Safety Data Sheet

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

1.1 Product Identifier

Product Name		Litsea Cubeba Oil			
Biological Definition		Litsea Cubeba Fruit Oil is the volatile oil obtained from the berries of the Litsea cubeba, Lauraceae			
INCI Name		Litsea Cubeba Fruit Oil			
Synonyms & Trade Names		Litsea Cubeba ext. May Chang Oil			
CAS-No	68855-99-2 / 90063-59-5	EC No.	290-018-7	EINECS No.	290-018-7

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

Industrial use only. Only for professional use.

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 is displayed in section 16.

Human health
May be fatal if swallowed and enters airways. The product is irritating to eyes and skin.

Environment
The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.
Hydrocarbon Content 19%

Classification (EC 1272/2008)

Physical and Chemical Hazards: Not classified.
Human health: Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; Asp. Tox. 1 - H304
Environment: Aquatic Chronic 2 - H411

2.2 Label Elements

Label in accordance with (EC) No 1272/2008

GHS08 GHS07 GHS09

Signal Word	Danger
Contains	Geranial, Neral, (S)-p-mentha-1,8-diene, (+)-Citronellal, Sabinene, 1,

	8 cineole, 1,alpha-(-)-Pinene, Geraniol, Nerol, ß-(+)-Citronellol

Hazard Statements

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.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

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/doctor.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do NOT induce vomiting.

Supplementary Precautionary Statements

P261 Avoid breathing vapour/spray.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

2.3 Other Hazards

PBT or vPvB according to Annex XIII	No additional data available.
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

24.84 - 43.0% Geranial CAS-No: 141-27-5 EC No: 205-476-5

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Skin Sens. 1 - H317

20.24 - 35.0% Neral CAS-No: 106-26-3 EC No: 203-379-2

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Skin Sens. 1 - H317

2.3 - 18.0% (S)-p-mentha-1,8-diene CAS-No: 5989-54-8 EC No: 227-815-6

Classification (EC 1272/2008); M factor (Acute) = 1, M factor (Chronic) = 1
Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Skin Sens. 1 - H317
Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410

0.01 - 7.0% (+)-Citronellal CAS-No: 2385-77-5 EC No: 219-194-5

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1B - H317

0.2 - 2.0% Sabinene CAS-No: 3387-41-5 EC No: 222-212-4

Classification (EC 1272/2008); M factor (Acute) = 1
Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319
Skin Sens. 1 - H317, STOT SE 3 - H335, Aquatic Acute 1 - H400

0.74 - 1.8% 7-methyl-3-methyleneocta-1,6-diene CAS-No: 123-35-3 EC No: 204-622-5

Classification (EC 1272/2008); Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319
Asp. Tox. 1 - H304

0.01 - 2.2% Verbenol CAS-No: 473-67-6 EC No: 207-470-8

Classification (EC 1272/2008); Skin Irrit. 2 - H315

0.31 - 1.7% 1, 8 cineole CAS-No:470-82-6 EC No: 207-431-5

Classification (EC 1272/2008); Flam. Liq. 3 - H226, Skin Sens. 1B - H317

1.0 - 5.0% 1,alpha-(-)-Pinene CAS-No:7785-26-4 EC No: 232-077-3

Classification (EC 1272/2008); M factor (Chronic) = 1
Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319
Skin Sens. 1 - H317, STOT SE 3 - H335, Aquatic Chronic 1 - H410

0.01 - 2.9% Geraniol CAS-No:106-24-1 EC No: 203-377-1

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Eye Dam. 1 - H318, Skin Sens. 1 - H317

0.01- 5.0% 6-Methyl-5-hepten-2-one CAS-No:110-93-0 EC No: 203-816-7

Classification (EC 1272/2008); Flam. Liq. 3 - H226

0.01 - 3.3% Linalool CAS-No:126-91-0 EC No: 204-811-2

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, STOT SE 3 - H335

0.01 - 3.0% Beta Caryophyllene CAS-No: 87-44-5 EC No: 201-746-1

Classification (EC 1272/2008); Asp. Tox. 1 - H304

0.18 - 1.2% Nerol CAS-No: 106-25-2 EC No: 203-378-7

Classification (EC 1272/2008); Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1 - H317

0.01 - 1.5% ß-(+)-Citronellol CAS-No: 1117-61-9 EC No: 214-250-5

Classification (EC 1272/2008) Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1B - H317

04. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention immediately.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye Contact	Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

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

Treat symptomatically.

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Extinguishing media: Use as appropriate: Carbon dioxide (CO_2), Foam, dry chemical powder.

Unsuitable extinguishing media: Do not use water, if avoidable.

5.2 Special hazards arising from the product

In case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO_2), smoke, soot.

5.3 Advice for firefighters

Special Fire Fighting Procedures
Avoid breathing fire gases or vapours. Containers close to fire should be removed or cooled with water.
Protective equipment for fire-fighters
Use protective equipment appropriate for surrounding materials.

06. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation of the working area, evacuate personnel to safe area, wear suitable protective equipment. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin and eyes. Avoid inhalation of vapours.

6.2 Environmental Precautions

Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up.

Cover with inert, inorganic, non-combustible material (e.g. dry-lime, sand, soda ash). Place in covered containers and dispose of in accordance with local authority guidelines.

6.4 Reference to other sections

For waste disposal, see Section 13.

07. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breathe vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only in well ventilated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3 Specific end use(s)

No additional data available.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

7-methyl-3-methyleneocta-1,6-diene (CAS: 123-35-3)

DNEL
- Workers - Dermal; Long term systemic effects: 0.83 mg/kg
- Workers - Inhalation; Long term systemic effects: 5.83 mg/m³
- General population - Dermal; Long term systemic effects: 0.42 mg/kg
- General population - Inhalation; Long term systemic effects: 1.25 mg/m³

PNEC
- STP; 0.2 mg/l
- Soil; 1.015 mg/kg
- Fresh water; 0.00028 mg/l
- Marine water; 0.0008 mg/l
- Sediment (Freshwater); 5.022 mg/kg
- Sediment (Marine water); 0.502 mg/kg

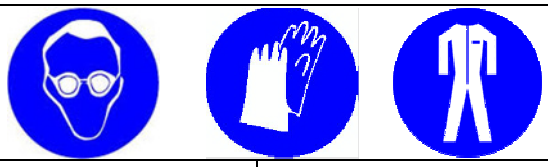
1, 8 cineole (CAS: 470-82-6)

DNEL
- Workers - Dermal; Long term systemic effects: 2 mg/kg
- General population - Oral; Long term systemic effects: 600 mg/kg
- General population - Dermal; Long term systemic effects: 1 mg/kg
- General population - Inhalation; Long term systemic effects: 1.74 mg/m³

PNEC
- STP; 10 mg/l
- Soil; 0.2 mg/kg
- Intermittent release; 0.57 mg/l
- Fresh water; 0.057 mg/l
- Marine water; 0.0057 mg/l
- Sediment (Freshwater); 0.06732 mg/kg
- Sediment (Marine water); 0.00673 mg/kg

8.2 Exposure controls

Protective Equipment



Process Conditions	Provide eyewash station.
Engineering Measures	Provide adequate ventilation.
Respiratory Equipment	Generally unnecessary in a well ventilated area. If ventilation is insufficient, respiratory protection must be worn.
Hand Protection	To protect hands from chemicals, gloves should comply with European Standard EN374.
Eye Protection	Personal protective equipment for eye and face protection should comply with

	European Standard EN166.
Other Protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene Measures	Good personal hygiene practices are always advisable, especially when working with chemicals / oils.
Personal Protection	No additional data available.
Skin Protection	Wear apron or protective clothing in case of splashes.
Environmental Exposure Controls	Avoid discharging into drainage water.

09. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Mobile Liquid, pale yellow to yellow.
Colour	Pale yellow to yellow.
Odour	Characteristic.
Relative Density	0.882 - 0.905 @ 25°C
Flash Point (°C)	REACH dossier information. 68.3±1°c°C CC (Closed cup).
Refractive Index	1.475 - 1.490 @ 20°C
Melting Point (°C)	REACH dossier information. Litsea Cubeba Oil is a mobile liquid at 20°c and a mobile liquid after 2 days at -20°c. Therefore, it was concluded that the melting point of Litsea Cubeba Oil is <-20°c.
Boiling Point (°C)	REACH dossier information. 83 ± 10°c°C @ 1013 hPa
Vapour Pressure	REACH dossier information. 60.69 Pa @ 25°C
Solubility in Water @20°C	REACH dossier information. The range of water solubilities of the known constituents of Litsea Cubeba oil was found to be 0.5 - 4364 mg/l at 25°c
Auto-ignition temperature (°C)	No additional data available.

9.2 Other information

No additional data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No hazardous reactions if stored and handled as prescribed / indicated.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possible hazardous reactions

None known.

10.4 Conditions to Avoid

Keep away from heat, sparks and open flame.

10.5 Incompatible materials

Strong acids. Strong alkalis. Strong oxidising agents.

10.6 Hazardous Decomposition Products

Prolonged or excessive heat and/or exposure to air may cause decomposition or oxidation of the material.

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	No additional data available.

Skin corrosion / irritation	No additional data available.
Serious eye damage / irritation	No additional data available.
Respiratory or skin sensitisation	No additional data available.
Germ Cell Mutagenicity	No additional data available.
Carcinogenicity	No additional data available.
Reproductive toxicity	No additional data available.
STOT-single exposure	No additional data available.
STOT-repeated exposure	No additional data available.
Aspiration hazard	No additional data available.
Photo-toxicity	No additional data available.
Other Information	No additional data available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity - fish LL_{50}, 96 hour: 4.2 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity
– aquatic invertebrates EL50, 48 hours: 4.2 mg/l, Daphnia magna

12.2 Persistence & degradability

Expected to be readily biodegradable.

12.3 Bioaccumulation Potential

Partition coefficient
REACH dossier information. The log Kow range of Litsea Cubeba oil constituents was found to be 2.06 - 6.3. 16.90% of the constituents has a log Kow >=4

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

General information
Dispose of in compliance with all local and national regulations.

14. TRANSPORT INFORMATION

14.1 UN number

UN No. Road	3082
UN No. SEA	3082
UN No. AIR	3082

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID N.O.S.

14.3 Transport hazard class(es)

ADR/RID/ADN Class 9
ADR/RID Classification Code M6

ADR Label	9
IMDG Class	9
ICAO Class/Division	9
AND Class	9

14.4 Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

14.6 Special precautions for user

EMS	F-A-S-F
ADR Transport Category	3
Emergency Action Code	•3Z
ADR/RID Hazard ID Number	90
Tunnel Restriction Code	(E)

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

EU legislation
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 (as amended).
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) (as amended).
Guidance
CHIP for everyone HSG228.

15.2 Chemical safety assessment

No additional information available.

16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full	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. H335 May cause respiratory irritation. 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	September 1, 2016
Reason for revision	Updated SDS from supplier.
Rev No/Repl, SDS Generated	02

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