



Safety Data Sheet

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

1.1 Product Identifier

Product Name		Petitgrain oil			
Biological Definition		The volatile oil obtained by steam distillation of the branches, twigs and leaves of an acclimatised variety of the Bitter Orange Tree <i>Citrus aurantium L. subsp. aurantium</i>			
INCI Name		Citrus Aurantium Amara Leaf/Twig Oil.			
Synonyms & Trade Names		-			
CAS-No	68916-04-1 / 72968-50-4	EC No.	277-143-2	EINECS No.	277-143-2

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

Flavour and fragrance.

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 are displayed in Section 16.

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not Classified.
Human health hazards	Skin Irrit. 2 - H315; Eye Dam. 1 - H318; Skin Sens. 1 - H317, Asp. Tox. 1 - H304
Environmental Hazards	Aquatic Chronic 2 - H411.

2.2 Label Elements

Label in accordance with (EC) No 1272/2008



Signal Word

Danger

Contains

Geranyl Acetate, Geraniol, Beta Pinene, Nerol, (S)-p-mentha-1,8-diene, a terpinolene, Alpha Pinene

Hazard Statements

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.

H411 Toxic to aquatic life with long lasting effects.	
Precautionary Statements	
<p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P391 Collect spillage. P501 Dispose of contents/ container in accordance with national regulations. P262 Do not get in eyes, on skin, or on clothing.</p>	
Supplementary Precautionary Statements	
<p>P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P302+P352 IF ON SKIN: Wash with plenty of water. P321 Specific treatment (see medical advice on this label). P331 Do NOT induce vomiting. P332+P313 If skin irritation occurs: 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. P405 Store locked up.</p>	
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	
46 - 55% Linalyl Acetate	CAS: 115-95-7 EC: 204-116-4
Classification (EC 1272/2008)	Skin Irrit. 2 - H315; Eye Irrit. 2 - H319
20 - 26% Linalool	CAS: 78-70-6 EC: 201-134-4
Classification (EC 1272/2008)	Skin Irrit. 2 - H315; Eye Irrit. 2 - H319
4 - 8% a-terpineol (p-menth-1-en-8-ol)	CAS: 98-55-5 EC: 202-680-6
Classification (EC 1272/2008)	Skin Irrit. 2 - H315, Eye Irrit. 2 - H319
2 - 5% Geranyl Acetate	CAS: 105-87-3 EC: 203-341-5
Classification (EC 1272/2008)	Skin Irrit. 2 - H315, Skin Sens. 1B - H317, Aquatic Chronic 3 - H412
0.01 – 4.5% Geraniol	CAS: 106-24-1 EC: 203-377-1
Classification (EC 1272/2008)	Skin Irrit. 2 - H315, Eye Dam. 1 - H318, Skin Sens. 1 - H317

2 – 4.5% Trans Beta Ocimene	CAS: 3779-61-1	EC: 223-241-5
Classification (EC 1272/2008)	not classified.	
0.01 – 3.5% Neryl Acetate	CAS:123-35-3	EC: 204-622-5
Classification (EC 1272/2008)	not classified.	
0.01 - 4% Myrcene (7-methyl-3-methylenoocta-1,6-diene)	CAS: 123-35-3	EC: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 - 3% Nerol	CAS: 106-25-2	EC: 203-378-7
Classification (EC 1272/2008)	Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Eye Irrit. 2 - H319	
0.01 - 2% Beta-pinene	CAS: 127-91-3	EC: 204-872-5
Classification (EC 1272/2008)	M factor (Acute) = 1 M factor (Chronic) = 1 Flam. Liq. 3 - H226, Asp. Tox. 1 - H304, Skin Irrit. 2 - H315, Skin Sens. 1 - H317 Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410	
0.01 – 2.5% (S)-p-mentha-1,8-diene	CAS: 5989-54-8	EC: 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 – 1.5% a-Terpinolene	CAS: 586-62-9	EC: 209-578-0
Classification (EC 1272/2008)	M factor (Acute) = 1 M factor (Chronic) = 1 Skin Sens. 1 - H317, Asp. Tox. 1 - H304, Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	
0.01 - 1% Alpha-pinene	CAS: 80-56-8	EC: 201-291-9
Classification (EC 1272/2008)	M factor (Acute) = 1 M factor (Chronic) = 1 Flam. Liq. 3 - H226, Skin Irrit. 2 - H315, Skin Sens. 1 - H317, Asp. Tox. 1 - H304, Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410	

04. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention.
Ingestion	Give plenty of water to drink. Move affected person to fresh air at once. Get medical attention immediately.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye Contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

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
Note for doctor: treat symptomatically.

