

Safety data sheet

gemäß 1907/2006/EG, Artikel 31

Printing date 14.11.2013

Version 99

Revision: 14.11.2013

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

◇ Product identifier

- ◇ Trade name: **Citronellöl EuAB 01-4310-00**
- ◇ Article number: S0100023
- ◇ Registration number -
- ◇ 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

◇ 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
- ◇ Emergency telephone number: ++49-40-54.77.99.56 WAKO

2. Hazards identification

◇ Classification of the substance or mixture

- ◇ Classification according to Regulation (EC) No 1272/2008
Eye Dam. 1 H318 Causes serious eye damage.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.
Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

◇ Classification according to Directive 67/548/EEC or Directive 1999/45/EC

- Xi; Irritant
R38-41: Irritating to skin. Risk of serious damage to eyes.
Xi; Sensitising
R43: May cause sensitisation by skin contact.
N; Dangerous for the environment
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

◇ Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

◇ Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

◇ Label elements

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



GHS05 GHS07 GHS09

◇ Signal word Danger

◇ Hazard-determining components of labelling:

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

Citronellal

Citronellol

DIPENTENE

◇ Hazard statements

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.

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H411 Toxic to aquatic life with long lasting effects.

◊ **Precautionary statements**

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

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

◊ **Other hazards**

◊ Results of PBT and vPvB assessment

◊ PBT: Not applicable.

◊ vPvB: Not applicable.

3. Composition/information on ingredients

◊ **Chemical characterization: Mixtures**

◊ CAS-No: 89998-15-2

◊ EINECS-No: 289-753-6

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

◊ **Dangerous components:**

CAS: 106-23-0 Citronellal 25-49,99%

EINECS: 203-376-6 Xi R38; Xi R43; N R51/53

Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317

CAS: 106-24-1 3,7-Dimethylocta-2,6-dien-1-ole 20-24,99%

EINECS: 203-377-1 Xi R38-41; Xi R43

Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317

CAS: 106-22-9 Citronellol 10-19,99%

EINECS: 203-375-0 Xi R38; Xi R43; N R51/53

Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317

CAS: 105-87-3 2,6-Octadien-1-ol-3,7-dimethylacetate 2,5-4,99%

EINECS: 203-341-5 N R51/53

Aquatic Chronic 2, H411

CAS: 138-86-3 DIPENTENE 2,5-4,99%

EINECS: 205-341-0 Xn R65; Xi R38; Xi R43; N R50/53

R10

Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1B, H317

CAS: 78-70-6 3,7-Dimethyl-1,6-octadien-3-ol 1-2,49%

EINECS: 201-134-4 Xi R36/38

Skin Irrit. 2, H315; Eye Irrit. 2, H319

CAS: 5392-40-5 3,7-Dimethyl-2,6-octadien-1-al (cis und trans) 1-2,49%

EINECS: 226-394-6 Xi R38; Xi R43

Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317

CAS: 4602-84-0 3,7,11-Trimethyl-2,6,10-dodecatrienol 1-2,49%

EINECS: 225-004-1 Xi R36/38; Xi R43

Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1B, H317

CAS: 97-53-0 Eugenol 1-2,49%

EINECS: 202-589-1 Xi R36; Xi R43

Eye Irrit. 2, H319; Skin Sens. 1B, H317

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

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4. First aid measures

- ◊ **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. Then consult a doctor.
- ◊ **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- ◊ **Information for doctor:**
- ◊ **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- ◊ **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5. Firefighting measures

- ◊ **Extinguishing media**
- ◊ **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- ◊ **For safety reasons unsuitable extinguishing agents:** Water
- ◊ **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.
- ◊ **Advice for firefighters**
- ◊ **Protective equipment:** No special measures required.

6. Accidental release measures

- ◊ **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- ◊ **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- ◊ **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Treat with 2 % sodium hydroxide solution.
Ensure adequate ventilation.
- ◊ **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.

7. Handling and storage

- ◊ **Handling:**
- ◊ **Precautions for safe handling** Prevent formation of aerosols.
- ◊ **Information about fire - and explosion protection:** No special measures required.
- ◊ **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.

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

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8. Exposure controls/personal protection

◇ **Additional information about design of technical facilities:** No further data; see item 7.

◇ **Control parameters**

◇ **Ingredients with limit values that require monitoring at the workplace:**

106-23-0 Citronellal

MAK Long-term value: P

106-24-1 3,7-Dimethylocta-2,6-dien-1-ole

MAK vgl. Abschn. IV

138-86-3 DIPENTENE

MAK vgl. Abschn. IIb

4602-84-0 3,7,11-Trimethyl-2,6,10-dodecatrienol

MAK vgl. Abschn. IV

97-53-0 Eugenol

MAK vgl. Abschn. IV

◇ **Additional information:** The lists valid during the making were used as basis.

◇ **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 skin.

Avoid contact with the eyes and skin.

◇ **Respiratory protection:** Not required.

◇ **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 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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

9. Physical and chemical properties

◇ **Information on basic physical and chemical properties**

◇ **General Information**

◇ **Appearance:**

Form:

Fluid

Colour:

Yellow

◇ **Odour:**

Characteristic

◇ **Odour threshold:**

Not determined.

