



ITALIAN LEMON OIL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 4/29/2014 Revision date: 2/23/2021 Supersedes: 11/2/2020 Version: 2.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Substance name : ITALIAN LEMON OIL
EC-No. : 284-515-8
CAS-No. : 84929-31-7
REACH registration No : 01-2119495512-35
Product code : CITHE16
Synonyms : CAS USA : 8008-56-8
Product group : Essential oil

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use
Industrial/Professional use spec : Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

EXAFLOR
5 rue des Pyrénées
P.O. Box CP 30561
94653 Rungis Cedex - France
T +33 (0)1 41 73 23 10
exaflor@orange.fr - www.exaflor.co

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|----------------------|---------|-------------------|---------|
| | ORFILA (FRANCE) | | +33 1 45 42 59 59 | |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226
Skin corrosion/irritation, Category 2 H315
Skin sensitisation, Category 1 H317
Reproductive toxicity, Category 2 H361
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of damaging fertility or the unborn child. Causes skin irritation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Hazard statements (CLP) :

Precautionary statements (CLP) :

- : Danger
- : 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.
H361 - Suspected of damaging fertility or the unborn child.
H410 - Very toxic to aquatic life with long lasting effects.
- : P201 - Obtain special instructions before use.
P210 - Keep away from sparks, heat, open flames, hot surfaces. No smoking.
P261 - Avoid breathing fume, gas, dust, vapours.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor. Do NOT induce vomiting.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : ITALIAN LEMON OIL
CAS-No. : 84929-31-7
EC-No. : 284-515-8

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-----------------|--|-----------|---|
| D-LIMONENE | (CAS-No.) 5989-27-5 (EC-No.) 227-813-5 (EC Index-No.) 601-029-00-7 | 60 – 70 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| BETA-PINENES | (CAS-No.) 127-91-3 (EC-No.) 204-872-5 | 10 – 16.5 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 |
| GAMMA-TERPINENE | (CAS-No.) 99-85-4 (EC-No.) 202-794-6 | 7 – 12 | Flam. Liq. 3, H226 Repr. 2, H361 Asp. Tox. 1, H304 |
| ALPHA-PINENES | (CAS-No.) 80-56-8 (EC-No.) 201-291-9 | 1.5 – 4 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

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| | | | |
|----------|---|-----------|---|
| CITRAL | (CAS-No.) 5392-40-5 (EC-No.) 226-394-6 | 0.1 – 3.5 | Skin Irrit. 2, H315 Skin Sens. 1, H317 |
| SABINENE | (CAS-No.) 3387-41-5 (EC-No.) 222-212-4 | 1.5 – 3 | Flam. Liq. 3, H226 |
| MYRCENE | (CAS-No.) 123-35-3 (EC-No.) 204-622-5 | ≤ 2 | Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 |
| P-CYMENE | (CAS-No.) 99-87-6 (EC-No.) 202-796-7 | ≤ 0.4 | Flam. Liq. 3, H226 Repr. 2, H361 Aquatic Chronic 2, H411 |
| LINALOOL | (CAS-No.) 78-70-6 (EC-No.) 201-134-4 | ≤ 0.2 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |
| GERANIOL | (CAS-No.) 106-24-1 (EC-No.) 203-377-1 | ≤ 0.1 | Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 |

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Gently wash with plenty of soap and water. Get medical advice/attention. Specific treatment (see Read label before use. on this label). If skin irritation or rash occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not induce vomiting. Call a physician immediately. |

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

| | |
|-------------------------------------|--|
| Symptoms/effects after inhalation | : May cause an allergic skin reaction. |
| Symptoms/effects after skin contact | : Causes skin irritation. Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after ingestion | : May be fatal if swallowed and enters airways. Risk of lung oedema. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

| | |
|------------------|--|
| Fire hazard | : Flammable liquid and vapour. |
| Explosion hazard | : May form flammable/explosive vapour-air mixture. |

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Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing mist, fume, dust, vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes.

Hygiene measures : Wash Wash hands with water and soap thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

| | |
|----------------------------|--|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof Use spark-/explosionproof appliances and lighting system equipment. |
| Storage conditions | : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. |
| Incompatible products | : Strong bases. Strong acids. |
| Incompatible materials | : Sources of ignition. Direct sunlight. Heat sources. |
| Maximum storage period | : 12 months Shelf life to guarantee the quality and properties of the product; After this period, it is recommended to control organoleptic and physicochemical properties before using the raw material. |
| Storage temperature | : ≤ 15 °C |
| Storage area | : Keep away from any flames or sparking source. Store in a well-ventilated place. Keep in the dark. Store away from heat. |
| Special rules on packaging | : Store in a closed container. Keep only in original container. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses. Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Appearance | : Liquid mobile. Clear. |
| Colour | : light yellow. Green. Dark. weakly turbid after a lowering of the temperature. |
| Odour | : characteristic. fresh. sweet. pleasant fruity. lemon-like. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : 176 °C |
| Flash point | : 46 °C |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Flammable liquid and vapour. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : 0.849 – 0.858 |
| Solubility | : Poorly soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

