

Safety data sheet
according to ChemV 2015 - SR 813.11

Printing date 07.11.2018

Version 59

Revision: 07.11.2018

. SECTION 1: Identification of the substance/mixture and of the company/undertaking

◊ **1.1 Product identifier**

◊ Trade name: **Cardamomenöl / 01-4100**

◊ Article number: P0107694

◊ Registration number -

◊ **1.2 Relevant identified uses of the substance or mixture and uses advised against** No further relevant information available.

◊ Application of the substance / the mixture Flavour/Fragrance

◊ **1.3 Details of the supplier of the safety data sheet**

◊ Manufacturer/Supplier:

Frey & Lau GmbH

Immenhacken 12, D-24558 Henstedt-Ulzburg

Tel:++49-4193-9953 Fax: +49-4193-9955-80

◊ Further information obtainable from:

Sachkundige Person Frey + Lau

info@freylau.de

◊ **1.4 Emergency telephone number:** ++49-40-54.77.99.56 WAKO

. SECTION 2: Hazards identification

◊ **2.1 Classification of the substance or mixture**

◊ Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

◊ **2.2 Label elements**

◊ Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

◊ Hazard pictograms



GHS02 GHS07 GHS09

◊ Signal word Warning

◊ Hazard-determining components of labelling:

Eucalyptol

3,7-Dimethyl-1,6-octadien-3-ol

DIPENTENE

l.-alpha.-Pinene

3,7-Dimethylocta-2,6-dien-1-ole

3,7-Dimethyl-2,6-octadien-1-al (cis und trans)

beta-Pinene

Terpinolene

Farnesol

◊ Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

◊ Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

◊ Description: Mixture of substances listed below with nonhazardous additions.

◊ Dangerous components:

CAS: 80-26-2	TERPINYLACETATE	>25-50%
EINECS: 201-265-7	Aquatic Chronic 2, H411	
CAS: 470-82-6	Eucalyptol	>25-50%
EINECS: 207-431-5	Flam. Liq. 3, H226; Skin Sens. 1B, H317	
CAS: 78-70-6	3,7-Dimethyl-1,6-octadien-3-ol	>2,5-5%
EINECS: 201-134-4	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	
CAS: 99-86-5	p-mentha-1,3-diene	>2,5-5%
EINECS: 202-795-1	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H302	
CAS: 98-55-5	alpha-Terpineol	>2,5-5%
EINECS: 202-680-6	Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 138-86-3	DIPENTENE	≥1-<2,5%
EINECS: 205-341-0	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1B, H317	
CAS: 123-35-3	Myrcene	1-2,5%
EINECS: 204-622-5	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
CAS: 7785-26-4	l-alpha-Pinene	≥1-<2,5%
EINECS: 232-077-3	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1B, H317	
CAS: 106-24-1	3,7-Dimethylocta-2,6-dien-1-ole	1-2,5%
EINECS: 203-377-1	Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317	
CAS: 562-74-3	p-Menth-1-en-4-ol	1-2,5%
EINECS: 209-235-5	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	
CAS: 7212-44-4	Nerolidol (isomer unspecified)	≥0,25-<1%
EINECS: 230-597-5	Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Eye Irrit. 2A, H319	
CAS: 5392-40-5	3,7-Dimethyl-2,6-octadien-1-al (cis und trans)	≥0,1-<1%
EINECS: 226-394-6	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	
CAS: 18172-67-3	beta-Pinene	≥0,25-<1%
EINECS: 242-060-2	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1B, H317	
CAS: 586-62-9	Terpinolene	≥0,1-<0,25%
EINECS: 209-578-0	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1B, H317	
CAS: 4602-84-0	Farnesol	≥0,1-<1%
EINECS: 225-004-1	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1B, H317	

◊ Additional information: For the wording of the listed hazard phrases refer to section 16.

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. SECTION 4: First aid measures

◇ 4.1 Description of first aid measures

◇ **General information:** Immediately remove any clothing soiled by the product.

◇ **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

◇ **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

◇ **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

◇ **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

◇ **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 5: Firefighting measures

◇ 5.1 Extinguishing media

◇ Suitable extinguishing agents: CO₂, sand, extinguishing powder. Do not use water.

◇ For safety reasons unsuitable extinguishing agents: Water with full jet

◇ **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

◇ 5.3 Advice for firefighters

◇ Protective equipment: No special measures required.

. SECTION 6: Accidental release measures

◇ 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

◇ 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

◇ 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

◇ 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

. SECTION 7: Handling and storage

◇ **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

◇ **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:** No special requirements.

◇ **Information about storage in one common storage facility:** Not required.

◇ **Further information about storage conditions:** Keep container tightly sealed.

◇ **Storage class:** 3

◇ **7.3 Specific end use(s)** No further relevant information available.

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. SECTION 8: Exposure controls/personal protection

- ◊ Additional information about design of technical facilities: No further data; see item 7.
- ◊ **8.1 Control parameters**
- ◊ Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- ◊ Additional information: The lists valid during the making were used as basis.
- ◊ **8.2 Exposure controls**
- ◊ Personal protective equipment:
- ◊ General protective and hygienic measures:
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 the eyes and skin.
- ◊ 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.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- ◊ Material of gloves The multichemical-resistant glove Barrier 02-100 is recommended.
- ◊ 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: Tightly sealed goggles

. SECTION 9: Physical and chemical properties

- ◊ **9.1 Information on basic physical and chemical properties**
- ◊ General Information
- ◊ Appearance:
- Form: Fluid
- Colour: Yellowish
- ◊ Odour: Characteristic
- ◊ Odour threshold: Not determined.
- ◊ pH-value: Not determined.
- ◊ Melting point/freezing point: Undetermined.
- ◊ Flash point: 54 °C
- ◊ Flammability (solid, gas): Not applicable.
- ◊ Decomposition temperature: Not determined.
- ◊ Auto-ignition temperature: Not determined.
- ◊ Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- ◊ Explosion limits:
- Lower: Not determined.
- Upper: Not determined.
- ◊ Density at 20 °C: 0,93 g/cm³
- ◊ Relative density: Not determined.
- ◊ Vapour density: Not determined.
- ◊ Evaporation rate: Not determined.
- ◊ Solubility in / Miscibility with water: Not miscible or difficult to mix.
- ◊ Partition coefficient: n-octanol/water: Not determined.
- ◊ VOC (EC) 84,60 %

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◇ **9.2 Other information** No further relevant information available.

