



MATERIAL SAFETY DATA SHEET

1. Identification of Substance/Preparation & Company

PRODUCT NAME: Clove Bud Oil
PRODUCT CODE: CLOVE
SUPPLIER: Green Valley Aromatherapy Ltd.,
4988 North Island Hwy, Courtenay, BC CANADA V9N 9H9
Emergency Tel No: (250) 334-4836. Contact Person: Kelly Lees

2. Composition / Information on Ingredients

DEFINITION/BOTANICAL ORIGIN: The volatile oil obtained by steam distillation of the unopened flower buds of the clove tree *syzigium aromaticum* (L.) Merr. Et Perry syn. *Eugenia caryophyllata* Thunberg. (Fam.Myrtaceae).

H-No: 3301.29.5013
CoE No: 188
FDA: § 182.20
RIFM: monograph
INCI name: *Eugenia caryophyllata*

CAS No: 8000-34-8
FEMA: 2323
IFRA: not restricted
EINECS: 284-638-7

Status: natural
Additives: none
Application: Aromatherapy, skin care, etc
RTECS:
FCCIV:

3. Hazards Identification

Xn Harmful; Xi Irritant

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 Remove all potential ignition sources. Contain spilled material. Cover with an inert or

FOR SPILLAGES: 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: Yellow to brown

APPEARANCE: Clear, slightly viscous liquid

ODOUR: Spicy, eugenolic

FLASH POINT °C: >100

SPECIFIC GRAVITY @ 20°C: 1.040 – 1.070

OPTICAL ROTATION @ 20°C:

REFRACTIVE INDEX @ 20°C: 1.528 – 1.538

SOLUBILITY IN 75% ETHANOL @ 20°C: 1 + 2

SOLUBILITY IN VEGETABLE OILS: Soluble

SOLUBILITY IN WATER: Insoluble

Typical Analysis by GLC/GCMS:

CONSTITUENT	PERCENTAGE
Beta Caryophyllene	9.3
Alpha Caryophyllene	1.0
Eugenol	82.4
Eugenyl acetate	6.5

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

Acute oral LD50: 1.37g/kg. Moderate irritant, strong mucous membrane irritant. See RIFM monograph (1978) FCT **16**, 695.

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): n/a
AIR (IATA/ICAO): n/a
SEA (IMDG): n/a
CHIP: See section 15

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

HAZARDS: Harmful, Irritant
SYMBOLS: Xn, Xi
RISK PHRASES: R21/22/38 Harmful on contact with skin / harmful if swallowed / irritating to the skin
SAFETY PHRASES: S36/37 Wear suitable protective clothing and gloves
S20 No eating and drinking while at work

16. Other Information

Cosmetics Directive 7th Amendment: Restrictions may apply. A Source of Eugenol and Isoeugenol, listed as sensitizers. Check maximum usage levels for skin care products before use.

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.

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