Refractive index : 1.471 – 1.476

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

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Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

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| | |
|--------------------|--------------|
| LD50 oral rat | 2840 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

D-LIMONENE (5989-27-5)

| | |
|--------------------|--------------|
| LD50 oral rat | 4400 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

GAMMA-TERPINENE (99-85-4)

| | |
|---------------|------|
| LD50 oral rat | 3850 |
|---------------|------|

CITRAL (5392-40-5)

| | |
|--------------------|----------------------------|
| LD50 oral rat | 4960 mg/kg |
| LD50 oral | 6000 mg/kg LD50 oral mouse |
| LD50 dermal rabbit | 2550 mg/kg |

ALPHA-PINENES (80-56-8)

| | |
|--------------------|--------------|
| LD50 oral rat | 3700 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

MYRCENE (123-35-3)

| | |
|--------------------|--------------|
| LD50 oral rat | > 5000 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

P-CYMENE (99-87-6)

| | |
|--------------------|------------|
| LD50 oral rat | 4750 mg/kg |
| LD50 dermal rabbit | 5000 |

LINALOOL (78-70-6)

| | |
|--------------------|----------------------------|
| LD50 oral rat | 2790 mg/kg |
| LD50 oral | 3120 mg/kg LD50 oral mouse |
| LD50 dermal rabbit | 5610 mg/kg |

GERANIOL (106-24-1)

| | |
|--------------------|--------------|
| LD50 oral rat | 3600 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified
Additional information : Based on available data, the classification criteria are not met
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met

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D-LIMONENE (5989-27-5)

| | |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

| | |
|---|---|
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. |
| Additional information | : Based on available data, the classification criteria are not met |
| STOT-single exposure | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| STOT-repeated exposure | : Not classified |
| Additional information | : Based on available data, the classification criteria are not met |
| Aspiration hazard | : May be fatal if swallowed and enters airways. |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : Very toxic to aquatic life with long lasting effects. |
| Ecology - water | : Very toxic to aquatic life with long lasting effects. |
| Hazardous to the aquatic environment, short-term (acute) | : Very toxic to aquatic life. |
| Hazardous to the aquatic environment, long-term (chronic) | : Very toxic to aquatic life with long lasting effects. |

D-LIMONENE (5989-27-5)

| | |
|----------------|---|
| LC50 fish 1 | 0.702 mg/l Pimephales promela (fathead minnow) -96h |
| EC50 Daphnia 1 | 69.6 daphnia - 48h |

ALPHA-PINENES (80-56-8)

| | |
|--------------------------------|---|
| LC50 fish 1 | 0.28 mg/l Pimephales promela (fathead minnow) - 96h |
| LC50 other aquatic organisms 1 | 41 mg/l EC50 48h - Daphnia magna [mg/l] |

P-CYMENE (99-87-6)

| | |
|----------------|---|
| LC50 fish 1 | 48 mg/l 96h -Cyprinodon variegatus (Sheep shead minnow) |
| EC50 Daphnia 1 | 6.5 mg/l EC50 48h - Daphnia magna [mg/l] |
| ErC50 (algae) | 4.03 mg/l 72h - Scenedesmus capricornutum (Fresh water algae) |

LINALOOL (78-70-6)

| | |
|--------------------------------|---|
| LC50 fish 1 | 27.8 mg/l EC 50 (fish : rainbow trout) : - 96h |
| LC50 other aquatic organisms 1 | 88.3 mg/l Desmodesmus subspicatus (green algae) - 96h |
| EC50 Daphnia 1 | 59 mg/l EC50 48h - Daphnia magna [mg/l] |
| NOEC chronic fish | 3.5 mg/l Oncorhynchus mykiss (Rainbow trout)- 96h |
| NOEC chronic crustacea | 25 mg/l daphnia - 48h |

GERANIOL (106-24-1)

| | |
|-------------|---|
| LC50 fish 1 | env. 22 mg/l Brachydanio rerio (zebra-fish) - 96h |
|-------------|---|

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| | |
|--------------------------------|--|
| EC50 Daphnia 1 | 10.8 mg/l EC50 48h - Daphnia magna [mg/l] |
| EC50 other aquatic organisms 1 | 13.1 mg/l Desmodesmus subspicatus (green algae) -72h |

