Material Safety Data Sheet

In accordance with SANS 10234:2019 and GHS standard criteria

Lemon Essential Oil

SECTION 1: Product and Company Information

1.1 Product Identifier

- **Product Name:** Lemon Essential Oil
- **INCI Name:** *Citrus limonum*
- **CAS Number:** 5989-27-5

1.2 Relevant Identified Uses of the Substance

- **Identified Uses:** Food-grade flavourant and industrial formulation applications.
- **Restrictions:** Not intended to be consumed as is.

1.3 Details of the Supplier of the Safety Data Sheet

- **Company Name:** Oryion Oils & Fragrants
- **Address:** Main Road, Queensburgh, Durban, South Africa, 4076
- **Contact Number:** 076 092 6052

1.4 Emergency Telephone Number

- **Emergency Hotline:** 076 092 6052 (Available during business hours)

SECTION 2: Hazards Identification

2.1 Classification of the Substance or Mixture

- Flammable Liquids, Category 3 (H226)
- Skin Corrosion/Irritation, Category 2 (H315)
- Serious Eye Damage/Eye Irritation, Category 2B (H320)
- Respiratory Sensitisation, Sub-category 1B (H334)

2.2 GHS Label Elements

- **Signal Word: DANGER**
- **Hazard Pictograms:** Flammable (GHS02), Health Hazard/Irritant (GHS07), Respiratory Hazard (GHS08)

Hazard Statements:

- H226: Flammable liquid and vapour.
- H315: Causes skin irritation.
- H320: Causes eye irritation.
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

- **Precautionary Statements (Prevention):**

  - P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
  - P261: Avoid breathing vapours/spray.
  - P264: Wash hands thoroughly after handling.
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves/clothing/eye protection.
  - P284: In case of inadequate ventilation, wear respiratory protection

- **Precautionary Statements (Response):**

  - P302+P352: IF ON SKIN: Wash with plenty of water.
  - P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.
  - P332+P313+P337: If skin or eye irritation occurs/persists, get medical advice/attention.
  - P391: Collect spillage.
  - P501: Dispose of contents/container in accordance with local/regional/national regulations.

SECTION 3: Composition/Information on Ingredients

3.1 Substances

- **Chemical Identity:** 100% Pure & Natural Lemon Essential Oil.
  Composition Details: Terpene hydrocarbons obtained from cold-pressing *Citrus Limon* peel. Composed primarily of d-limonene

SECTION 4: First Aid Measures

- **Eye Contact:** Rinse cautiously with large volumes of lukewarm water. Remove contact lenses if present and easy to do. Consult a physician if symptoms persist.
- **Skin Contact:** Remove contaminated clothing. Wash affected areas thoroughly with soap and lukewarm water. If irritation occurs, consult a physician.
- **Inhalation:** Move individual away from exposure and into fresh air. Seek medical assistance if symptoms persist. Administer oxygen if breathing is difficult.
- **Ingestion:** Do not induce vomiting. In case of overdose or large ingestion volumes, drink large amounts of water or milk and consult a physician immediately.
  Symptoms: May cause hives or sensitization in susceptible persons

SECTION 5: Firefighting Measures

- **5.1 Extinguishing Media:** Dry chemical, foam, extinguishing powder, carbon dioxide (CO2), or sand.

- **5.2 Unsuitable Media:** Water contact during hot decomposition may generate flammable vapours.

- **5.3 Specific Hazards:** Not directly combustible, but thermal stress may liberate hazardous vapours.

- **5.4 Firefighter Protection:** Stay in danger area only with a self-contained breathing apparatus (SCBA). Maintain a safe distance to avoid direct skin contact.

SECTION 6: Accidental Release Measures

- **6.1 Personal Precautions:** Keep spill area away from ignition sources. Avoid substance contact and ensure adequate ventilation. Use personal protective equipment.

- **6.2 Environmental Precautions:** Do not empty spilled oil directly into drainage networks or water tables.

- **6.3 Methods for Clean-up:** Extinguish all ignition sources and ventilate. Absorb spillage with non-flammable absorbent material and place in closed containers. Clean residues with lukewarm water and detergents.

SECTION 7: Handling and Storage

- **7.1 Safe Handling:** Keep product away from open ignition sources. Store inside closed drums to prevent industrial spills. Do not smoke in work areas and wash hands thoroughly post-work.

  7.2 Storage Conditions: Keep out of direct sunlight. Do not store at elevated temperatures (keep under 40°C). Store locked up in a cool, well-ventilated space away from heat, sparks, and open flames.

SECTION 8: Exposure Controls/Personal Protection

- **8.1 Control Parameters:** This product does not contain any hazardous materials with established regional occupational exposure limits.

- **8.2 Individual Protection Measures:**
  - **Eye Protection:** Splash-proof safety goggles are required.
  - **Hand/Skin Protection:** Wear protective gloves under prolonged handling. Normal skin protection is not mandatory under standard handling setups.
  - **Respiratory Protection:** Not required when working inside adequately ventilated zones.

SECTION 9: Physical and Chemical Properties

- **Physical State:** Liquid
- **Appearance:** Clear
- **Colour:** Yellow
- **Odour:** Characteristic of fresh lemon peel
- **Melting/Freezing Point:** -74.3 °C
- **Initial Boiling Point:** > 35 °C
- **Flash Point:** 46 °C
- **Vapour Pressure:** < 300 kPa @ 50°C
- **Specific Gravity @ 20°C:** 0.8500 – 0.8580
- **Refractive Index @ 20°C:** 1.4730 – 1.4760
- **Auto-ignition Temperature:** 255 °C
- **Solubility:** Very low solubility in water (<0.1%); soluble in polar organic solvents, hexane, and petroleum ether.

SECTION 10: Stability and Reactivity

- **10.1 Reactivity & Stability:** Stable under standard environmental conditions and recommended handling setups.
- **10.2 Hazardous Reactions:** None known under standard storage frameworks.
- **10.3 Conditions to Avoid:** Open heat, flames, and localized sparks.
- **10.4 Incompatible Materials:** No specific incompatible materials known to produce a hazardous situation.
- **10.5 Hazardous Decomposition:** Releases hazardous vapours under thermal fire breakdown

SECTION 11: Toxicological Information

- **11.1 Toxicity Effects:** Does not present an acute toxicity hazard based on known technical raw materials information. May act as a skin and eye irritant. Inhalation may cause asthma or breathing difficulties in susceptible individuals.

SECTION 12: Ecological Information

- **12.1 Ecotoxicity:** Very toxic to aquatic life with long-lasting environmental effects.
- **12.2 Marine Pollutant Evaluation:** Not classified as a marine pollutant according to specific IMDG Code evaluation criteria.

SECTION 13: Disposal Considerations

- **13.1 Waste Treatment:** Dispose of in accordance with regional, provincial, and national environmental waste laws. Waste chemical residues must be handled via authorized waste tracking companies. Do not discharge directly into the municipal drinking water supply, soil, or wastewater systems.

SECTION 14: Transport Information

- **14.1 Land Transport (ADR/RID):**
  - **UN Number:** UN 2319 | **Shipping Name:** Terpene hydrocarbons n.o.s | **Class:** 3 | **Packing Group:** PG III
- **14.2 Sea Transport (IMDG):**
  - **UN Number:** UN 2319 | **Shipping Name:** Terpene hydrocarbons n.o.s | **Class:** 3 | **Packing Group:** PG III
- **14.3 Air Transport (IATA):**
  UN Number: UN 2319 | **Shipping Name:** Terpene hydrocarbons n.o.s | **Class:** 3 | **Packing Group:** PG III

SECTION 15: Regulatory Information

- **15.1 Safety, Health, and Environmental Regulations:** Regulated under national environmental acts. FDA Grass Status: 182.20 Essential oils, oleoresins (solvent-free), and natural extractives.

SECTION 16: Other Information

- **Disclaimer:** The information contained in this 16-point safety report is accurate and true to the best of our technical capability. All recommendations are provided without an explicit or implied processing guarantee. Users must execute their independent tests.

- **Revision Date:** August 2026.