

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product: Lemon Essential Oil
Product Type: Fragrance Compound (Mixture)
Company: CandleScience
1247 Person St.
Durham, NC 27703

Product ID 1749
91475-91477
91434

Emergency telephone CHEMTREC 1-800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION ACCORDING TO HCS 2012 (29 CFR PARTS 1910, 1915, AND 1926):

Flammable Liquids:	Category 3
Skin Corrosion/Irritation:	Category 2
Skin Sensitization:	Category 1B
Aspiration Toxicity:	Category 1
Acute Aquatic Toxicity:	Category 1
Chronic Aquatic Toxicity:	Category 3

Signal Word:

DANGER



Hazard Statement:

May be fatal if swallowed and enters airways. Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing mist/vapors. Wash thoroughly after handling.

Response:

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with local/national laws and regulations.

Please note: Mixtures have not been tested for health hazards. The health hazard information presented is provided in accordance with US 29 CFR 1910.1200 and is based on the testing of individual components which have been shown

to cause or may cause these health effects when tested at higher concentrations or at full strength.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENT

Hazardous components	CAS No.	Weight %
dl-Limonene	138-86-3	70 - 80
Citral	5392-40-5	3 - 5
Geranyl acetate	105-87-3	1 - 3
Geraniol	106-24-1	≤ 1
Linalyl acetate	115-95-7	≤ 0.5
Citronellal	106-23-0	≤ 0.5

SECTION 4. FIRST AID MEASURES

Inhalation:

In the event of exposure to vapors, immediately remove from the area to a fresh air environment.

Skin contact:

Remove contaminated clothes. Wash skin with large volumes of water. If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.

Eye contact:

In the event of contact with the eyes, irrigate with water for at least 15 minutes; obtain medical advice if irritation persists.

Ingestion:

In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water. Obtain medical advise immediately. Do not induce vomiting, obtain medical advise immediately.

Most important symptoms:

No specific data available.

Indication of immediate medical attention:

No specific data available.

General information:

As in all cases of potential poisoning, obtain medical advice immediately.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media:

Foam, carbon dioxide, or dry chemical.

Unsuitable extinguishing media:

Avoid use of water in extinguishing fires.

Specific hazards:

During fire, gases hazardous to health may be formed. Do not allow run-off from fire fighting to enter drains or water courses.

Special fire fighting procedures:

Wear self-contained breathing apparatus for firefighting. Move containers from fire area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions:

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Dispose of in accordance with local regulations. Local authorities should be advised if significant spillage cannot be contained.

Methods and materials for containment and cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, vermiculite). Keep in suitable and closed containers for disposal. Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Avoid prolonged inhalation of vapors. 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 practices.

Conditions for safe storage, including any incompatibilities:

Store in tightly closed and upright container in a cool, dry, ventilated area. Store away from light, heat, and sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

ACGIH: Geraniol (CAS 106-24-1) TWA 5 ppm

ACGIH: Citral (CAS 5392-40-5) TWA 5 ppm

Appropriate Engineering Controls:

Ventilation:

Use engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Personal Protective Equipment:

Eye protection:

Ensure that eyewash stations and safety showers are close to the workstation location.

Chemical resistant goggles must be worn.

Hand protection:

Wear chemical resistant gloves suitable for this material as determined by a hazard assessment. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin and body protection:

Wear protective clothing suitable for this material as determined by a hazard assessment.

Respiratory protection:

Respiratory protection should be worn when workplace exposures exceed exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, use an approved respirator where there is a potential for adverse effects, including but not limited to respiratory irritation or odor, where indicated or required by the exposure assessment. Selection of air-purifying or positive-pressure supplied air will depend on the results of the exposure assessment which includes an evaluation of the specific operations and the actual or potential airborne concentrations. The type of cartridge or filter to be used must be selected and approved for the chemical, class, or classes of chemicals likely to be encountered in the workplace. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Color:	Pale yellow to green
Odor:	Characteristic
Odor threshold:	N/A
pH:	N/A
Melting point:	N/A
Boiling point:	N/A
Flashpoint:	45 °C 113 °F
Evaporation Rate (Butyl Acetate = 1):	N/A
Flammability (solid, gas):	N/A
Upper lower flammability or explosive limits:	N/A
Vapor density (Air=1):	N/A
Vapor pressure:	2.0 mm Hg @20°C
Specific gravity (H2O=1):	0.85
Solubility in water:	N/A
Solubility in other solvents:	N/A
Partition coefficient: n-octanol/water:	N/A
Auto-ignition temperature:	N/A

Decomposition temperature: N/A
Kinematic viscosity: N/A
Dynamic viscosity: N/A
Explosive properties: N/A
Oxidizing properties: N/A
Refractive index: N/A

SECTION 10. STABILITY AND REACTIVITY

Chemical stability:

The product is stable and non-reactive under normal conditions of use, storage and transport.

Possibility of hazardous reactions:

Material is stable under normal conditions.

Conditions to avoid:

Heat, flames and sparks. Temperature extremes and direct sunlight.

Incompatible materials:

Strong oxidizing agents. Strong acids. Strong Bases.

Hazardous decomposition products:

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity:

No data available

Acute dermal toxicity:

No data available

Acute inhalation toxicity:

No data available

Skin corrosion/irritation:

No data available

Serious eye damage/eye irritation:

No data available

Respiratory or skin sensitization:

No data available

Mutagenicity:

No data available

Reproductive toxicity:

No data available

Carcinogenicity:

No data available

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity:**

No data available

Persistence and Degradability:

No data available

Bioaccumulation:

No data available

Other Adverse Effects:

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal instructions:**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations:

Dispose in accordance with all applicable regulations.

Hazardous waste code:

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues/unused products:

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging:

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

IATA UN Number:	2319
IATA UN Proper Shipping Name:	TERPENE HYDROCARBONS, N.O.S. (LIMONENE)
IATA Transport Hazard Class:	3
IATA Packing group:	III
IATA Environmental Hazards:	N/A

SAFETY DATA SHEET

IATA ERG Codes:	N/A
IATA Special Precautions:	N/A
IATA Other Information:	N/A
IMDG UN Number:	2319
IMDG UN Proper Shipping Name:	TERPENE HYDROCARBONS, N.O.S. (LIMONENE)
IMDG Transport Hazard Class:	3
IMDG Packing Group:	III
IMDG Environmental Hazards:	Marine pollutant
IMDG EMS:	N/A
IMDG Special Precautions:	N/A
IMDG Transport in Bulk:	N/A

SECTION 15. REGULATORY INFORMATION

TSCA:

All components of this product are listed or excluded from listing on the TSCA inventory.

SECTION 16. OTHER INFORMATION

The information and recommendations contained in this data sheet represent, to the best of CandleScience's knowledge and belief, an accurate and reliable representation as the known data for this material. Since the conditions for use, handling, storage and disposal of this product are beyond CandleScience's control, it is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising out of the product's improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies (e.g. DOT, EPA, FDA) may have specific regulations concerning the transportation, handling, storage, use or disposal of this product, which may not be reflected in this SDS. The user should review these regulations to ensure full compliance.