### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** OIL OF LIME DISTILLED

**Other name(s):** Oil Lime Distilled West Indian Type FCC; AAOIL00525; AAOIL00530; Lime Oil Dist 5 F; Five Fold Lime Oil (Distilled); AALIM00061

**Recommended Use of the Chemical** Essential oil.

**Supplier:** Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia

**ABN:** 51 600 546 512

**Street Address:** 70 Marple Avenue

Villawood NSW 2163

Australia

**Telephone Number:** +61 2 8717 2929

**Facsimile:** +61 2 9755 9611

**Emergency Telephone:** 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the “Other Information” section at the end of this Data Sheet.

### 2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

**Classification of the substance or mixture:**

- Flammable liquids - Category 3
- Aspiration hazard - Category 1
- Skin Irritation - Category 2
- Skin Sensitisation - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

- Acute Aquatic Toxicity - Category 1
- Chronic Aquatic Toxicity - Category 1

**SIGNAL WORD:** DANGER

**Hazard Statement(s):**

- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H410 Very toxic to aquatic life with long lasting effects.
Precautionary Statement(s):

**Prevention:**
P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground / bond container and receiving equipment.
P241 Use explosion-proof electrical / ventilating / lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing mist / vapours / spray.
P264 Wash hands 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.

**Response:**
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P362 Take off contaminated clothing and wash before reuse.
P363 Wash contaminated clothing before re-use.
P370 In case of fire:
P378 Use normal foam, dry agent (carbon dioxide, dry chemical powder) to extinguish.
P391 Collect spillage.

**Storage:**
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Poisons Schedule (SUSMP):** None allocated.

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### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**Product Description:** contains d-limonene (CAS number: 5989-27-5), ~45%.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Hazard Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oils, lime</td>
<td>8008-26-2</td>
<td>100%</td>
<td>H226, H304, H315, H317, H400, H410</td>
</tr>
</tbody>
</table>

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### 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.
**Inhalation:**
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Skin Contact:**
If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water and soap. If swelling, redness, blistering or irritation occurs seek medical assistance.

**Eye Contact:**
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

**Ingestion:**
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Get to a doctor or hospital quickly.

**Indication of immediate medical attention and special treatment needed:**
Treat symptomatically. Delayed pulmonary oedema may result.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:**
Normal foam, dry agent (carbon dioxide, dry chemical powder).

**Hazchem or Emergency Action Code:** 3Y

**Specific hazards arising from the substance or mixture:**
Flammable liquid. On burning will emit toxic fumes, including those of oxides of carbon.

**Special protective equipment and precautions for fire-fighters:**
Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

## 6. ACCIDENTAL RELEASE MEASURES

**Emergency procedures/Environmental precautions:**
Shut off all possible sources of ignition. Clear area of all unprotected personnel. Increase ventilation. If contamination of sewers or waterways has occurred advise local emergency services.

**Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:**
Slippery when split. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use non-sparking tools. Collect and seal in properly labelled containers or drums for disposal. Wash area down with detergent and excess water.

## 7. HANDLING AND STORAGE
Precautions for safe handling:
Avoid skin and eye contact and breathing in vapour, mists and aerosols. May form flammable vapour mixtures with air. Vapour may travel a considerable distance to source of ignition and flash back. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: No value assigned for this specific material by Safe Work Australia.

Appropriate engineering controls:
Use in well ventilated areas. If inhalation risk exists: Use with local exhaust ventilation or while wearing organic vapour/particulate respirator. Keep containers closed when not in use.
Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected.

Individual protection measures, such as Personal Protective Equipment (PPE):
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.

Wear overalls, chemical goggles and impervious gloves. If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Clear Liquid
Colour: Colourless to Pale Yellow
Odour: Characteristic Citrus
Odour Threshold: Not available
Solubility: Insoluble in water.
Specific Gravity: 0.86 - 0.87 @ 20°C
Relative Vapour Density (air=1): approx. 4.7
Vapour Pressure (20°C): approx. 2 mmHg @ 25°C
Safety Data Sheet

Flash Point (°C): 45 - 48 (CC)
Flammability Limits (%): approx. 0.7 - 6.1
Autoignition Temperature (°C): approx. 237
% Volatile by Weight: approx. >92
Solubility in water (g/L): approx. 0.0138 @ 25°C
Melting Point/Range (°C): approx. -90
Boiling Point/Range (°C): approx. 175
Decomposition Point (°C): Not available
pH: Not available
Viscosity: Not available
Evaporation Rate: approx. 5.8 (diethyl ether = 1)
Partition Coefficient: approx. 4.23

10. STABILITY AND REACTIVITY

Reactivity: No information available.
Chemical stability: Stable under normal conditions of use.
Possibility of hazardous reactions: Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. Peroxides formed by oxidation may present an explosion hazard if they become highly concentrated through distillation. Hazardous polymerisation will not occur.
Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame.
Incompatible materials: Incompatible with strong oxidising agents, acid clays and mineral acids.
Hazardous decomposition products: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).

Eye contact: May be an eye irritant.

Skin contact: Contact with skin will result in irritation. A skin sensitisier. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Inhalation: Breathing in vapour, mists or aerosols may produce respiratory irritation.

Acute toxicity:
Oral LD50 (rat): >5,000 mg/kg (1)

Product Name: OIL OF LIME DISTILLED
Substance No: 000000033023

Issued: 23/10/2015
Version: 4
Dermal LD50 (rabbit): >5,000 mg/kg (1)

Skin corrosion/irritation: Irritant.
Serious eye damage/irritation: No information available.
Respiratory or skin sensitisation: A skin sensitiser.

Chronic effects: No information available for the product.

Mutagenicity: No information available.
Carcinogenicity: No information available.
Reproductive toxicity: No information available.
Specific Target Organ Toxicity (STOT) - single exposure: No information available.
Specific Target Organ Toxicity (STOT) - repeated exposure: No information available.
Aspiration hazard: May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.
Persistence/degradability: The material is partially biodegradable. (2)
Bioaccumulative potential: This product shows a high bioaccumulation potential. (2)
Mobility in soil: No information available.
Aquatic toxicity: Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Log Octanol/Water Partition Coefficient: 4.23 (1)
48hr LC50 (Daphnia magna): 0.577 mg/L (2)

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.
Safety Data Sheet

UN No: 2319
Transport Hazard Class: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name or Technical Name: TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)
Hazchem or Emergency Action Code: 3Y

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.

UN No: 2319
Transport Hazard Class: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name or Technical Name: TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)
IMDG EMS Fire: F-E
IMDG EMS Spill: S-D
Marine Pollutant: Yes

Air Transport
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 2319
Transport Hazard Class: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name or Technical Name: TERPENE HYDROCARBONS, N.O.S. (CONTAINS D-LIMONENE)

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.
Classification of the substance or mixture:
Flammable liquids - Category 3
Aspiration hazard - Category 1
Skin Irritation - Category 2
Skin Sensitisation - Category 1

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
Acute Aquatic Toxicity - Category 1
Chronic Aquatic Toxicity - Category 1

Hazard Statement(s):
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Poisons Schedule (SUSMP): None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

(1) Supplier Safety Data Sheet; 10/2014.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:
Revised Primary SDS
Change in Hazardous Substance Classification
Alignment to GHS requirements
Update in Ecological Information.

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd’s responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris.