



Safety Data Sheet

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

1.1 Product Identifier

Product Name	Mandarin Oil Red.				
Biological Definition	Citrus Nobilis Peel Oil Expressed is an essential oil expressed from the epicarps of the Mandarin, <i>Citrus nobilis</i> , Rutaceae.				
INCI Name	Citrus Nobilis Peel Oil Expressed				
Synonyms & Trade Names	-				
CAS-No	84929-38-4	EC No.	284-521-0	EINECS No.	284-521-0

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

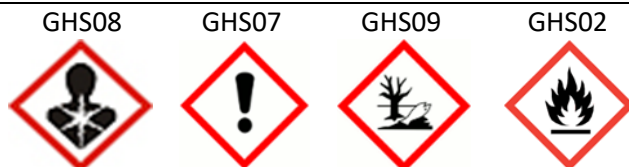
The Full Text for all Hazard Statements displayed in Section 16.

Classification (EC 1272/2008)

Flam. Liq. 3 – H226
 Asp. Tox. 1 - H304
 Skin Irrit 2 – H315
 Skin Sens. 1 – H317
 Aquatic Chronic 1 - H410

2.2 Label Elements

Label in accordance with (EC) No 1272/2008



Signal Word

Danger.

Contains

-

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.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P241 Use explosion-proof electrical / ventilating / lighting equipment.
 P262 Do not get in eyes, on skin or on clothing.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing and eye/face protection.
 P301+310 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.
 P331 Do NOT induce vomiting.
 P405 Store locked up.
 P501 Dispose of contents/container to ...

Supplementary Precautionary Statements

None.

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

~**74.0% Limonene** CAS-No.: 5989-27-5 EC No.: 227-813-5

Classification (EC 1272/2008) Flam. Liq. 3 – H226, Skin Irrit 2 – H315 Asp Tox. 1 – H304, Skin Sens. 1 – H317
 Aquatic Acute 1 – H400, Aquatic Chronic 1 – H410

~**18.0% Y-terpinene** CAS-No 99-85-4, EC 202-794-6

Classification (EC 1272/2008); Flam. Liq. 3 – H226, Asp Tox. 1 –H304;

~**2.0% Alpha-pinene** CAS-No.: 80-56-8 EC No.: 201-291-9

Classification (EC 1272/2008) Flam. Liq. 3 - H226, Skin Sens. 1 - H317, Asp. Tox. 1 - H304, Aquatic Acute 1 - H400, Aquatic Chronic 1 - H410

~**2.0% Myrcene (7-methyl-3-methylenocta-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

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	Ask immediately medical assistance - mouth washing with water and do not provoke vomiting.
Skin Contact	Remove contaminated clothing and wash with water and soap the contaminated part – make sure you have eliminated the contamination - in case of complaints seek medical attention.
Eye Contact	abundant eye-wash for 15 minutes with pure water, make sure you have eliminated the contamination, in case of complaints seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: inhalation: can cause slight headache - contact: can cause bloodshot eyes - can cause slight skin rash.

Acute and delayed effects: no post-disorder effects are reported.
4.3 Indication of any immediate medical attention and special treatment needed
Immediate medical assistance: see point 4.1. Immediate/special treatment: see point 4.1. First aid specific means: eye wash fountain / safety shower should be available in the work area.

05. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media
Suitable extinguishing media: SMALL FIRE: use CO ₂ , foam, dry powder - LARGE FIRE: use water spray or fog - cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion. Unsuitable extinguishing media: pressurized water jet.
5.2 Special hazards arising from the product
Vapours may form explosive mixture with air - in case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO ₂), smoke, soot.
5.3 Advice for firefighters
Standard procedure for chemical fires - spray extinguishing media to base of flames - use adequate protections for respiratory apparatus, avoid vapour inhalation.

06. ACCIDENTAL RELEASE MEASURES

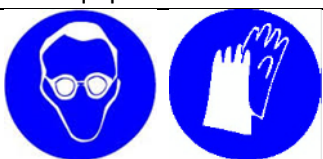
6.1 Personal precautions, protective equipment and emergency procedures
For non emergency personnel: in an emergency (i.e. unintentional important release of the product in enclosed space) respiratory protection (Gas filter A, Colour code brown: consider the maximum duration for wear) must be worn. Use insulating device for respiratory protection with an independent air supply in circumstances which are unclear - use adequate protections solvent resistant: security shoes, bodysuit, gloves and protective goggles (see point 8). For emergency responders: as per non emergency personnel. Emergency procedures: remove any ignition source and ensure adequate ventilation in working areas following accidental releases.
6.2 Environmental Precautions
Keep away from drains - keep away from surface and ground water.
6.3 Methods and material for containment and cleaning up.
Keep away from heat and use non-combustible absorbing sawdust (sand, specific binder). Refer to point 13 for the appropriate methods of waste treatment.
6.4 Reference to other sections
See point 4, 8 & 13.

