





## SAFETY DATA SHEET

In accordance with REACH Regulation EC No.1907/2006

**Product:** Lemon oil FPD-2016A-LM2708

**Version:** 11

**Pictograms:**



### 2.3 Other hazards

**Other hazards:** Hydrocarbon Concentration %: 96.0000%

### Section 3. Composition / information on ingredients

#### 3.1 Substances

**Product identifier:** Lemon oil; CAS: 84929-31-7

**Contains:**

Name	CAS	EC	REACH Registration No.	%	Classification for (CLP) 1272/2008	Specific Conc. Limits, M-factors and ATEs
Lemon oil	84929-31-7, 8008-56-8	284-515-8		50-100%	Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1-Asp. Tox 1-Aquatic Chronic 2;H226-H304-H315-H317-H411,-	dermal: ATE = 107142.86 mg/kg bw-oral: ATE = 36355.05 mg/kg bw
dl-Limonene (racemic)	138-86-3	205-341-0		50-100%	Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1-Aquatic Chronic 1; H226-H304-H315-H317-H410,-	M = 1
beta-Pinene	127-91-3	204-872-5		10-<20%	Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1-Aquatic Chronic 1; H226-H304-H315-H317-H410,-	M = 1-M = 1
p-Mentha-1,4-diene	99-85-4	202-794-6		5-<10%	Flam. Liq. 3-Asp. Tox 1;H226-H304,-	oral: ATE = 3850 mg/kg bw
Citral	5392-40-5	226-394-6		1-<5%	Skin Irrit. 2-Eye Irrit. 2-Skin Sens. 1B;H315-H317-H319,-	dermal: ATE = 2250 mg/kg bw
alpha-Pinene	80-56-8	201-291-9		1-<5%	Flam. Liq. 3-Skin Irrit. 2-Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1-Aquatic Chronic 1; H226-H304-H315-H317-H410,-	M = 1-M = 1-oral: ATE = 3500 mg/kg bw
Myrcene	123-35-3	204-622-5		1-<5%	Flam. Liq. 3-Skin Irrit. 2-Eye Irrit. 2-Asp. Tox 1;H226-H304-H315-H319,-	
Terpinolene	586-62-9	209-578-0		0.1-<1%	Skin Sens. 1B-Asp. Tox 1-Aquatic Acute 1-Aquatic Chronic 1; H304-H317-H410,-	M = 1-oral: ATE = 3850 mg/kg bw

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Geraniol	106-24-1	203-377-1		0.1-<1%	Skin Irrit. 2-Eye Dam. 1-Skin Sens. 1;H315- H317-H318,-	oral: ATE = 3600 mg/kg bw
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### Section 4. First-aid measures

#### 4.1 Description of first aid measures

**Inhalation:** Remove from exposure site to fresh air, keep at rest, and obtain medical attention.

**Eye exposure:** Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.

**Skin exposure:** IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

#### 4.2 Most important symptoms and effects, both acute and delayed

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause an allergic skin reaction.

#### 4.3 Indication of any immediate medical attention and special treatment needed

None expected, see Section 4.1 for further information.

### Section 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable media: Carbon dioxide, Dry chemical, Foam.

#### 5.2 Special hazards arising from the substance or mixture

In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

#### 5.3 Advice for fire fighters:

In case of insufficient ventilation, wear suitable respiratory equipment.

### Section 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures:

Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

#### 6.2 Environmental precautions:

Keep away from drains, surface and ground water, and soil.

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### 6.3 Methods and material for containment and cleaning up:

Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

### 6.4 Reference to other sections:

Also refer to sections 8 and 13.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling:

Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

### 7.2 Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

### 7.3 Specific end use(s):

Flavours, Fragrances: Use in accordance with good manufacturing and industrial hygiene practices.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limits: Not Applicable

### 8.2 Exposure Controls

#### Eye / Skin Protection

Wear protective gloves/eye protection/face protection

#### Respiratory Protection

Under normal conditions of use and where adequate ventilation is available to prevent build up of excessive vapour, this material should not require special engineering controls. However, in conditions of high or prolonged use, or high temperature or other conditions which increase exposure, the following engineering controls can be used to minimise exposure to personnel: a) Increase ventilation of the area with local exhaust ventilation. b) Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. c) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

## Section 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**Physical State/Colour:** Not determined

**Odour:** Not determined

**Odour threshold:** Not determined

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**Melting point / freezing point:** Not determined  
**Boiling point or initial boiling point and boiling range:** Not determined  
**Flammability:** Not determined  
**Lower and upper explosion limit:** Not determined  
**Flash point:** 53.5 °C  
**Auto-ignition temperature:** Not determined  
**Decomposition temperature:** Not relevant  
**pH:** Not determined  
**Kinematic viscosity:** Not determined  
**Solubility:** Not determined  
**Partition coefficient: n-octanol/water (log value):** Not determined  
**Vapour pressure:** Not determined  
**Density and/or relative density:** Not determined  
**Relative vapour density:** Not determined  
**Particle characteristics:** Not determined

**9.2 Other information:** None available

### Section 10. Stability and reactivity

#### **10.1 Reactivity:**

Presents no significant reactivity hazard, by itself or in contact with water.

