

SAFETY DATA SHEET

In accordance with REACH Regulation EC No.1907/2006

Product: Clove Leaf Essential Oil K0141

Version: 1

Section 1. Identification of the substance or the mixture and of the supplier

1.1 Product Identifier

Product identifier: Clove Leaf Essential Oil; CAS: 8015-97-2

Other identifiers: Eugenia Caroyphyllus Leaf Oil

1.2 Relevant identified uses of the substance of mixture and uses advised against

Product uses: Flavours, Fragrances, Food Use, Cosmetics

1.3 Details of the supplier of the safety data sheet

Company name: O&3 U.K. Limited

Company address: Units 2, 3 & 5 Athelstan Business Park
Hanwell Lane
Hutton Conyers
Ripon
North Yorkshire
HG4 5BF

Contact: Regulatory Affairs

E-Mail address: hello@oand3.com

Company phone: +44 (0)1765 522120

1.4 Emergency telephone number

Emergency phone: +44 (0)1765 522120

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Classification under Regulation (EC) No 1272/2008

Class and category of danger: Acute Toxicity - Oral Category 4
Acute Toxicity - Dermal Category 4
Skin Corrosion / Irritation Category 2
Eye Damage / Irritation Category 2
Sensitization - Skin Category 1
Aspiration Hazard Category 1
H302, Harmful if swallowed.
H304, May be fatal if swallowed and enters airways.
H312, Harmful in contact with skin.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.

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2.2 Label elements

Classification under Regulation (EC) No 1272/2008

Signal word: Warning

Hazard statements: H302, Harmful if swallowed.
H304, May be fatal if swallowed and enters airways.
H312, Harmful in contact with skin.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.

M factor: None

Supplemental Information: None

Precautionary statements: P261, Avoid breathing vapour or dust.
P264, Wash hands and other contacted skin thoroughly after handling.
P270, Do not eat, drink or smoke when using this product.
P272, Contaminated work clothing should not be allowed out of the workplace.
P280, Wear protective gloves/eye protection/face protection.
P301/310, IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302/352, IF ON SKIN: Wash with plenty of soap and water.
P305/351/338, IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312, Call a POISON CENTRE or doctor/physician if you feel unwell.
P330, Rinse mouth.
P331, Do not induce vomiting.
P333/313, If skin irritation or rash occurs: Get medical advice/attention.
P337/313, If eye irritation persists: Get medical advice/attention.
P362, Take off contaminated clothing and wash before reuse.
P405, Store locked up.
P501, Dispose of contents/container to approved disposal site, in accordance with local regulations.

Pictograms:



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2.3 Other hazards

Other hazards: Hydrocarbon Concentration %: 25.0000%
 Substance is not identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100
 Substance does not meet the criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII

Section 3. Composition / information on ingredients

3.1 Substances

Product identifier: Clove Leaf Essential Oil; CAS: 8015-97-2

Contains:

Name	CAS	EC	REACH Registration No.	%	Classification for (CLP) 1272/2008	Specific Conc. Limits, M-factors and ATEs
Eugenol	97-53-0	202-589-1		50-100%	Eye Irrit. 2-Skin Sens. 1B;H317-H319,-	oral: ATE = 2500 mg/kg bw
beta-Caryophyllene	87-44-5	201-746-1		20-<50%	Skin Sens. 1B-Asp. Tox 1;H304-H317,-	
Eugenyl acetate	93-28-7	202-235-6		10-<20%	Acute Tox. 4;H302,-	oral: ATE = 1670 mg/kg bw
alpha-Humulene	6753-98-6	229-816-7		5-<10%	Skin Irrit. 2-Eye Irrit. 2-STOT SE 3;H315-H319-H335,-	
Eugenyl methyl ether	93-15-2	202-223-0		0.1-<1%	Acute Tox. 4-Muta. 2-Carc. 2;H302-H341-H351,-	oral: ATE = 1180 mg/kg bw

Section 4. First-aid measures

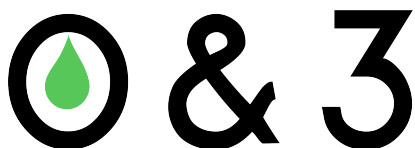
4.1 Description of first aid measures

Inhalation: Remove from exposure site to fresh air, keep at rest, and obtain medical attention.
Eye exposure: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin exposure: IF ON SKIN: Wash with plenty of soap and water.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed.
 May be fatal if swallowed and enters airways.
 Harmful in contact with skin.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed



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None expected, see Section 4.1 for further information.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable media: Carbon dioxide, Dry chemical, Foam.

5.2 Special hazards arising from the substance or mixture

In case of fire, may be liberated: Carbon monoxide, Unidentified organic compounds.

5.3 Advice for fire fighters:

In case of insufficient ventilation, wear suitable respiratory equipment.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid inhalation. Avoid contact with skin and eyes. See protective measures under Section 7 and 8.

6.2 Environmental precautions:

Keep away from drains, surface and ground water, and soil.

6.3 Methods and material for containment and cleaning up:

Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Contain spillage immediately by use of sand or inert powder. Dispose of according to local regulations.

6.4 Reference to other sections:

Also refer to sections 8 and 13.

Section 7. Handling and storage

7.1 Precautions for safe handling:

Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

7.3 Specific end use(s):

Flavours, Fragrances, Food Use, Cosmetics: Use in accordance with good manufacturing and industrial hygiene practices.

