



# GREEN MANDARIN OIL

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Issue date: 5/20/2014 Revision date: 6/12/2020 Version: 1.4

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : GREEN MANDARIN OIL  
EC-No. : 284-521-0  
CAS-No. : 84929-38-4  
Product code : MANHE03  
Synonyms : No CAS USA : 8008-31-9  
Product group : Essential oil  
Other means of identification : Citrus reticulata Blanco

#### 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

EXAFLOX  
5 rue des Pyrénées  
P.O. Box CP 30561  
94653 Rungis Cedex - France  
T +33 (0)1 41 73 23 10 - F +33 (0)1 41 73 23 19  
[exaflor@orange.fr](mailto:exaflor@orange.fr) - [www.exaflor.fr](http://www.exaflor.fr)

#### 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 heat, sparks, hot surfaces. No smoking.  
P261 - Avoid breathing fume, gas, dust, vapours.  
P264 - Wash hands thoroughly after handling.  
P280 - Wear protective clothing, protective gloves, 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 : GREEN MANDARIN OIL  
CAS-No. : 84929-38-4  
EC-No. : 284-521-0

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	65 – 75	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
GAMMA-TERPINENE	(CAS-No.) 99-85-4 (EC-No.) 202-794-6	15 – 22	Flam. Liq. 3, H226 Repr. 2, H361 Asp. Tox. 1, H304
ALPHA-PINENES	(CAS-No.) 80-56-8 (EC-No.) 201-291-9	1 – 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
MYRCENE	(CAS-No.) 123-35-3 (EC-No.) 204-622-5	1.4 – 2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319

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BETA-PINENES	(CAS-No.) 127-91-3 (EC-No.) 204-872-5	0 – 2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
P-CYMENE	(CAS-No.) 99-87-6 (EC-No.) 202-796-7	0 – 1	Flam. Liq. 3, H226 Aquatic Chronic 2, H411
METHYL-N-METHYLANTHRANILATE	(CAS-No.) 85-91-6 (EC-No.) 201-642-6	0.4 – 0.7	Not classified
LINALOOL	(CAS-No.) 78-70-6 (EC-No.) 201-134-4	0 – 0.2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
CITRAL	(CAS-No.) 5392-40-5 (EC-No.) 226-394-6	0 – 0.2	Skin Irrit. 2, H315 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: Get immediate medical advice/attention, Immediately call a POISON CENTER/doctor. Get medical advice/attention. Specific treatment (see Read label before use. on this label). If skin irritation or rash occurs: Immediately call a POISON CENTER/doctor. Get immediate 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.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

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### 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 smokes, 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 hands 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.

### 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 ventilating equipment.

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Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Heat sources, Direct sunlight. 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	: 10 (5 – 25) °C

### 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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid mobile. Clear.

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Colour	: light green. dark green. Light blue fluorescence.
Odour	: characteristic.
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	: 175 °C
Flash point	: 48 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour.
Vapour pressure	: 2 mm Hg at 25 °C
Relative vapour density at 20 °C	: No data available
Relative density	: 0.847 – 0.855
Solubility	: Insoluble in water. Soluble in. alcohol.
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

VOC content	: ~ 75 %
Refractive index	: 1.472 – 1.478

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 10.2. Chemical stability

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

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### GREEN MANDARIN OIL (84929-38-4)

LD50 oral rat	5000 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
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### 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

### METHYL-N-METHYLANTHRANILATE (85-91-6)

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

### CITRAL (5392-40-5)

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

### 12.2. Persistence and degradability

### GREEN MANDARIN OIL (84929-38-4)

Persistence and degradability	May cause long-term adverse effects in the environment.
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### D-LIMONENE (5989-27-5)

Persistence and degradability	May cause long-term adverse effects in the environment.
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### GAMMA-TERPINENE (99-85-4)

Persistence and degradability	Not established.
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### ALPHA-PINENES (80-56-8)

Persistence and degradability	Readily biodegradable. May cause long-term adverse effects in the environment.
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### BETA-PINENES (127-91-3)

Persistence and degradability	Not established.
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### MYRCENE (123-35-3)

