



Safety Data Sheet

01. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	Ravensara Oil.				
Biological Definition	Ravensara Aromatica Leaf Oil is the volatile oil distilled from the leaves of <i>Ravensara aromatica</i> , <i>Lauraceae</i> .				
INCI Name	Ravensara Aromatica Leaf Oil				
Synonyms & Trade Names	Ravensara Aromatica Oil				
CAS-No	91770-56-8	EC No.	294-842-8	EINECS No.	294-842-8

1.2 Relative identified uses of the substance or mixture and uses advised against

No additional data available.

1.3 Details of the supplier of the safety data sheet

Golden Bough Botanicals Inc 12-1585 Cliveden Ave Delta BC V3M 6M1

1.4 Emergency Tel. No.

604-540-8700 (Monday-Friday 8:30 am-4:30 pm)

02. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

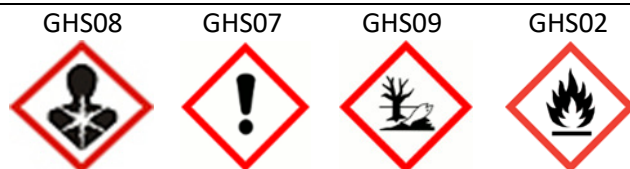
The Full Text for all Hazard Statements displayed in Section 16.

Classification (EC 1272/2008)

Flammable liquid, Category 3 (Flam. Liq. 3, H226).
 Skin irritation, Category 2 (Skin Irrit. 2, H315).
 Eye irritation, Category 2 (Eye Irrit. 2, H319).
 Skin sensitisation, Category 1 (Skin Sens. 1, H317).
 Germ cell mutagenicity, Category 2 (Muta. 2, H341).
 Carcinogenicity, Category 2 (Carc. 2, H351).
 Aspiration hazard, Category 1 (Asp. Tox. 1, H304).
 Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

2.2 Label Elements

Label in accordance with (EC) No 1272/2008



Signal Word

Danger.

Contains

601-029-00-7 (R)-P-MENTHA-1,8-DIENE
 E-427-8 ESTRAGOLE
 EC 236-719-3 DELTA-3-CARENE
 EC 201-291-9 ALPHA-PINENE X
 EC 204-622-5 MYRCENE
 EC 202-223-0 EUGENYL METHYL ETHER (METHYL EUGENOL)

	EC 204-872-5 B-PINENE EC 201-746-1 BETA-CARYOPHYLLENE EC 202-792-5 A-PHELLANDRENE EC 202-794-6 G-TERPINENE EC 202-795-1 P-MENTHA-1,3-DIENE (SEE ALPHA-TERPINENE)
Hazard Statements	
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. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H411 Toxic to aquatic life with long lasting effects	
Precautionary Statements	
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection.. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
Supplementary Precautionary Statements	
None.	
2.3 Other Hazards	
PBT or vPvB according to Annex XIII	The substance does not satisfy the PBT or vPvP criteria in accordance with annexe XIII of the REACH regulations EC 1907/2006..
Adverse physio-chemical properties	No additional data available.
Adverse effects on human health	No additional data available.

03. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
10.0 - 25.0% (R)-P-MENTHA-1,8-DIENE CAS: 5989-27-5, EC: 227-813-5 Classification (EC 1272/2008) Flam. Liq. 3, H226, Skin Irrit. 2, H315, Skin Sens. 1, H317, Aquatic Acute 1, H400 M Acute = 1, Aquatic Chronic 1, H410, M Chronic = 1
10.0 - 25.0% 4(10)-THUJENE CAS: 3387-41-5, EC: 222-212-4 Classification (EC 1272/2008)
2.5 – 10.0% ESTRAGOLE CAS: 140-67-0, EC: 205-427-8 Classification (EC 1272/2008) Acute Tox. 4, H302, Carc. 2, H351, Muta. 2, H341, Skin Sens. 1, H317
2.5 – 10.0% DELTA-3-CARENE CAS: 13466-78-9, EC: 236-719-3 Classification (EC 1272/2008) Asp. Tox. 1, H304, Flam. Liq. 3, H226, Skin Irrit. 2, H315, Skin Sens. 1, H317