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Section 8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits: Not Applicable

8.2 Exposure Controls

Eye / Skin Protection

Wear protective gloves/eye protection/face protection

Respiratory Protection

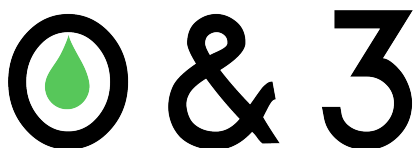
Under normal conditions of use and where adequate ventilation is available to prevent build up of excessive vapour, this material should not require special engineering controls. However, in conditions of high or prolonged use, or high temperature or other conditions which increase exposure, the following engineering controls can be used to minimise exposure to personnel: a) Increase ventilation of the area with local exhaust ventilation. b) Personnel can use an approved, appropriately fitted respirator with organic vapour cartridge or canisters and particulate filters. c) Use closed systems for transferring and processing this material.

Also refer to Sections 2 and 7.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State/Colour:	Liquid, pale yellow to brown
Odour:	Characteristic
Odour threshold:	Not determined
Melting point / freezing point:	Not determined
Boiling point or initial boiling point and boiling range:	Not determined
Flammability:	Not determined
Lower and upper explosion limit:	Not determined
Flash point:	117 °C
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not relevant
pH:	Not determined
Kinematic viscosity:	Not determined
Solubility:	Not determined
Partition coefficient: n-octanol/water (log value):	Not determined
Vapour pressure:	Not determined
Density and/or relative density:	1.0200 - 1.0600
Relative vapour density:	Not determined
Particle characteristics:	Not determined



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9.2 Other information: None available

Section 10. Stability and reactivity

10.1 Reactivity:

Presents no significant reactivity hazard, by itself or in contact with water.

10.2 Chemical stability:

Good stability under normal storage conditions.

10.3 Possibility of hazardous reactions:

Not expected under normal conditions of use.

10.4 Conditions to avoid:

Avoid extreme heat.

10.5 Incompatible materials:

Avoid contact with strong acids, alkalis or oxidising agents.

10.6 Hazardous decomposition products:

Not expected.

Section 11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity:	Acute Toxicity - Oral Category 4 Acute Toxicity - Dermal Category 4
Acute Toxicity Oral	>5000
Acute Toxicity Dermal	Not Applicable
Acute Toxicity Inhalation	Not Available
Skin corrosion/irritation:	Skin Corrosion / Irritation Category 2
Serious eye damage/irritation:	Eye Damage / Irritation Category 2
Respiratory or skin sensitisation:	Sensitization - Skin Category 1
Germ cell mutagenicity:	Based on available data the classification criteria are not met.
Carcinogenicity:	Based on available data the classification criteria are not met.
Reproductive toxicity:	Based on available data the classification criteria are not met.
STOT-single exposure:	Based on available data the classification criteria are not met.
STOT-repeated exposure:	Based on available data the classification criteria are not met.
Aspiration hazard:	Aspiration Hazard Category 1

Information about hazardous ingredients in the mixture

Ingredient	CAS	EC	LD50/ATE Oral (mg/kg)	LD50/ATE Dermal (mg/kg)	LC50/ATE Inhalation	LC50 Route
Eugenyl acetate	93-28-7	202-235-6	1670	Not available	Not available	Not available

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Refer to Sections 2 and 3 for additional information.

11.2 Information on other hazards

Not Applicable

Section 12. Ecological information

12.1 Toxicity: Not available

12.2 Persistence and degradability: Not available

12.3 Bioaccumulative potential: Not available

12.4 Mobility in soil: Not available

12.5 Results of PBT and vPvB assessment:

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Endocrine disrupting properties: Not Applicable

12.7 Other adverse effects: Not available

Section 13. Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with local regulations. Avoid disposing into drainage systems and into the environment. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport information

	14.1 UN number or ID number:	14.2 UN Proper Shipping Name:	14.3 Transport hazard class (es):	Sub Risk:	14.4 Packing Group:
UN Model Regulations	Not classified	-	-	-	-
IMDG	Not classified	-	-	-	-
ADR,RID,ADN	Not classified	-	-	-	-
ICAO TI	Not classified	-	-	-	-

14.5 Environmental hazards: Not environmentally hazardous for transport

14.6 Special precautions for user: None additional

14.7 Maritime transport in bulk according to IMO instruments:

Not classified

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Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

None additional

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.

Section 16. Other information

Concentration % Limits: EDI 2=10.53% SS 1=1.05% AH 1=40.00%

Total Fractional Values: EDI 2=9.50 SS 1=95.00 AH 1=2.50

Key to revisions:

Not applicable

Key to abbreviations:

Abbreviation	Meaning
Acute Tox. 4	Acute Toxicity - Oral Category 4
Asp. Tox 1	Aspiration Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2	Eye Damage / Irritation Category 2
H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects (exposure route).
H351	Suspected of causing cancer (exposure route).
Muta. 2	Germ Cell Mutagenicity Category 2
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing vapour or dust.
P264	Wash hands and other contacted skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/eye protection/face protection.
P281	Use personal protective equipment as required.
P301/310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301/312	IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell.
P302/352	IF ON SKIN: Wash with plenty of soap and water.
P304/340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308/313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
P330	Rinse mouth.
P331	Do not induce vomiting.
P332/313	If skin irritation occurs: Get medical advice/attention.
P333/313	If skin irritation or rash occurs: Get medical advice/attention.
P337/313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P403/233/235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to approved disposal site, in accordance with local regulations.
STOT SE 3	Specific Target Organ Toxicity (Single Exposure) Category 3
Skin Irrit. 2	Skin Corrosion / Irritation Category 2
Skin Sens. 1B	Sensitization - Skin Category 1B

The information in this safety data sheet is to the best of our knowledge true and accurate but all data, instructions, recommendations and/or suggestions are made without guarantee.