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media
Suitable extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media: For safety reasons do not use full water jet.
5.2 Special hazards arising from the product
Specific hazards: In case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO ₂), smoke, soot.
5.3 Advice for firefighters
Use special protective clothing.

06. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes. Avoid inhalation of vapours. For personal protection, see Section 8.
6.2 Environmental Precautions
Avoid discharge into drains or watercourses or onto the ground.
6.3 Methods and material for containment and cleaning up.
Absorb spillage with sand or other inert absorbent. Dispose of waste via a licensed waste disposal contractor.
6.4 Reference to other sections
No additional data available.

07. HANDLING AND STORAGE

7.1 Precautions for safe handling
Apply good manufacturing practice and industrial hygiene practices. Keep containers sealed when not in use. Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Avoid inhalation of vapours. For personal protection, see Section 8.
7.2 Conditions for safe storage, including any incompatibilities
Keep air contact to a minimum. Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame.
7.3 Specific end use(s)
No additional data available.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Linalool (CAS: 78-70-6)
DNEL
Workers - Dermal; Short term systemic effects: 5 mg/kg
Workers - Inhalation; Short term systemic effects: 16.5 mg/m ³

Workers - Dermal; Long term systemic effects: 2.5 mg/kg
Workers - Inhalation; Long term systemic effects: 2.8 mg/m³
General population - Oral; Short term systemic effects: 1.5 mg/kg
General population - Dermal; Short term systemic effects: 2.5 mg/kg
General population - Inhalation; Short term systemic effects: 4.1 mg/m³
General population - Oral; Long term systemic effects: 0.2 mg/kg
General population - Dermal; Short term systemic effects: 1.25 mg/kg
General population - Inhalation; Short term systemic effects: 0.7 mg/m³

PNEC

- STP; Short term 10 mg/l
- Soil; Short term 0.327 mg/kg
- Intermittent release; Short term 2 mg/l
- Fresh water; Short term 0.2 mg/l
- Marine water; Short term 0.02 mg/l
- Sediment (Freshwater); Short term 2.22 mg/kg
- Sediment (Marine water); Short term 0.222 mg/kg

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 - **Dermal; Long term systemic effects: 1.25 mg/m³**

- 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**

Alpha Pinene (CAS: 80-56-8)

DNEL

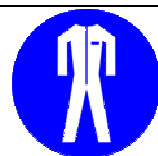
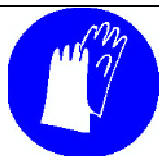
Workers - Inhalation; Long term systemic effects: 5.98 mg/m³
General population - Oral; Long term systemic effects: 0.31 mg/kg
General population - Inhalation; Long term systemic effects: 1.06 mg/m³

PNEC

- STP; 3.26 mg/l
- Soil; 0.539 mg/kg
- Fresh water; 0.004 mg/l
- Marine water; 0.0004 mg/l
- **Sediment (Freshwater); 1.033 mg/kg**
- Sediment (Marine water); **0.103 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	Use suitable protective gloves if risk of skin contact.
Eye Protection	Wear chemical safety goggles.
Other Protection	Measures should be taken to prevent materials from being splashed into the eyes or on the skin. Wear eye shields and protective clothing.
Hygiene Measures	Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Good personal hygiene practices are always advisable, especially when working with chemicals.
Personal Protection	General protective and hygienic measures: Use personal protective equipment depending on concentration and amount of hazardous substance. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes and skin.
Skin Protection	Avoid contact with skin. Wear suitable gloves.
Environmental Exposure Controls	Avoid discharging into drainage water. Only eliminate by authorised companies.

09. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear liquid
Colour	Pale yellow to yellow brown.
Odour	Characteristic
Relative Density	Approx. 0.888 @ 20°C
Flash Point (°C)	> 74.0
Refractive Index	Approx. 1.457 @ 20°C
Melting Point (°C)	No additional data available.
Boiling Point (°C)	> 220.0
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 hazardous reactions if stored and handled as prescribed / indicated.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

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	Causes skin irritation.
Serious eye damage / irritation	Causes serious eye damage.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
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	May be fatal if swallowed and enters airways.
Photo-toxicity	No additional data available.
Other Information	No additional data available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

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

Recycling is preferred to disposal or burning. Disposal must be made according to official regulations. Must not be disposed together with household waste.

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
IMDG	Class 9
ICAO	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
Hazard Identification Number (ADR/RID)	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

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. 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. 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. H412 Harmful to aquatic life with long lasting effects.
Other Information	None
Revision Date	May 5, 2017
Reason for revision	Updated SDS
Rev No/Repl, SDS Generated	03, replaces 02

DISCLAIMER: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.