<p>2.5 – 10.0% Alpha-pinene CAS-No.: 80-56-8 EC No.: 201-291-9</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Flam. Liq. 3, H226, Skin Irrit. 2, H315, Skin Sens. 1, H317</p>
<p>2.5 – 10.0% Linalool CAS: 78-70-6, EC: 201-134-4</p> <p>Classification (EC 1272/2008) Eye Irrit. 2, H319, Skin Irrit. 2, H315</p>
<p>2.5 – 10.0% MYRCENE CAS: 123-35-3, EC: 204-622-5</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Eye Irrit. 2, H319, Flam. Liq. 3, H226, Skin Irrit. 2, H315</p>
<p>2.5 - 10.0% 4-TERPINENOL CAS: 562-74-3, EC: 209-235-5</p> <p>Classification (EC 1272/2008); Acute Tox. 4, H302, Eye Irrit. 2, H319, Skin Irrit. 2, H315</p>
<p>2.5 – 10.0% EUGENYL METHYL ETHER (METHYL EUGENOL) CAS: 93-15-2, EC: 202-223-0</p> <p>Classification (EC 1272/2008) Acute Tox. 4, H302, Carc. 2, H351, Muta. 2, H341</p>
<p>2.5 – 10.0% B-PINENE CAS: 127-91-3, EC: 204-872-5</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Flam. Liq. 3, H226, Skin Irrit. 2, H315, Skin Sens. 1, H317</p>
<p>2.5 – 10.0% EUCALYPTOL CAS: 87-44-5, EC: 201-746-1</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304</p>
<p>2.5 – 10.0% BETA-CARYOPHYLLENE CAS: 87-44-5, EC: 201-746-1</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304</p>
<p>2.5 – 10.0% A-PHELLANDRENE CAS: 99-83-2, EC: 202-792-5</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Flam. Liq. 3, H226</p>
<p><2.5% G-TERPINENE CAS: 99-85-4, EC: 202-794-6</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Flam. Liq. 3, H226</p>
<p><2.5% CAMPHENE CAS: 79-92-5, EC: 201-234-8</p> <p>Classification (EC 1272/2008) Eye Irrit. 2, H319, Aquatic Acute 1, H400, M Acute = 1, Aquatic Chronic 1, H410 M Chronic = 1</p>
<p><2.5% P-MENTHA-1,3-DIENE (SEE ALPHA-TERPINENE) CAS: 99-86-5, EC: 202-795-1</p> <p>Classification (EC 1272/2008) Asp. Tox. 1, H304, Acute Tox. 4, H302, Aquatic Chronic 2, H411, Flam. Liq. 3, H226</p>

04. FIRST AID MEASURES

4.1 Description of first aid measures	
Inhalation	Move to fresh air for at least 15 minutes, in case of complaints seek medical attention.
Ingestion	Do not give the patient anything orally. In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. Seek medical attention immediately, showing the label. If swallowed accidentally, do not allow to drink, do not induce vomiting and transfer to hospital immediately by ambulance. Show the label to the doctor.
Skin Contact	Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner. Watch out for any remaining product between skin and clothing, watches, shoes, etc. In the event of an allergic reaction, seek medical attention. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.
Eye Contact	Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open. If there is any redness, pain or visual impairment, consult an ophthalmologist.
4.2 Most important symptoms and effects, both acute and delayed	
No additional data available.	
4.3 Indication of any immediate medical attention and special treatment needed	
No additional data available.	

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media	
Keep packages near the fire cool, to prevent pressurised containers from bursting. Suitable methods of extinction Prevent the effluent of fire-fighting measures from entering drains or waterways.	
5.2 Special hazards arising from the product	
A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health. Do not breathe in smoke. In the event of a fire, the following may be formed : - carbon monoxide (CO) - carbon dioxide (CO ₂).	
5.3 Advice for firefighters	
Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.	

06. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures	
Consult the safety measures listed under headings 7 and 8. For non first aid worker Avoid any contact with the skin and eyes. For first aid worker First aid workers will be equipped with suitable personal protective equipment (See section 8).	
6.2 Environmental Precautions	
Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal. Prevent any material from entering drains or waterways.	

	<p>If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures.</p> <p>Use drums to dispose of collected waste in compliance with current regulations (see section 13).</p>
6.3	Methods and material for containment and cleaning up.
	Clean preferably with a detergent, do not use solvents.
6.4	Reference to other sections
	No additional data available.