Persistence and degradability	Not established.
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### P-CYMENE (99-87-6)

Persistence and degradability	Readily biodegradable.
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Biodegradation	100 %
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### LINALOOL (78-70-6)

Persistence and degradability	Readily biodegradable. Not established.
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Biodegradation	100 % 13 DAYS- ZAHN-WELLENS TEST OECD N° 302 B
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### CITRAL (5392-40-5)

Persistence and degradability	Not established.
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## 12.3. Bioaccumulative potential

### GREEN MANDARIN OIL (84929-38-4)

Bioaccumulative potential	Not established.
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### D-LIMONENE (5989-27-5)

Bioaccumulative potential	Not established.
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### GAMMA-TERPINENE (99-85-4)

Bioaccumulative potential	Not established.
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### ALPHA-PINENES (80-56-8)

Partition coefficient n-octanol/water (Log Pow)	4.834
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Bioaccumulative potential	Not established.
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### BETA-PINENES (127-91-3)

Bioaccumulative potential	Not established.
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### MYRCENE (123-35-3)

Partition coefficient n-octanol/water (Log Kow)	4.17
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Bioaccumulative potential	Not established.
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### P-CYMENE (99-87-6)

Partition coefficient n-octanol/water (Log Kow)	4.1
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### LINALOOL (78-70-6)

Partition coefficient n-octanol/water (Log Pow)	2.97
Bioaccumulative potential	Not established.

### METHYL-N-METHYLANTHRANILATE (85-91-6)

Partition coefficient n-octanol/water (Log Pow)	2.81
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### CITRAL (5392-40-5)

Bioaccumulative potential	Not established.
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### 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.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to contents/container to agreed companies according to national regulations.
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 / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR)	: UN 1169
UN-No. (IMDG)	: UN 1169
UN-No. (IATA)	: UN 1169
UN-No. (ADN)	: UN 1169
UN-No. (RID)	: UN 1169

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: EXTRACTS, AROMATIC, LIQUID
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

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Transport document description (ADR)	: UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1169 , 3, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1169 , 3, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1169 , 3, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1169 , 3, ENVIRONMENTALLY HAZARDOUS

### 14.3. Transport hazard class(es)

#### ADR

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



#### IMDG

Transport hazard class(es) (IMDG)	: 3
	:



#### IATA

Transport hazard class(es) (IATA)	: 3
	:



#### ADN

Transport hazard class(es) (ADN)	: 3
	:



#### RID

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



### 14.4. Packing group

Packing group (ADR)	: III
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

### 14.5. Environmental hazards

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

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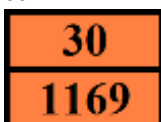
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### 14.6. Special precautions for user

#### 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

#### Transport by sea

No data available

#### Air transport

No data available

#### Inland waterway transport

No data available

#### Rail transport

No data available

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

Not applicable

## 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)	GREEN MANDARIN OIL ; P-CYMENE ; MYRCENE ; ALPHA-PINENES ; BETA-PINENES ; GAMMA-TERPINENE ; D-LIMONENE	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)	GREEN MANDARIN OIL ; MYRCENE ; LINALOOL ; ALPHA-PINENES ; BETA-PINENES ; GAMMA-TERPINENE ; CITRAL ; D-LIMONENE	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)	GREEN MANDARIN OIL ; P-CYMENE ; ALPHA-PINENES ; D-LIMONENE	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.	GREEN MANDARIN OIL ; P-CYMENE ; MYRCENE ; ALPHA-PINENES ; BETA-PINENES ; GAMMA-TERPINENE ; D-LIMONENE	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.

GREEN MANDARIN OIL is not on the REACH Candidate List

GREEN MANDARIN OIL is not on the REACH Annex XIV List

GREEN MANDARIN 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.

GREEN MANDARIN 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

# GREEN MANDARIN OIL

## Safety Data Sheet

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

VOC content : ~ 75 %

### 15.1.2. National regulations

#### Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (ID No. 3822)  
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
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.

# GREEN MANDARIN OIL

## Safety Data Sheet

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

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 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.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
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.