

MATERIAL SAFETY DATA SHEET – MSDS

1) PRODUCT IDENTIFICATION

Product name : **LEMON OIL**

Date: 12.02.2016

2) HAZARD IDENTIFICATION

Risk phrases	: harmful : may cause lung damage if swallowed. irritating to skin.
Hazards identification	may cause sensitization by skin contact. May be fatal if swallowed and enters airways Flammable liquid and vapour Causes skin irritation May cause an allergic skin reaction Very toxic to aquatic life with long lasting effects
Adverse human health effects	: there are potential chronic health effects to consider.
Dangerous product	: may form flammable/explosive vapour-air mixture.
Environmental hazard	: toxic to aquatic organisms, may cause long-term adverse effects in the aquatic Environment.
Primary route of exposure	: skin contact.
Symptoms relating to use	
- inhalation	: headache. Cough. Breathing difficulties. Shortness of breath.
- skin contact	: may cause sensitization by skin contact. Redness, pain.
- eye contact	: tears. Blurred vision. Burning sensation. Redness, pain. Severe eye irritant.
- ingestion	: must not come into contact with food or be consumed. Swallowing a small quantity of this material presents some health hazard. Abdominal pain, nausea.
Note	: nfpa ratings involve data and interpretations that may vary from company to Company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

2.1. Classification of the substance or mixture Classification EC 67/548 or EC 1999/45 Classification

: R10
Xn; R65
Xi; R38
R43
N; R50-53

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

- **Health hazards** : Aspiration hazard - Category 1 - Danger - (CLP : Asp. Tox. 1) - H304
Skin sensitisation - Category 1 - Warning - (CLP : Skin Sens. 1) - H317
- **Physical hazards** : Flammable liquids - Category 3 - Warning - (CLP : Flam. Liq. 3) - H226
- **Environmental hazards** Hazardous to the aquatic environment - Chronic hazard - Category 1 - Warning –
(CLP : Aquatic Chronic 1) - H410

2.2. Label elements Labelling EC 67/548 or EC 1999/45

Symbol(s) : Xn : Harmful
N : Dangerous for the environment

R Phrase(s) : Flammable.
Irritating to skin.
May cause sensitization by skin contact.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Harmful : may cause lung damage if swallowed.

S Phrase(s) : Avoid contact with skin.
Wear suitable gloves.
Avoid release to the environment. Refer to special instructions/Safety data sheets.
If swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.

Labelling Regulation EC 1272/2008 (CLP)

- **Hazard pictograms** : SGH08 - SGH02 - SGH07 - GHS09
 - **Signal words** : Danger
 - **Hazard statements** : H304 - May be fatal if swallowed and enters airways
H226 - Flammable liquid and vapour
H317 - May cause an allergic skin reaction
H410 - Very toxic to aquatic life with long lasting effects
 - **Hazard determining components of labelling** : Dipentene
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3) COMPOSITION INGREDIENTS

Chemical name : natural essential oil
Product name : Lemon Oil – olio essenziale di limone
Inci name : CITRUS LIMON, (L.) BURM F.
Tariff (harmonized number) : 3301.1310 HS

3.1./3.2. Substance / Preparation

Product's formula (INCI) : MENTHADIENE, B-Pinene, alpha.Pinene, Citral.
LINALYL ACETATE, MENTHADIENE, LINALOOL, alpha-Pinene, CITRAL.
Components : This product is hazardous.

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
(R)-p-mentha-1,8-diene :	60 - 71 %	5989-27-5	227-813-5	601-029-00-7	----	R10 Xi; R38 R43 N; R50-53
b-Pinene :	10 – 16.5 %	127-91-3	204-872-5	---		R10 Xn; R65 R43 N; R50-53
alpha-Pinene :	1.5 - 3 %	80-56-8	201-291-9	-----	----	R10 Xn; R65 R43 N; R50-53
Citral :	1.2 – 3,3 %	5392-40-5	226-394-6	605-019-00-3	----	Xi; R38 R43

4) FIRST AID MEASURES

4.1. Description of first aid measures

First aid measures

- **Inhalation** : Obtain medical attention.
Allow the victim to rest.
If breathing is difficult, give oxygen.
- **Skin contact** : Assure fresh air breathing.
: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Seek medical attention if ill effect or irritation develops.
- **Eye contact** : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **Ingestion** : Rinse mouth.
Do not induce vomiting.
If swallowed seek medical advice immediately and show this container or label.

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

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

5) FIRE MEASURES

5.1. Extinguishing media

Extinguishing media : Shut off source of fuel if possible, and allow fire to burn out.
Foam.
Carbon dioxide.
Dry chemical.

5.2. Special hazards arising from the substance or mixture

Specific hazards : May form flammable vapour-air mixture.

5.3. Advice for firefighters

Flammable class : This product is flammable.

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Prevention : Keep away from sources of ignition.
No smoking.

