

CHEMICAL SAFETY DATA SHEET
according to 1907/2006/EC Article 31, as amended by N°
453/2010

2312700

Reviewed on: 15/07/19
Printing date: 15/07/2019

PRODUCT : CLOVE stem Mada ORGANIC OIL

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P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

2.3 Other hazards

- Results of PBT and vPvB assessment

- PBT:
Not applicable.

- vPvB:
Not applicable.

SECTION 03: Composition/information on ingredients

3.1 Chemical characterization: Substances

CAS No.	Description
8000-34-8	Syzygium aromaticum (L.) Merr. & L.M.Perry (Syn :Eugenia caryophyllus (Sprengel) Bullock et S.Harrison)

- Identification number(s)
- EC number:
904-912-8

- Dangerous components:

CAS Number		%
97-53-0	Eugenol ⚠ Eye Irrit. 2 - H319, Skin Sens. 1B - H317	50,001-100
87-44-5	beta-Caryophyllene EC number: 201-746-1 ⚠ Asp. Tox. 1 - H304; ⚠ Skin Sens. 1B - H317	5,001-10,00
93-28-7	4-allyl-2-methoxyphenyl acetate ⚠ Acute Tox. 4 - H302	1,001- 5,00
1139-30-6	Caryophyllene oxide EC number: 214-519-7 ⚠ Aquatic Chronic 2 - H411	0,101-1,00
119-36-8	methyl salicylate EC number: 204-317-7 ⚠ Acute Tox. 4 - H302	0,101-1,00
98-01-1	2-furaldehyde EC number: 202-627-7 ⚠ Acute Tox. 3 - H301, Acute Tox. 2 - H330; ⚠ Flam. Liq. 3 - H226; ⚠ Acute Tox. 4 - H312, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, STOT SE 3 - H335; ⚠ Carc. 2 - H351; Aquatic Chronic 3 - H412	0,101-1,00
97-54-1	Isoeugenol ⚠ Acute Tox. 4 - H302, Acute Tox. 4 - H312, Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, Skin Sens. 1A - H317	0,101-1,00
120-51-4	Benzyl benzoate EC number: 204-402-9	0,101-1,00

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93-15-2

⚠ Acute Tox. 4 - H302; ⚠ Aquatic
Acute 1 - H400, Aquatic Chronic 2 - H411
4-allylveratrole
EC number: 202-223-0
⚠ Acute Tox. 4 - H302; ⚠ Muta. 2 -
H341, Carc. 2 - H351

0,101-1,00

SECTION 04: First aid measures

4.1 Description of first aid measures

- **General information:**
Seek immediate medical advice.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
- **After skin contact:**
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Seek immediate medical advice.
- **Information for doctor:**

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 05: Firefighting measures

5.1 Extinguishing media

- **Suitable extinguishing agents:**
CO2, sand, extinguishing powder. Do not use water.
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:**
Water with full jet

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
- **Additional information**
Cool endangered receptacles with water spray.

SECTION 06: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

6.3 Methods and material for containment and cleaning up:

Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 07: Handling and storage

• Handling:

7.1 Precautions for safe handling

Keep receptacles tightly sealed.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Handle with care. Avoid jolting, friction and impact.

• Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

• Storage:

• Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.
Use only receptacles specifically permitted for this substance/ product.

• Further information about storage conditions:

Keep container tightly sealed.
Protect from heat and direct sunlight.
Store receptacle in a well ventilated area.

7.3 Specific end use(s)

No further relevant information available.

SECTION 08: Exposure controls/personal protection

8.1 Control parameters

- Ingredients with limit values that require monitoring at the workplace:
Not required.

CAS No.	Designation of material	%	Type	Value	Unit
Not required.					

Not required.

• Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls

• Personal protective equipment:

• General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.

• Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

• Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Safety glasses

SECTION 09: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form: viscous
Colour: colourless to dark yellow

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Odour:	spicy
Odour threshold:	Not determined.
Change in condition	
Melting point/freezing point:	-50,0 °C
Initial boiling point and boiling range:	270,0 °C
Flash point:	141,0 °C NFT 60-103 CC
Flammability (solid, gas):	Not determined.
Auto-ignition temperature:	Not determined.
Explosive properties:	Not determined.
Vapour pressure:	at 20,00 °C 0,0090 mbar
Density:	Not determined.
Relative density :	1,0420 1,065 D20/20
Solubility in / Miscibility with water:	
	at 20,00 °C 2,30 g/l
Partition coefficient: n-octanol/water:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
No further relevant information available.
- 10.2 Chemical stability
Thermal decomposition / conditions to be avoided:
Not determined.
- 10.3 Possibility of hazardous reactions
No dangerous reactions known.
- 10.4 Conditions to avoid
No further relevant information available.
- 10.5 Incompatible materials:
No further relevant information available.
- 10.6 Hazardous decomposition products:
Not determined.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity
 - LD/LC50 values relevant for classification:

ISO LD/LC

**8000-34-8 Syzygium aromaticum (L.) Merr. & L.M.Perry (Syn :
Eugenia caryophyllus (Sprengel) Bullock et S.**

Harrison)

