr>
<td>Solubility (ies)</td>
<td>Soluble in alcohol and oils. Insoluble in water.</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4790 to 1.4850 @ 20 °C</td>
</tr>
<tr>
<td>Optical rotation</td>
<td>-9.0 to +18.0 @ 25 °C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
This material presents no significant reactivity hazard.

Chemical stability
Chemically stable.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to avoid
Avoid sparks, flame and other heat sources.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Carbon Oxides.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity
None of the components of this material are listed as a carcinogen.

Chronic toxicity
May cause allergic reactions on skin.

Reproductive toxicity
No adverse effects on reproduction are known.

Inhalation
Inhalation of high concentrations of vapor may result in irritation of eyes, nose and throat, headache, nausea, and dizziness.

Skin contact
Adverse skin effects should be prevented by normal care and personal hygiene.

Eye contact
Possible irritation should be prevented by wearing safety glasses.

Ingestion
Low order toxicity causing irritation of the stomach and intestines which results in nausea and vomiting.

Repeated exposure
Repeated or prolonged contact may cause redness, irritation and scaling of skin (Dermatitis).

12. ECOLOGICAL INFORMATION

Ecotoxicity
No environmental hazards are known, avoid pollution to river and soil.

Bio - accumulative potential
Not available.

13. DISPOSAL CONSIDERATION
Dispose of product in accordance with local, state or provincial and federal regulations. Check with local municipal authority to ensure compliance.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN Number</th>
<th>3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Environmentally Hazardous Substance, Liquid, N.O.S (Citronella Oil)</td>
</tr>
<tr>
<td>Transport hazard class</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>US DOT Shipping Description (Land)</td>
<td>3082</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally Hazardous Substance, Liquid, N.O.S (Citronella Oil)</td>
</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packaging group</td>
<td>III</td>
</tr>
<tr>
<td>IMO-IMDG Shipping Description (Sea)</td>
<td>3082</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally Hazardous Substance, Liquid, N.O.S (Citronella Oil)</td>
</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packaging group</td>
<td>III</td>
</tr>
<tr>
<td>IMO-IMDG code</td>
<td>3082</td>
</tr>
<tr>
<td>IMDG-Marine pollution</td>
<td>Yes</td>
</tr>
<tr>
<td>IATA Shipping Description (Air)</td>
<td>3082</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally Hazardous Substance, Liquid, N.O.S (Citronella Oil)</td>
</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packaging group</td>
<td></td>
</tr>
</tbody>
</table>
III

Emergency action in case of accident
Notify police and fire department immediately

15. REGULATORY INFORMATION

GHS Hazard Statements
Please refer to section 2.

GHS Precautionary Statements
Please refer to section 2.

16. OTHER INFORMATION

Revision date : August 31, 2018

Disclaimer & Caution
Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agree that Jurisdiction is limited to the province of Ontario.