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. SECTION 10: Stability and reactivity

- ◇ **10.1 Reactivity** No further relevant information available.
- ◇ **10.2 Chemical stability**
 - ◇ Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- ◇ **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:** No dangerous decomposition products known.

. SECTION 11: Toxicological information

- ◇ **11.1 Information on toxicological effects**
 - ◇ Acute toxicity Based on available data, the classification criteria are not met.
 - ◇ LD/LC50 values relevant for classification:
ATE (Acute Toxicity Estimates)
 - Oral LD50 13.948 mg/kg
 - ◇ Primary irritant effect:
 - ◇ Skin corrosion/irritation Causes skin irritation.
 - ◇ Serious eye damage/irritation Causes serious eye irritation.
 - ◇ Respiratory or skin sensitisation May cause an allergic skin reaction.
 - ◇ CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
 - ◇ 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 Based on available data, the classification criteria are not met.

. SECTION 12: Ecological information

- ◇ **12.1 Toxicity**
 - ◇ Aquatic toxicity: No further relevant information available.
- ◇ **12.2 Persistence and degradability** No further relevant information available.
- ◇ **12.3 Bioaccumulative potential** No further relevant information available.
- ◇ **12.4 Mobility in soil** No further relevant information available.
- ◇ Ecotoxicological effects:
 - ◇ Remark: Toxic for fish
 - ◇ Additional ecological information:
 - ◇ General notes:
 - Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
 - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 - Danger to drinking water if even extremely small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Toxic for aquatic organisms
- ◇ **12.5 Results of PBT and vPvB assessment**
 - ◇ PBT: Not applicable.
 - ◇ vPvB: Not applicable.

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◊ **12.6 Other adverse effects** No further relevant information available.

. SECTION 13: Disposal considerations

◊ **13.1 Waste treatment methods**

◊ Recommendation Must not be disposed together with household garbage. Do not allow product to reach sewage system.

◊ Uncleaned packaging:

◊ Recommendation: Disposal must be made according to official regulations.

. SECTION 14: Transport information

◊ **14.1 UN-Number**

◊ ADR, IMDG, IATA

UN1993

◊ **14.2 UN proper shipping name**

◊ ADR

FLAMMABLE LIQUID, N.O.S. (1,8-Cineol, p-mentha-1,3-diene), ENVIRONMENTALLY HAZARDOUS

◊ IMDG

FLAMMABLE LIQUID, N.O.S. (1,8-Cineol, p-mentha-1,3-diene), MARINE POLLUTANT

◊ IATA

FLAMMABLE LIQUID, N.O.S. (containing 1,8-Cineol, p-mentha-1,3-diene)

◊ **14.3 Transport hazard class(es)**

◊ ADR

◊ Class

3 (F1) Flammable liquids.

◊ Label

3

◊ IMDG, IATA

◊ Class

3 Flammable liquids.

◊ Label

3

◊ **14.4 Packing group**

◊ ADR, IMDG, IATA

III

◊ **14.5 Environmental hazards:**

Product contains environmentally hazardous substances: DIPENTENE, TERPINYLACETATE

◊ Marine pollutant:

Yes

Symbol (fish and tree)

◊ Special marking (ADR):

Symbol (fish and tree)

◊ **14.6 Special precautions for user**

Warning: Flammable liquids.

◊ Danger code (Kemler):

30

◊ EMS Number:

F-E, S-E

◊ Stowage Category

A

◊ **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

◊ Transport/Additional information:

◊ ADR

◊ Limited quantities (LQ)

5L

◊ Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

◊ Transport category

3

◊ Tunnel restriction code

D/E

◊ IMDG

◊ Limited quantities (LQ)

5L

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◊ Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

◊ UN "Model Regulation":

UN 1993 FLAMMABLE LIQUID, N.O.S. (1,8-CINEOL, P-MENTHA-1,3-DIENE), 3, III, ENVIRONMENTALLY HAZARDOUS

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. SECTION 15: Regulatory information

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

◊ Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

◊ Hazard pictograms



GHS02 GHS07 GHS09

◊ Signal word Warning

◊ Hazard-determining components of labelling:

Eucalyptol

3,7-Dimethyl-1,6-octadien-3-ol

DIPENTENE

l.alpha.-Pinene

3,7-Dimethylocta-2,6-dien-1-ole

3,7-Dimethyl-2,6-octadien-1-al (cis und trans)

beta-Pinene

Terpinolene

Farnesol

◊ Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

◊ Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

◊ Directive 2012/18/EU

◊ Named dangerous substances - ANNEX I None of the ingredients is listed.

◊ Seveso category

E2 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

◊ Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

◊ Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

◊ REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 40

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

. SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

◊ Relevant phrases

H226 Flammable liquid and vapour.

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H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

◇ Department issuing SDS: Regulatory Affairs

◇ Contact: Dr. Maja Zippel

◇ Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2