



MATERIAL SAFETY DATA SHEET

1. Identification of Substance/Preparation & Company

PRODUCT NAME: Bitter Orange Oil
PRODUCT CODE: BITTER
SUPPLIER: Green Valley Aromatherapy Ltd.,
505 Duncan Ave, Courtenay, BC CANADA V9N 2M6
Emergency Tel No: (250) 334-4836. Contact Person: Kelly Lees

2. Composition / Information on Ingredients

DEFINITION/BOTANICAL ORIGIN: The volatile oil steam distilled from the fresh peel of *Citrus aurantium*.

H-No:	CAS No:	Status: natural
CoE No:	FEMA:	Additives: none
FDA: §	IFRA: See section 16	Application: Aromatherapy, perfumery
RIFM:	EINECS:	RTECS:
INCI name: <i>Citrus aurantium</i>		FCCIV:

3. Hazards Identification

Concentrated product. Do not ingest, use good housekeeping procedures when handling.

4. First-Aid Measures

INHALATION: Remove from exposure site to fresh air. Keep at rest. Obtain medical attention.

EYE CONTACT: Rinse immediately with plenty of water for at least 15 minutes. Contact a doctor if symptoms persist.

SKIN CONTACT: Remove contaminated clothes. Wash thoroughly with soap & water, flush with plenty of water. If irritation persists, seek medical advice.

INGESTION: Rinse out mouth with water. Seek medical advice **immediately**.

OTHER: When assessing action take Risk & Safety Phrases into account (Section 15).

5. Fire Fighting Measures

EXTINGUISHING MEDIA: Use CO², Dry Powder or Foam type Extinguishers, spraying extinguishing media to base of flames. Do not use direct water jet on burning material.

SPECIAL MEASURES: Avoid vapour inhalation. Keep away from sources of ignition. Do not smoke. Wear positive pressure self-contained breathing apparatus & protective clothing.

EXTINGUISHING PROCEDURES: Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

6. Accidental Release Measures

PERSONAL PRECAUTIONS: Avoid inhalation & direct contact with skin & eyes. Use individual protective equipment (safety glasses, waterproof-boots, suitable protective clothing) in case of major spillages.

ENVIRONMENT PRECAUTIONS: Keep away from drains, soils, surface & ground waters.

CLEAN UP METHODS FOR SPILLAGES: Remove all potential ignition sources. Contain spilled material. Cover with an inert or non-combustible inorganic absorbent material, sweep up and remove to an approved disposal container. Observe municipal, federal and local disposal regulations.

7. Handling & Storage

PRECAUTIONS IN HANDLING:	Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene. Do not eat, drink or smoke whilst handling.
STORAGE CONDITIONS:	Store in tightly closed original container, in a cool, dry & ventilated area away from heat sources & protected from light. Keep air contact to a minimum.
FIRE PROTECTION:	Keep away from ignition sources & naked flames. Take precautions to avoid static discharges in working area.

8. Exposure Controls/Personal Protection

RESPIRATORY PROTECTION:	Avoid breathing product vapour. Apply local ventilation where possible.
VENTILATION:	Ensure good ventilation of working area.
HAND PROTECTION:	Avoid all skin contact. Use chemically resistant gloves if required.
EYE PROTECTION:	Use safety glasses.
WORK / HYGIENE PRACTICES:	Wash hands with soap & water after handling.

9. Physical & Chemical Properties

COLOUR:	Orange brown
APPEARANCE:	Clear mobile liquid
ODOUR:	Characteristic of fresh, bitter orange peel
FLASH POINT °C:	48
SPECIFIC GRAVITY @ 20°C:	0.840 – 0.860
OPTICAL ROTATION @ 20°C:	
REFRACTIVE INDEX @ 20°C:	1.468 – 1.485
SOLUBILITY IN 75% ETHANOL @ 20°C:	
SOLUBILITY IN VEGETABLE OILS:	Soluble
SOLUBILITY IN WATER:	Insoluble

Typical Analysis by GLC/GCMS:

CONSTITUENT	PERCENTAGE
Alpha Pinene	0.3
Beta Pinene	0.2
Myrcene	1.3
Limonene	96.7
Gamma terpinene	0.1
Octanal	0.1
Decanal	0.15
Octonol	0.2
Linalool	0.2
Linalyl acetate	0.3
Geranyl acetate	0.1
Nootkatone	0.08

10. Stability & Reactivity

REACTIVITY: It presents no significant reactivity hazards, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

DECOMPOSITION: Liable to cause smoke & acrid fumes during combustion: carbon monoxide, carbon dioxide and other non-identified organic compounds may be formed.

11. Toxicological Information

Phototoxic

12. Ecological Information

BIODEGRADABILITY: Data not available

PRECAUTIONS: Prevent surface contamination of soil, ground & surface water.

13. Disposal Considerations

Avoid disposing to drainage systems and into the environment. Seek expert advice.

14. Transport Regulations

ROAD (ADR/RID): Class 3 item 3 1/c RID No 301; ADR RN N/2301

AIR (IATA/ICAO): UN 1993 Class 3.3

SEA (IMDG): Class 3 UN No: 1993

CHIP: See section 15

15. Regulatory Information According to Directive 88/379/EEC

HAZARDS: Flammable

SYMBOLS: n/a

RISK PHRASES: R10 Flammable liquid

SAFETY PHRASES: n/a

16. Other Information

PACKAGING:	TYPE	SUITABILITY
	Glass	Yes
	Lacquer lined steel/tin	Yes
	Aluminums	Yes
	HPPE	No
	F/HDPE	Yes
	Other Plastic	No

SHELF LIFE

Minimum 12 months when stored within advised conditions. Re-test after 12 months then every 3 months, up to a maximum of 36 months.

Q.C REQUIREMENTS

In-line with general product specification. Always satisfy suitability for specific application.

The data provided in this material safety data sheet is meant to represent typical data/analysis for this product and is correct to the best of our knowledge. The data was obtained from current and reliable sources, but is supplied without warranty, expressed or implied, regarding its' correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product, and to assume liability for loss, injury, damage or expense arising from improper use of this product. The information provided does not constitute a contract to supply to any specification, or for any given application, and buyers should seek to verify their requirements and product use.