Special procedures : Avoid (reject) fire-fighting water to enter environment.
Exercise caution when fighting any chemical fire.

Surrounding fires : Use water spray or fog for cooling exposed containers.

6) ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions : Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
Keep public away from danger area.
No smoking.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Clean up methods : Clean up any spills as soon as possible, using an absorbent material to collect it.
Dilute residue with water.

7) STORAGE AND HANDLING

7.1. Precautions for safe handling

General : Store and handle as though always a serious potential fire/explosion and health hazard exists.

Handling : Keep away from sources of ignition - No smoking.
: Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.
Ensure prompt removal from eyes, skin and clothing.
Do not breathe vapours.

Technical protective measures : Proper grounding procedures to avoid static electricity should be followed.

Precautions in handling and storage : Good ventilation of the workplace required.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame.
Keep in fireproof place.
Keep container only cool and dry and in well ventilated area, with a temperature between +8° c and +12° c.

8) PROTECTION INFO

8.1. Control parameters

The use of safety goggles is recommended, the use of resistant gloves if material if handled manually is recommended.

- **Respiratory protection** : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
- **Skin protection** : No special clothing/skin protection equipment is recommended under normal conditions of use.
- **Eye protection** : Goggles.
- **Hand protection** : Gloves.
- **Ingestion** : When using, do not eat, drink or smoke.
- Industrial hygiene** : Provide good ventilation in process area to prevent formation of vapour.
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9) PHYSICAL / CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state at 20 °C** : Oily liquid.
- Colour** : PALE TO DEEP YELLOW OR GREENWISH YELLOW
- Odour** : CHARACTERISTIC OF OUTER PART OF FRESH LEMON PEEL
- OPTICAL ROTATION AT 20°C** : +57° - +66°
- Final boiling point [°C]** : 175
- Refraction index (°)** : 1.4730 - 1.4760
- Relative density, liquid (water=1)** : 0.8500 – 0.8580
- Flash point C°** : 49
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10) STABILITY AND REACTIVITY – SHELF LIFE

10.3. Possibility of hazardous reactions

- Hazardous reactions** : Halogens.
May release flammable gases.
Reacts violently with :
Oxidizing agent.
- Hazardous properties** : In use, may form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

- Conditions to avoid** : Open flame.
Overheating.
Sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products

- Hazardous decomposition products** : According to process conditions, hazardous decomposition products may be generated.
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11) TOXICOLOGICAL INFO

Ld 50 – oral / rat. Not determined / if swallowed seek medical treatment (Ld 50 oral = 5g/kg)

12) ECOLOGICAL INFO

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

Ecological effects information	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
BOD5-value [mg/l]	: No data available.
COD-value [mg/l]	: No data available.

13) DISPOSAL CONSIDERATION

13.1. Waste treatment methods

General	: Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container at hazardous or special waste Collection point. Avoid release to the environment
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14) TRANSPORT INFO

General information

UN No.	: 1993 : 3: Flammable liquids N.O.S.
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Labelling ADR

Land transport

H.I. nr	: 30
Proper shipping name	: UN1993 FLAMMABLE LIQUIDS, 3 (9E), III, (D/E)
- ADR Class	: 3
- ADR Packing group	: E III
DOT (USA)	: Special provision : 640E Group : III Class : 3

Sea transport

- IMO-IMDG code	: Class 3
- IMO Packing group	: III
- IMDG-Marine pollution	: YES, BETA PINENE
- EMS-Nr	: S-D F-E, S-E

Air transport

- ICAO/IATA	: 355 Packaging instructions passenger: 366 Packaging instructions cargo :
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Proper shipping name

- IATA - Class or division	: 3
- IATA Packing group	: III

Personal precautions

In case of spillage and/or leakage	: The driver shall not attempt to deal with any fire of the load. : Clean up even minor leaks or spills if possible without unnecessary risk.
Emergency action in case of accident	: Stop the engine.

No naked lights. No smoking.
Keep public away from danger area.
Mark roads and warns other road users.
Notify fire brigade and environmental authorities.

Additional information

Limited quantities (LQ)

: 5L.

Excepted quantities (EQ)

: Code E1

Max net quantity per inner packaging: 30ml

Max net quantity per outer packaging: 1000ml

Transport category

3

Tunnel restriction code

: D/E.

15) REGULATORY LABEL INFO:

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

Ensure all national/local regulations are observed.

15.2. Chemical safety assessment.

16) OTHER INFORMATION

Recommended uses and restrictions : Specifications and technical informations on the product may be obtained by your dealer.

List of relevant R phrases (heading 3) : R10 : Flammable.

R38 : Irritating to skin.

R43 : May cause sensitization by skin contact.

R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 : Harmful : may cause lung damage if swallowed.

List of relevant symbols (heading 3) : N : Dangerous for the environment

Xi : Irritant

Xn : Harmful

Further information

: None.