07. HANDLING AND STORAGE

7.1	Precautions for safe handling
	<p>Always wash hands after handling.</p> <p>Remove and wash contaminated clothing before re-using.</p> <p>Remove contaminated clothing and protective equipment before entering eating areas.</p> <p>Fire prevention :</p> <p>Handle in well-ventilated areas.</p> <p>Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.</p> <p>Never inhale this substance.</p> <p>Prevent the accumulation of electrostatic charges with connections to earth.</p> <p>Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.</p> <p>Keep packages tightly closed and away from sources of heat, sparks and naked flames.</p> <p>Do not use tools which may produce sparks. Do not smoke.</p> <p>Prevent access by unauthorised personnel.</p> <p>Recommended equipment and procedures :</p> <p>For personal protection, see section 8.</p> <p>Observe precautions stated on label and also industrial safety regulations.</p> <p>Avoid skin and eye contact with this substance.</p> <p>Avoid exposure - obtain special instructions before use.</p> <p>Prohibited equipment and procedures :</p> <p>No smoking, eating or drinking in areas where the substance is used.</p> <p>Never open the packages under pressure.</p>
7.2	Conditions for safe storage, including any incompatibilities
	<p>Storage</p> <p>Keep the container tightly closed in a dry, well-ventilated place.</p> <p>Keep away from food and drink, including those for animals.</p> <p>Keep away from all sources of ignition - do not smoke.</p> <p>Keep well away from all sources of ignition, heat and direct sunlight.</p> <p>Avoid accumulation of electrostatic charges.</p> <p>Packaging</p> <p>Always keep in packaging made of an identical material to the original.</p>
7.3	Specific end use(s)
	No additional data available.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	Control parameters
	<p>Occupational exposure limits :</p> <p>ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :</p>

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
13466-78-9	20 ppm	-	-	-	-
80-56-8	20 ppm	-	-	-	-
127-91-3	20 ppm	-	-	-	-

8.2 Exposure controls

Protective Equipment



Process Conditions	Provide eyewash station.
Engineering Measures	Where appropriate, use closed system to transfer and process this material – if appropriate, isolate mixing rooms and other areas. Where this material is used or openly handled - maintain these areas under negative air pressure relative to the rest of the plant.
Respiratory Equipment	Not necessary in adequate local with general ventilation - avoid breathing vapours.
Hand Protection	Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374. Gloves must be selected according to the application and duration of use at the workstation. Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required. Recommended properties : - Impervious gloves in accordance with standard EN374
Eye Protection	Avoid contact with eyes. Use eye protectors designed to protect against liquid splashes Before handling, wear safety goggles with protective sides in accordance with standard EN166. In the event of high danger, protect the face with a face shield. Prescription glasses are not considered as protection. Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours. Provide eyewash stations in facilities where the product is handled constantly.
Other Protection	Protective work clothing solvent resistant (should be checked regularly).
Hygiene Measures	Good personal hygiene practices are always advisable, especially when working with chemicals / oils.
Personal Protection	No additional data available.
Skin Protection	Avoid skin contact. Wear suitable protective clothing. Suitable type of protective clothing : In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact. In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact. Work clothing worn by personnel shall be laundered regularly. After contact with the product, all parts of the body that have been soiled must be washed.
Environmental Exposure	The usual precautions in handling chemicals have to be observed.

Controls	
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09. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Mobile liquid.
Colour	Colourless to pale yellow.
Odour	Characteristic.
Relative Density	0.870 – 0.930 @ 20°C
Flash Point (°C)	50°C
Refractive Index	1.450 – 1.490 @ 20°C
Melting Point (°C)	No additional data available.
Boiling Point (°C)	No additional data available.
Vapour Pressure	No additional data available.
Solubility in Water @20°C	Insoluble in water.
Auto-ignition temperature (°C)	No additional data available.

9.2 Other information

No additional data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No additional data available.

10.2 Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

10.3 Possible hazardous reactions

No additional data available.

10.4 Conditions to Avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- accumulation of electrostatic charges.
- heating
- heat
- flames and hot surfaces.

10.5 Incompatible materials

No additional data available.