12.2. Persistence and degradability

ITALIAN LEMON OIL (84929-31-7)

| | |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

D-LIMONENE (5989-27-5)

| | |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

BETA-PINENES (127-91-3)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

GAMMA-TERPINENE (99-85-4)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

CITRAL (5392-40-5)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

ALPHA-PINENES (80-56-8)

| | |
|-------------------------------|--|
| Persistence and degradability | Readily biodegradable. May cause long-term adverse effects in the environment. |
|-------------------------------|--|

MYRCENE (123-35-3)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

P-CYMENE (99-87-6)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |
|-------------------------------|------------------------|

| | |
|----------------|-------|
| Biodegradation | 100 % |
|----------------|-------|

LINALOOL (78-70-6)

| | |
|-------------------------------|---|
| Persistence and degradability | Readily biodegradable. Not established. |
|-------------------------------|---|

| | |
|----------------|--|
| Biodegradation | 100 % 13 DAYS- ZAHN-WELLENS TEST OECD N° 302 B |
|----------------|--|

GERANIOL (106-24-1)

| | |
|-------------------------------|---|
| Persistence and degradability | Readily biodegradable. Not established. |
|-------------------------------|---|

| | |
|----------------|--|
| Biodegradation | 80 – 100 % a robie, Exposure duration 3 days |
|----------------|--|

SABINENE (3387-41-5)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

12.3. Bioaccumulative potential

ITALIAN LEMON OIL (84929-31-7)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

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D-LIMONENE (5989-27-5)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

BETA-PINENES (127-91-3)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

GAMMA-TERPINENE (99-85-4)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

CITRAL (5392-40-5)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

ALPHA-PINENES (80-56-8)

| | |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | 4.834 |
|---|-------|

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

MYRCENE (123-35-3)

| | |
|---|------|
| Partition coefficient n-octanol/water (Log Kow) | 4.17 |
|---|------|

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

P-CYMENE (99-87-6)

| | |
|---|-----|
| Partition coefficient n-octanol/water (Log Kow) | 4.1 |
|---|-----|

LINALOOL (78-70-6)

| | |
|---|------|
| Partition coefficient n-octanol/water (Log Pow) | 2.97 |
|---|------|

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

GERANIOL (106-24-1)

| | |
|---|--------------|
| Partition coefficient n-octanol/water (Log Pow) | 2.5 at 25 °C |
|---|--------------|

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

SABINENE (3387-41-5)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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| | |
|--|---|
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Additional information | : Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container. |
| Ecology - waste materials | : Avoid release to the environment. Hazardous waste due to toxicity. |

SECTION 14: Transport information

In accordance with ADR

14.1. UN number

UN-No. (ADR) : UN 1169

14.2. UN proper shipping name

Proper Shipping Name (ADR) : EXTRACTS, AROMATIC, LIQUID
Transport document description (ADR) : UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3
Danger labels (ADR) : 3



14.4. Packing group

Packing group (ADR) : III

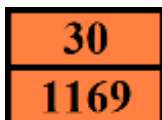
14.5. Environmental hazards

Dangerous for the environment : Yes
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
Special provisions (ADR) : 601, 640E
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Vehicle for tank carriage : FL
Transport category (ADR) : 3
Hazard identification number (Kemler No.) : 30
Orange plates :



Tunnel restriction code (ADR) : D/E

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

| Reference code | Applicable on | Entry title or description |
|----------------|--|--|
| 3(a) | ITALIAN LEMON OIL ; GAMMA-TERPINENE ; BETA-PINENES ; ALPHA-PINENES ; D-LIMONENE ; P-CYMENE ; MYRCENE ; SABINENE | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F |
| 3(b) | ITALIAN LEMON OIL ; GAMMA-TERPINENE ; BETA-PINENES ; ALPHA-PINENES ; LINALOOL ; D-LIMONENE ; GERANIOL ; CITRAL ; MYRCENE | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 |
| 3(c) | ITALIAN LEMON OIL ; ALPHA-PINENES ; D-LIMONENE ; P-CYMENE | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 |
| 40. | ITALIAN LEMON OIL ; GAMMA-TERPINENE ; BETA-PINENES ; ALPHA-PINENES ; D-LIMONENE ; P-CYMENE ; MYRCENE ; SABINENE | Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. |

ITALIAN LEMON OIL is not on the REACH Candidate List

ITALIAN LEMON OIL is not on the REACH Annex XIV List

ITALIAN LEMON OIL is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

ITALIAN LEMON OIL is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (ID No. 2884)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BLV | Biological limit value |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC50 | Median effective concentration |
| EC-No. | European Community number |

ITALIAN LEMON OIL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | |
|-------|---|
| EN | European Standard |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| vPvB | Very Persistent and Very Bioaccumulative |
| WGK | Water Hazard Class |

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

| | |
|-------------------|---|
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| 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. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H400 | Very toxic to aquatic life. |

ITALIAN LEMON OIL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | |
|------|---|
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.