



**AMPHORA AROMATICS
LIMITED**

essential oils, skincare & aromatherapy products

SAFETY DATA SHEET

1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME: Clove Essential Oil

SUPPLIER: Amphora Aromatics Limited, Airfield House, Western Drive, Bristol, BS14 0AF

PRODUCT NUMBER: 14

CAS NUMBER: 8000-34-8 / 68917-29-3 / 84961-50-2

EC NUMBER: 284-638-7

INCI: Eugenia Caryophyllata Bud Oil

IDENTIFIED USES: Concentrated product used in production of Household, Personal Care, Flavours, Fragrances and Aromatherapy

BIOLOGICAL DEFINITION: This is a natural substance. The substance has a natural variability in its composition. It is obtained by the steam distillation of the buds of Eugenia Caryophyllata L.

2: HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

CAS: 8000-34-8 / 68917-29-3 / 84961-50-2

EC: 284-638-7

CLASSIFICATION (EC 1272/2008):

- PHYSICAL HAZARDS: Not classified.
- HEALTH HAZARDS: Asp. Tox. 1 – H304
Skin Irrit. 2 – H315
Skin Sens. 1 – H317
Eye Irrit. 2, H319
- ENVIRONMENTAL HAZARDS: Not classified.

LABEL ELEMENTS

PICTOGRAM:



SIGNAL WORD:

DANGER

HAZARD STATEMENTS:

H304: May be fatal if swallowed and enters airways

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319 - Causes serious eye irritation

PRECAUTIONARY STATEMENTS:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray

P262: Do not get in eyes, on skin, or on clothing

P264: Wash thoroughly after handling.

P273: Avoid release to the environment

P280: Wear protective gloves/clothing/eye-protection/face protection

P301 + P310: IF SWALLOWED: Immediately call a poison centre or doctor



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P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P331: DO NOT induce vomiting
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P391: Collect spillage
P233: Keep container tightly closed
P501: Dispose of contents/container in accordance with local/regional/national /international regulations.
OTHER HAZARDS: All essential oils are highly concentrated so have strong aromas and colour that can stain.

3: COMPOSITION/INFORMATION ON INGREDIENTS

67-87% Eugenol

CAS NUMBER: 97-53-0

CLASSIFICATION (EC 1272/2008):

EC NUMBER: 202-589-1

Skin Sens. 1B, H317

Eye Irrit. 2, H319

Asp. Tox. 1, H304

67 to 87% Eugenyl acetate

CAS NUMBER: 93-28-7

CLASSIFICATION (EC 1272/2008):

EC NUMBER: 202-235-6

Acute Tox. 4, H302

Skin Sens. 1B, H317

4 to 8 % beta-Caryophyllene

CAS NUMBER: 87-44-5

CLASSIFICATION (EC 1272/2008):

EC NUMBER: 201-746-1

Asp. Tox. 1, H304

Skin Sens. 1B, H317

Aquatic Chronic 4, H413

< 0.4% Methyl Eugenol

CAS NUMBER: 93-15-2

CLASSIFICATION (EC 1272/2008):

EC NUMBER: 202-223-0

Acute Tox. 4, H302

Muta. 2, H341

Carc. 2, H351

Aquatic Acute 3, H402

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.



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4: FIRST AID MEASURES

INHALATION:	Remove the individual to fresh air and keep at rest. Obtain medical advice immediately.
INGESTION:	Rinse mouth with water. Obtain medical advice immediately. Do not induce vomiting.
SKIN CONTACT:	Remove contaminated clothes. Wash skin with large volumes of water. If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.
EYE CONTACT:	Irrigate copiously with water for at least 10 minutes. Obtain medical advice if any irritation or evidence of tissue damage persists.
GENERAL INFORMATION:	Depending on the level/type of exposure, small levels can be treated by first aider. Larger contact, or if symptoms persist, seek medical help immediately.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:	Cooling sensation. No specific data available.
SELF PROTECTION OF FIRST AIDER:	Use personal protective equipment as described in section 8 if substance is present

5: FIREFIGHTING MEASURES

EXTINGUISHING MEDIA RECOMMENDED:	Carbon dioxide, dry chemical, foam. Do not use a direct waterjet on burning material.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:	No specific hazard known
ADVICE FOR FIREFIGHTERS:	No specific advice. Avoid inhalation of smoke and fumes. In case of insufficient ventilation wear suitable respiratory equipment.
EMERGENCY ACTION CODE:	3[Y] (Foam + BA & Fire Kit)

6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:	Adequate protective gloves should be worn when handling spillages. Avoid skin contamination and inhalation of vapour. Shut off all sources of ignition. Individual washing routines should be followed after any potential contact. Ensure adequate ventilation in working areas following accidental releases.
ENVIRONMENT PRECAUTIONS:	Do not discharge directly into drains, air, into soil or into the aquatic environment.
CLEANING UP METHODS FOR SPILLAGES:	Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. For small spills, wash area with detergent and water. For large spills, contain with earth, sand or similar inert absorbent material and both liquids and solids transferred to salvage containers and arrange disposal by disposal company. Wash spilled area thoroughly with water and detergent.