10.6 Hazardous Decomposition Products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	P-MENTHA-1,3-DIENE (SEE ALPHA-TERPINENE) (CAS: 99-86-5) Oral route : LD50 = 1680 mg/kg G-TERPINENE (CAS: 99-85-4)
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	<p>Oral route : LD50 = 3850 mg/kg</p> <p>EUCALYPTOL (CAS: 470-82-6) Oral route : LD50 = 2480 mg/kg</p> <p>EUGENYL METHYL ETHER (METHYL EUGENOL) (CAS: 93-15-2) Oral route : LD50 = 810 mg/kg</p> <p>4-TERPINENOL (CAS: 562-74-3) Oral route : LD50 = 1300 mg/kg Dermal route : LD50 = 2500 mg/kg</p> <p>LINALOOL (CAS: 78-70-6) Oral route : LD50 = 3000 mg/kg</p> <p>ALPHA-PINENE X (CAS: 80-56-8) Oral route : LD50 = 3700 mg/kg</p> <p>DELTA-3-CARENE (CAS: 13466-78-9) Oral route : LD50 = 4800 mg/kg</p> <p>ESTRAGOLE (CAS: 140-67-0) Oral route : LD50 = 1230 mg/kg</p>
Skin corrosion / irritation	<p>May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.</p> <p>May cause an allergic reaction by skin contact.</p>
Serious eye damage / irritation	<p>May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.</p>
Respiratory or skin sensitisation	No additional data available.
Germ Cell Mutagenicity	Cause for concern owing to the possibility that it may induce heritable mutations in the germ cells of humans.
Carcinogenicity	Suspected human carcinogen.
Reproductive toxicity	No additional data available.
STOT-single exposure	No additional data available.
STOT-repeated exposure	No additional data available.
Aspiration hazard	<p>Aspiration toxicity includes severe acute effects such as chemical pneumonia, varying degrees of pulmonary injury or death following aspiration.</p> <p>May be fatal if swallowed and enters airways.</p>
Photo-toxicity	No additional data available.
Other Information	<p>CAS 93-15-2 : IARC Group 2B : The agent is possibly carcinogenic to humans.</p> <p>CAS 5989-27-5 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans..</p>

12. ECOLOGICAL INFORMATION

12.1 Toxicity


Toxic to aquatic life with long lasting effects.
The product must not be allowed to run into drains or waterways.

12.2 Persistence & degradability
No additional data available.
12.3 Bioaccumulation Potential
No additional data available.
12.4 Mobility in soil
No additional data available.
12.5 Results of PBT and vPvB Assessment
No additional data available.
12.6 Other adverse effects
No additional data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
<p>Do not pour into drains or waterways.</p> <p>Waste :</p> <p>Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.</p> <p>Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.</p> <p>Do not contaminate the ground or water with waste, do not dispose of waste into the environment.</p> <p>Soiled packaging :</p> <p>Empty container completely. Keep label(s) on container.</p> <p>Give to a certified disposal contractor.</p>

14. TRANSPORT INFORMATION

14.1 UN number						
<table border="1"> <tr> <td>UN No. Road</td> <td>1169</td> </tr> <tr> <td>UN No. SEA</td> <td>1169</td> </tr> <tr> <td>UN No. AIR</td> <td>1169</td> </tr> </table>	UN No. Road	1169	UN No. SEA	1169	UN No. AIR	1169
UN No. Road	1169					
UN No. SEA	1169					
UN No. AIR	1169					
14.2 UN proper shipping name						
Extracts, aromatic, liquid.						
14.3 Transport hazard class(es)						
<p>ADR/RID/ADN Class 3</p> <p>ADR/RID/ADN Class 3</p> <p>IMDG Class 3</p> <p>ICAO Class/Division 3</p> <p>Transport Labels</p> 						
14.4 Packing group						
<p>ADR/RID/ADN Packing group III</p> <p>IMDG Packing group III</p>						

ICAO Packing group III

14.5 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant.



14.6 Special precautions for user

ADR/RID

Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
3	F1	III	3	30	5 L	601 640E	E1	3	D/E

IMDG

Class	2° Label	Pack gr.	LQ	EMS	Provis.	EQ
3	-	III	5 L	F-E,S-D	223 955	E1

IATA

Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
3	-	III	355	60 L	366	220 L	A3	E1
3	-	III	Y344	10 L	-	-	A3	E1.

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

No additional data available.

15. REGULATORY INFORMATION

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

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Guidance Notes

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2 Chemical safety assessment

No additional information available.

16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full

H226 Flammable liquid and vapour.
H228 Flammable solid.
H302 Harmful if swallowed.
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. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. 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.
Other Information	None.
Revision Date	February 24, 2016
Reason for revision	New format and updated SDS.
Rev No/Repl, SDS Generated	02

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