#### **10.2 Chemical stability:**

Good stability under normal storage conditions.

#### **10.3 Possibility of hazardous reactions:**

Not expected under normal conditions of use.

#### **10.4 Conditions to avoid:**

Avoid extreme heat.

#### **10.5 Incompatible materials:**

Avoid contact with strong acids, alkalis or oxidising agents.

#### **10.6 Hazardous decomposition products:**

Not expected.

### Section 11. Toxicological information

#### **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute Toxicity:** Based on available data the classification criteria are not met.  
Acute Toxicity Oral >5000

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Acute Toxicity Dermal >5000  
 Acute Toxicity Inhalation Not Available  
**Skin corrosion/irritation:** Skin Corrosion / Irritation Category 2  
**Serious eye damage/irritation:** Based on available data the classification criteria are not met.  
**Respiratory or skin sensitisation:** Sensitization - Skin Category 1  
**Germ cell mutagenicity:** Based on available data the classification criteria are not met.  
**Carcinogenicity:** Based on available data the classification criteria are not met.  
**Reproductive toxicity:** Based on available data the classification criteria are not met.  
**STOT-single exposure:** Based on available data the classification criteria are not met.  
**STOT-repeated exposure:** Based on available data the classification criteria are not met.  
**Aspiration hazard:** Aspiration Hazard Category 1

### Information about hazardous ingredients in the mixture

Not Applicable

Refer to Sections 2 and 3 for additional information.

### 11.2 Information on other hazards

Not Applicable

## Section 12. Ecological information

### 12.1 Toxicity:

Toxic to aquatic life with long lasting effects.

**12.2 Persistence and degradability:** Not available

**12.3 Bioaccumulative potential:** Not available

**12.4 Mobility in soil:** Not available

### 12.5 Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

**12.6 Endocrine disrupting properties:** Not Applicable

**12.7 Other adverse effects:** Not available

## Section 13. Disposal considerations

### 13.1 Waste treatment methods:

Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Section 14. Transport information

	<b>14.1 UN number:</b>	<b>14.2 UN Proper Shipping Name:</b>	<b>14.3 Transport hazard class (es):</b>	<b>Sub Risk:</b>	<b>14.4 Packing Group:</b>

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<b>UN Model Regulations</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Lemon oil, dl-Limonene (racemic))	3	-	III
<b>IMDG</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Lemon oil, dl-Limonene (racemic)) MARINE POLLUTANT	3	-	III
<b>ADR,RID,ADN</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Lemon oil, dl-Limonene (racemic))	3	-	III
<b>ICAO TI</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Lemon oil, dl-Limonene (racemic))	3	-	III

**14.5 Environmental hazards:** This is classified as an environmentally hazardous substance under the UN Model Regulations. This is classified as a Marine Pollutant under the IMDG Code.

**14.6 Special precautions for user:** None additional

**14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**

Not applicable

### Section 15. Regulatory information

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

Water Hazard Class (WGK): 2

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out for this product.

### Section 16. Other information

**Concentration % Limits:** SCI 2=5.46% SS 1=1.00000000% AH 1=10.42%

**Total Fractional Values:** SCI 2=18.30 SS 1=100.00 AH 1=9.60

**Key to revisions:**

14.2. UN proper shipping name

Concentration % Limits

SECTION 3: Composition/information on ingredients

Total Fractional Values

**Key to abbreviations:**

Abbreviation	Meaning
Aquatic Acute 1	Hazardous to the Aquatic Environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the Aquatic Environment - Long-term Hazard Category 1
Aquatic Chronic 2	Hazardous to the Aquatic Environment - Long-term Hazard Category 2
Asp. Tox 1	Aspiration Hazard Category 1
Eye Dam. 1	Eye Damage / Irritation Category 1
Eye Irrit. 2	Eye Damage / Irritation Category 2
Flam. Liq. 3	Flammable Liquid, Hazard Category 3



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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.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
P210	Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing vapour or dust.
P264	Wash hands and other contacted 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/eye protection/face protection.
P301/310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302/352	IF ON SKIN: Wash with plenty of soap and water.
P303/361/353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305/351/338	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 or doctor/physician.
P331	Do not induce vomiting.
P332/313	If skin irritation occurs: Get medical advice/attention.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P337/313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P370/378	In case of fire: Use carbon dioxide, dry chemical, foam for extinction.
P391	Collect spillage.
P403/235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to approved disposal site, in accordance with local regulations.
Skin Irrit. 2	Skin Corrosion / Irritation Category 2
Skin Sens. 1	Sensitization - Skin Category 1
Skin Sens. 1B	Sensitization - Skin Category 1B

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.