07. HANDLING AND STORAGE

7.1 Precautions for safe handling
Safe handling: during handling keep original container closed - avoid contact with skin and eyes – wear adequate protective gloves and eye/face protection - avoid any sources of ignition – avoid exposing to high temperature during processing - maintain adequate local and general ventilation where product is handled. Hygiene at work: do not ingest or apply to the skin as such - no smoking - remove contaminated clothing – good personal washing routines should be followed - if at risk of contamination, foods,

beverages and other articles of consumption must not be stored or consumed at the work areas.
7.2 Conditions for safe storage, including any incompatibilities
<p>Container: to be stored in stainless steel drums, preferably under inert atmosphere (nitrogen), protected from day-light take note: the container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long term warehousing.</p> <p>Conditions: stored in a dry, aerated place, away from any heat source and ignition source.</p> <p>Temperature: from 5°C and 20°C.</p>
7.3 Specific end use(s)
Use as odour agent / flavouring agent - the information of this section are not related to the use of the product in combination with any other material or any other process altering its characteristics.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters	
No additional data available.	
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	Suitable gloves tested to EN374 (should be checked regularly) - always use with clean, dry hands.
Eye Protection	Protective goggles with built-in-frame tested to EN166 (should be checked regularly).
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	Use personal protection according to Directive 89/686/EEC.
Skin Protection	Wear apron or protective clothing in case of splashes.
Environmental Exposure Controls	The usual precautions in handling chemicals have to be observed.

09. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Appearance	Mobile liquid.
Colour	Orange to dark yellow.
Odour	Citrus – mandarin.
Relative Density	0.906 - 0.923 @ 20°C
Flash Point (°C)	48°C
Refractive Index	1.471 to 1.476 @ 20°C
Melting Point (°C)	No additional data available.
Boiling Point (°C)	170 +/- 10 @ 1026 hPa.

Vapour Pressure	186.4 Pa @ 25°C.
Solubility in Water @20°C	Insoluble in water.
Auto-ignition temperature (°C)	235°C.
9.2 Other information	
No additional data available.	

10. STABILITY AND REACTIVITY

10.1 Reactivity
Substance not reactive with water - substance not reactive if used according to storage & handling conditions & identified uses (see subsection 1.2).
10.2 Chemical stability
Substance stable if used according to storage & handling conditions & identified uses (see subsection 1.2).
10.3 Possible hazardous reactions
None if used according to storage & handling conditions & identified uses (see subsection 1.2).
10.4 Conditions to Avoid
Avoid exposure to heat.
10.5 Incompatible materials
Highly oxidizing agents.
10.6 Hazardous Decomposition Products
no known hazardous decomposition products under recommended storage & handling conditions - in case of combustion: carbon monoxide (CO), carbon dioxide (CO ₂).

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute Toxicity	LD50: 5 g/kg [source RIFM].
Skin corrosion / irritation	Hazard statement: H315 causes skin irritation.
Serious eye damage / irritation	Not classified as irritating to the eye [source RIFM].
Respiratory or skin sensitisation	Hazard statement: H317 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	Hazard statement: H304 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
Aquatic life: hazard statement: H410 very toxic to aquatic life with long lasting effects. Algae/aquatic plants: EC50 65.9 mg/l (48h) calculated value [source RIFM]. Fish/aquatic invertebrates: No additional data. PNECs: No additional data.
12.2 Persistence & degradability
This substance to be considered as a readily biodegradable substance; based on its ready biodegradability, oil

does not fulfil the criteria for persistence.
12.3 Bioaccumulation Potential
Hazard statement: H410 very toxic to aquatic life with long lasting effects.
12.4 Mobility in soil
This substance is considered as a readily biodegradable NCS. Based on the ready biodegradability of the NCS, simulation tests in surface water, sediment and soil are not required in accordance with column 2 of REACH Annex IX.
12.5 Results of PBT and vPvB Assessment
This substance is not classified as: PBT or vPvB / CMR.
12.6 Other adverse effects
No additional data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
The containers used for this product must completely empty before disposal. Dispose product and/or contaminated packaging in accordance with federal, state and local environmental control regulations - disposal through the waste water is illegal.

14. TRANSPORT INFORMATION

14.1 UN number	
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)	
ADR/RID/ADN Class 3 ADR/RID/ADN Class 3 IMDG Class 3 ICAO Class/Division 3	
Transport Labels	
	
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

This product contains constituents flammables & dangerous for the environment - in case of pouring out, make sure to label new package accordingly, reproducing original label with relevant symbols.

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

Tariff Number 3301192000.

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. H410 very toxic to aquatic life with long lasting effects.
Other Information	None.
Revision Date	October 27, 2015
Reason for revision	New format and updated SDS.
Rev No/Repl, SDS Generated	02

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