

Material Safety Data Sheet (MSDS)

Product Name: Clove Oil

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd

1101- City Centre 2,

Science City Road,

Sola Ahmedabad Gujarat,

India - 380060.

Contact No.: +91 97272 88479

Email: info@rawpharmabiz.com

Website: www.rawpharmabiz.com

1. Identification of the Substance/Preparation and Company

- **Chemical Name:** Eugenia caryophyllata oil
- **Synonyms:** Eugenol oil, Clove Leaf Oil, Clove Bud Oil
- **CAS Number:** 8000-34-8 (Clove oil), 97-53-0 (Eugenol)
- **Molecular Formula:** Mixture (mainly C₁₀H₁₂O₂ - Eugenol)

2. Composition / Information on Ingredients

Clove oil is a natural essential oil consisting mainly of **Eugenol (approx. 70–90%)**, **β-Caryophyllene (approx. 5–12%)**, and other minor constituents (approx. 5–15%).

3. Hazards Identification

- **GHS Classification:** Flammable liquid (Category 3), Skin irritation (Category 2), Eye irritation (Category 2A)
- **Signal Word:** Warning

- **Hazard Statements:**
 - H226: Flammable liquid and vapor
 - H315: Causes skin irritation
 - H319: Causes serious eye irritation
 - H304: May be fatal if swallowed and enters airways
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4. First Aid Measures

- **Inhalation:** Move to fresh air; seek medical attention if symptoms persist.
 - **Skin Contact:** Wash with soap and water; remove contaminated clothing.
 - **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes; seek medical attention.
 - **Ingestion:** Do NOT induce vomiting; seek immediate medical attention.
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5. Fire Fighting Measures

- **Suitable Extinguishing Media:** Carbon dioxide, dry chemical powder, foam
 - **Unsuitable Media:** Water jet (may spread fire)
 - **Special Hazards:** Emits toxic fumes when burning
 - **Protective Equipment:** Self-contained breathing apparatus (SCBA) and protective clothing
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6. Accidental Release Measures

- **Personal Precautions:** Avoid contact with skin and eyes; wear protective gloves and goggles
 - **Environmental Precautions:** Prevent entry into drains and waterways
 - **Cleanup Methods:** Absorb with inert material (sand, vermiculite); place in chemical waste container
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7. Handling and Storage

- **Handling:** Avoid skin and eye contact; use in well-ventilated areas

- **Storage:** Store in a cool, dry, well-ventilated area away from heat, sparks, open flame, and oxidizing agents
 - **Container:** Keep tightly closed in original container
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8. Exposure Controls / Personal Protection

- **Occupational Exposure Limits:** Not established
 - **Engineering Controls:** Use local exhaust ventilation
 - **Personal Protective Equipment (PPE):**
 - Gloves: Chemical resistant
 - Eye: Safety goggles
 - Respiratory: If ventilation is inadequate, use a respirator
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9. Physical and Chemical Properties

- **Appearance:** Clear to pale yellow oily liquid
 - **Odor:** Characteristic strong clove odor
 - **Boiling Point:** 254°C (Eugenol)
 - **Flash Point:** 93°C
 - **Solubility:** Insoluble in water; soluble in alcohol and ether
 - **Density:** 1.03 g/cm³
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10. Stability and Reactivity

- **Stability:** Stable under normal conditions
 - **Conditions to Avoid:** Heat, flames, and sparks
 - **Incompatible Materials:** Strong oxidizers, acids
 - **Hazardous Decomposition Products:** Carbon oxides, phenolic compounds
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11. Toxicological Information

- **Acute Toxicity:** Low toxicity orally and dermally; may cause irritation
 - **Skin Corrosion/Irritation:** Irritating to skin
 - **Eye Damage/Irritation:** Causes eye irritation
 - **Sensitization:** May cause allergic skin reaction
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12. Ecological Information

- **Aquatic Toxicity:** Harmful to aquatic life; avoid release to water
 - **Persistence/Degradability:** Biodegradable
 - **Bioaccumulation:** Low potential
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13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations
 - Do not pour into drains or watercourses
 - Recommended method: Incineration in a licensed facility
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14. Transport Information (Detailed)

- **UN Number:** UN1169
- **UN Proper Shipping Name:** Essential oil, flammable
- **Transport Hazard Class:** 3 (Flammable liquid)
- **Packing Group:** III
- **Marine Pollutant:** Yes
- **Transport Modes:**
 - **Road / Rail (ADR/RID):** Follow Flammable liquid regulations; keep away from ignition sources
 - **Air (IATA/ICAO):** Class 3, Packing group III, Label "Flammable Liquid"
 - **Sea (IMDG):** Class 3, Packing group III; store in cool, ventilated area

- **Special Precautions:** Avoid heat, sparks, and open flames during transport; use leak-proof containers
 - **Labeling Requirements:** Flammable liquid symbol, "Keep away from heat/sparks/open flames"
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15. Regulatory Information

- **HS Code:** 3301.29
 - **India Regulations:** Compliant with Manufacture, Storage and Import of Hazardous Chemical Rules (MSIHC), 1989
 - **GHS Label Elements:** Hazard pictogram for flammable and irritant
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16. Other Information

- **Disclaimer:** The information provided in this MSDS is based on current knowledge and intended to describe the product for safety purposes. It does not constitute a guarantee of product properties. Users should ensure suitability for their intended use.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.