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7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:

Avoid contact with skin and eyes. Wear adequate protective gloves protection and eye/face protection. No smoking. Avoid any sources of ignition. Avoid exposing to high temperature during processing. Do not ingest or apply to the skin as such. Good personal washing routines should be followed. Maintain adequate local and general ventilation where product is handled. Keep strict control of dust accumulation to a minimum. Avoid any sources of ignition. Good personal washing routines should be followed.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

It is good general practice to store in closed, preferably full, containers away from heat sources, and protected from extremes of temperature. Do not re-use the empty container. Respect general rules for compatibility storage.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:



APPROPRIATE ENGINEERING CONTROLS:

Avoid exposing to high temperature during processing. Maintain adequate local and general ventilation where product is handled and dispensed.

EYE/FACE PROTECTION:

Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.

HAND PROTECTION:

No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient.

GENERAL PROTECTION:

Use personal protective equipment depending on concentration and amount of hazardous substance. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes and skin.

RESPIRATORY PROTECTION:

Wear apron or protective clothing in case of contact. No respiratory protection is required during normal operations in a workplace where engineering controls such as adequate ventilation, etc. are sufficient.



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9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear mobile liquid.
COLOUR:	Yellow Liquid.
ODOUR:	Clove. Spicy character
FLASH POINT °C:	190
SPECIFIC GRAVITY @ 25°C:	1.030 – 1.063
REFRACTIVE INDEX @ 25°C:	1.528 – 1.537
SOLUBILITY:	eugenol: moderate-low water solubility (2,463 mg/L at 25°C)
BOILING POINT:	251.0 °C
VAPOUR PRESSURE @ 25 °C:	12200 mPa
FREEZING POINT	<-20 °C

10: STABILITY AND REACTIVITY

REACTIVITY:	No reaction known with water.
CHEMICAL STABILITY:	Good stability at standard temperature.
POSSIBILITY OF HAZARDOUS REACTIONS:	No hazardous reactions known.
CONDITIONS TO AVOID:	Keep away from heat and flame. Do not heat closed containers. Avoid contact with oxidizing agents.
INCOMPATIBLE MATERIALS:	Avoid contact with strong acids, alkali or oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:	May produce carbon monoxide and carbon dioxide upon decomposition.

11: TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS:	Oral: rat LD50 = 1370 mg/kg Eye: causes serious eye irritation (Cat. 2) Inhalation: breathing difficulties, particularly young children Skin: rabbit LD50 1200 mg/kg Skin Irritation: Potential irritant (Cat.2) Skin Sensitivity: Skin Sensitiser (Cat. 1) Mutagenicity: Not mutagenic (Ames test) Fertility/Reproduction: no data
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12: ECOLOGICAL INFORMATION

TOXICITY:	
- FISH:	Acute 96 hours LC50 >5.6 (A3 Oncorhynchus mykiss) interpretation - moderate
- ALGAE:	no data
- AQUATIC INVERTEBRATES:	Brine shrimp - LC50= 0.5993 µg. mL-1
- TERRESTRIAL ARTHROPODS:	Dermatophagoides (mite) LD50 of 0.48 kg/ha
- PLANTS:	Johnsongrass and burning nettle - 10 kg/ha = 50% foliar damage
- MICROORGANISMS:	Insufficient data
PERSISTENCE AND DEGRADABILITY:	Eugenol is anticipated to be short-lived in the environment. Soil and water biodegradation data not available.
BIOACCUMULATIVE POTENTIAL:	Described as low potential
MOBILITY IN SOIL:	Eugenol: moderate mobility in soils (Koc is 409 mL/g)
RESULTS OF PBT AND VPVB ASSESSMENT:	Not determined
PRECAUTIONS:	Not established

SDS: 14 Clove Essential Oil

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13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

When being disposed of in its unused and uncontaminated state, product should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

SPECIAL PRECAUTIONS FOR LANDFILL AND INCINERATION:

Not stated. See previous.

14: TRANSPORT INFORMATION

UN No.:

Not regulated.

PROPER SHIPPING NAME:

Not regulated.

TRANSPORT HAZARD CLASS(ES):

Not regulated.

PACKING GROUP:

Not regulated.

ENVIRONMENTAL HAZARDS:

Not regulated.

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE:

Not regulated.

15: REGULATORY INFORMATION

STATUTORY INSTRUMENTS:

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)

16: OTHER INFORMATION

Q.C. REQUIREMENTS.

In-line with general product specification. Always satisfy suitability for specific application.
Retest after 6 months.

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.