

MATERIAL SAFETY DATA SHEET.

1. IDENTIFICATION OF SUBSTANCE/PREPARATION & COMPANY.

PRODUCT NAME: **Clove Oil**

SUPPLIER: Norfolk trading 1 Rigby's Crt Norwich NR2 1NT

Telephone +44 (0)1603 610883

2. COMPOSITION / INFORMATION ON INGREDIENTS.

DEFINITION/BOTANICAL ORIGIN: The volatile oil obtained by steam distillation of the leaves of *Eugenia caryophyllus*.

H-No: 3301.29

CAS No: 8015-97-2

Status: natural

CoE No: 188n

FEMA: 2328

Additives: none

FDA: 184.1257

IFRA: not restricted

Application:

RIFM: monograph

EINECS: 284-638-7

RTECS:

INCI name: Eugenia Caryophyllata

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 mins. 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 mouth out with water. Seek medical advice **immediately**.

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

5. FIRE FIGHTING MEASURES.

EXTINGUISHING MEDIA RECOMMENDED: 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 & groundwaters.

CLEANING 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 state, federal & local disposal regulations.

7. HANDLING & STORAGE.

PRECAUTIONS IN HANDLING: Apply good manufacturing practice & industrial hygiene practices, ensuring proper ventilation. Observe good personal hygiene, and 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

APPEARANCE: mobile liquid

ODOUR: Strong, spicy, phenolic

FLASH-POINT °C: 117

SPECIFIC GRAVITY @ 20°C: 1.03-1.063

REFRACTIVE INDEX @ 20°C: 1.528-1.537

OPTICAL ROTATION: 0 to -2

SOLUBILITY IN 70% ETHANOL @ 20°C: 1+2

10. STABILITY & REACTIVITY.

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

DECOMPOSITION: Liable to cause smoke & acrid fumes during combustion: carbon monoxide, carbon dioxide & 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):

AIR (IATA):

SEA (IMDG):

15. REGULATORY INFORMATION. According to Directive 88/379/EEC

HAZARDS: Harmful, Irritant

SYMBOLS: Xn, Xi

RISK PHRASES: R21/22/38 Harmful on contact with the 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.

Conc. % Limits:

PACKAGING:

Type	Suitability
Glass	Yes
Lacquer lined steel/tin	NO
Aluminium	Yes
HPPE	No
F/HDPE	Yes
Galvanised steel	Yes
Other plastic	No

SHELF-LIFE

Min 12 months when stored within advised conditions.

Q.C. REQUIREMENTS.

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

Retest after 6 months.

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