Oral, LD50: 1370 mg/kg (rat) (calculated)
Dermal, LD50: 1200 mg/kg (Rabbit) (calculated)

97-53-0 Eugenol
Oral, LD50: 1930 mg/kg (rat)

87-44-5 beta-Caryophyllene
Oral, LD50: > 5000 mg/kg (rat) (Hart and Wong 1971)

1139-30-6 Caryophyllene oxide

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- Oral, LD50: >5000 mg/kg (rat) (Moreno 1978)
- 119-36-8 methyl salicylate**
Oral, LD50: 887 mg/kg (rat)
- 98-01-1 2-furaldehyde**
Oral, LD50: 65 mg/kg (rat)
- 97-54-1 Isoeugenol**
Oral, LD50: 1560 mg/kg (rat)
- 120-51-4 Benzyl benzoate**
Oral, LD50: 1700 mg/kg (rat)
Oral, LD50: 3450 mg/kg (mouse) (Bier, 1979)
Dermal, LD50: 4000 mg/kg (Rabbit)
- 93-15-2 4-allylveratrole**
Oral, LD50: 810 mg/kg (rat) (Beroza and al., 1975)
- Primary irritant effect:
 - Skin corrosion/irritation
No irritant effect.
 - Serious eye damage/irritation
No irritating effect.
 - Respiratory or skin sensitisation
- 120-51-4 Benzyl benzoate**
Sensitisation, NESIL: 59000 ug/cm2 (human being) (Standard IFRA)
- Subacute to chronic toxicity:
- 87-44-5 beta-Caryophyllene**
Oral, NOAEL: 700 mg/kg (rat) (90 days Schmitt 2016)
- Germ cell mutagenicity
- 87-44-5 beta-Caryophyllene**
AMES: NEGATIVE (in vitro) (Heck and al., 1989)
- 1139-30-6 Caryophyllene oxide**
AMES: NEGATIVE (in vitro) (Richold and al, 1979)
- 120-51-4 Benzyl benzoate**
AMES: NEGATIVE (in vitro) (Schunk and al., 1986)
- Carcinogenicity
Not determined.
 - Reproductive toxicity
Not determined.
 - STOT-single exposure
Not determined.
 - STOT-repeated exposure
Not determined.
 - Aspiration hazard
Not determined.

SECTION 12: Ecological information

12.1 Toxicity

- Aquatic toxicity:

**8000-34-8 Syzygium aromaticum (L.) Merr. & L.M.Perry (Syn :
Eugenia caryophyllus (Sprengel) Bullock et S.
Harrison)**

CE50/48h: 1,9 mg/l (daphnia) (QSAR)
ErC50(0-72h): 41 mg/l (algae) (QSAR)
96h-LC50: 3,2 mg/l (fish) (calculated)

93-15-2 4-allylveratrole

CE50/48h: 38 mg/l (daphnia) (Ministry of the Environment of Japan 2018)
ErC50(0-72h): 22 mg/l (algae) (Ministry of the Environment of Japan 2018)
96h-LC50: 14 mg/l (fish) (Ministry of the Environment of Japan 2018)

12.2 Persistence and degradability

No further relevant information available.

- Behaviour in environmental systems:

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Not determined.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

- **Ecotoxicological effects:**
Not determined.

12.5 Results of PBT and vPvB assessment

- **PBT:**
Not applicable.
- **vPvB:**
Not applicable.

12.6 Other adverse effects
No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- **Recommendation**
Must be specially treated adhering to official regulations.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR Void

IMDG Void

IATA Void

14.2 UN proper shipping name

ADR Void

IMDG Void

IATA Void

14.3 Transport hazard class(es)

ADR

Class Void

IMDG

Class Void

IATA

Class Void

14.4 Packing group

ADR Void

IMDG Void

IATA Void

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user
Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

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Not applicable.

- Transport/Additional information:
Not applicable.

SECTION 15: Regulatory information

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

- National regulations:
- Waterhazard class:
Generally not hazardous for water.

15.2 Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information in this safety data sheet is based on the state of our knowledge at the date indicated. The information in this sheet must be regarded as a description of the safety requirements for the product, they are not to be considered a warranty or quality specification and have no contractual value on properties and application areas thereof. The information contained in this safety data sheet relate to the specific material designated and may not be valid with respect to the product associated with another product or process, unless it is specified in the text of this document.

The required information complies with EU regulations in force. It does not exempt the user from knowing and applying all the national regulations in force.

- Relevant phrases

H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
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.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
- Training hints
Minimum training in occupational risk prevention is recommended for personnel who will handle this product, in the purpose of facilitating the understanding and interpretation of this form of safety data in the same way as the labeling of the product.
- Abbreviations and acronyms:
IFRA:International Fragrance Association IOFI:International Organization of the Flavor Industry
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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- Sources
IFRA/IOFI Labelling Manual, REACH registration dossier, supplier information
- * Data compared to the previous version altered.