◇ **pH-value:**

Not determined.

◇ **Melting point/Melting range:**

Undetermined.

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- ◊ **Flash point:** 90 °C
- ◊ **Flammability (solid, gaseous):** Not applicable.
- ◊ **Ignition temperature:**
 - Decomposition temperature:** Not determined.
- ◊ **Self-igniting:** Not determined.
- ◊ **Danger of explosion:** Not determined.
- ◊ **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- ◊ **Density at 20 °C:** 0,885 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.
- ◊ **Other information:** No further relevant information available.

10. Stability and reactivity

- ◊ **Reactivity**
- ◊ **Chemical stability**
- ◊ **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- ◊ **Possibility of hazardous reactions:** No dangerous reactions known.
- ◊ **Conditions to avoid:** No further relevant information available.
- ◊ **Incompatible materials:** No further relevant information available.
- ◊ **Hazardous decomposition products:** No dangerous decomposition products known.

11. Toxicological information

- ◊ **Information on toxicological effects**
- ◊ **Acute toxicity:**
- ◊ **Primary irritant effect:**
 - on the skin:** Irritant to skin and mucous membranes.
 - on the eye:**
 - Strong caustic effect.
 - Strong irritant with the danger of severe eye injury.
- ◊ **Sensitization:** Sensitization possible through skin contact.
- ◊ **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
 - The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
 - Corrosive
 - Irritant
 - In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with high danger of central respiratory arrest.
 - In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with the danger of central respiratory arrest.

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12. Ecological information

- ◊ **Toxicity**
- ◊ **Aquatic toxicity:** No further relevant information available.
- ◊ **Persistence and degradability** No further relevant information available.
- ◊ **Behaviour in environmental systems:**
- ◊ **Bioaccumulative potential** No further relevant information available.
- ◊ **Mobility in soil** No further relevant information available.
- ◊ **Ecotoxicological effects:**
- ◊ **Remark:** Toxic for fish
- ◊ **Additional ecological information:**
- ◊ **General notes:**
*Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms*
- ◊ **Results of PBT and vPvB assessment**
- ◊ **PBT:** Not applicable.
- ◊ **vPvB:** Not applicable.
- ◊ **Other adverse effects** No further relevant information available.

13. Disposal considerations

- ◊ **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.

14. Transport information

- ◊ **UN-Number**
- ◊ **ADR, IMDG, IATA** UN3082
- ◊ **UN proper shipping name**
- ◊ **ADR** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellal, 3,7-Dimethylocta-2,6-dien-1-ole)
- ◊ **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellal, 3,7-Dimethylocta-2,6-dien-1-ole), MARINE POLLUTANT
- ◊ **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellal, 3,7-Dimethylocta-2,6-dien-1-ole)
- ◊ **Transport hazard class(es)**
- ◊ **ADR**
- ◊ **Class** 9 (M6) Miscellaneous dangerous substances and articles.
- ◊ **Label** 9
-
- ◊ **IMDG, IATA**
- ◊ **Class** 9 Miscellaneous dangerous substances and articles.
- ◊ **Label** 9
- ◊ **Packing group**
- ◊ **ADR, IMDG, IATA** III
- ◊ **Environmental hazards:** Product contains environmentally hazardous substances: DIPENTENE, Citronellal

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◊ Marine pollutant:	Yes
◊ Special marking (ADR):	Symbol (fish and tree)
◊ Special marking (IATA):	Symbol (fish and tree)
◊ Special precautions for user	Symbol (fish and tree)
◊ Danger code (Kemler):	Warning: Miscellaneous dangerous substances and articles.
◊ EMS Number:	90
◊ Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	F-A, S-F
◊ Transport/Additional information:	Not applicable.

◊ ADR	
◊ Limited quantities (LQ)	5L
◊ Transport category	3
◊ Tunnel restriction code	E
◊ UN "Model Regulation":	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellal, 3,7-Dimethylocta-2,6-dien-1-ole), 9, III

15. Regulatory information

- ◊ **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

GHS05 GHS07 GHS09
- ◊ Signal word Danger
- ◊ Hazard-determining components of labelling:
 - 3,7-Dimethylocta-2,6-dien-1-ole
 - Citronellal
 - Citronellol
 - DIPENTENE
- ◊ Hazard statements
 - H315 Causes skin irritation.
 - H318 Causes serious eye damage.
 - H317 May cause an allergic skin reaction.
 - H411 Toxic to aquatic life with long lasting effects.
- ◊ Precautionary statements
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P310 Immediately call a POISON CENTER or doctor/physician.
 - P321 Specific treatment (see on this label).
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- ◊ National regulations:
- ◊ Classification according to VbF: A III
- ◊ Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- ◊ **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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.
- 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.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- R10 Flammable.
- R36 Irritating to eyes.
- R36/38 Irritating to eyes and skin.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R65 Harmful: may cause lung damage if swallowed.

◊ **Department issuing MSDS:** 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 Organization

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 Harmonized 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)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)

◊ *** Data compared to the previous version altered.**