

## Safety data sheet

gemäß 1907/2006/EG, Artikel 31

Printing date 14.11.2013

Version 26

Revision: 14.11.2013

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

◊ **Product identifier**

- ◊ Trade name: **Citronenöl rekt. EuAB/ 01-3970-00**
- ◊ Article number: P0140035
- ◊ 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  
Flam. Liq. 3 H226 Flammable liquid and vapour.  
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.  
Aquatic Chronic 1 H410 Very 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  
Xn; Harmful

R65: Harmful: may cause lung damage if swallowed.

Xi; Irritant

R38: Irritating to skin.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R10: Flammable.

- ◊ 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



GHS02 GHS07 GHS08 GHS09

- ◊ Signal word Danger

- ◊ Hazard-determining components of labelling:

DIPENTENE  
beta-Pinene

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- 3,7-Dimethyl-2,6-octadien-1-al (cis und trans)  
alpha-Pinene
- ◊ **Hazard statements**
    - H226 Flammable liquid and vapour.
    - H315 Causes skin irritation.
    - H317 May cause an allergic skin reaction.
    - H304 May be fatal if swallowed and enters airways.
    - H410 Very toxic to aquatic life with long lasting effects.
  - ◊ **Precautionary statements**
    - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
    - P241 Use explosion-proof electrical/ventilating/lighting/equipment.
    - P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
    - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
    - P405 Store locked up.
    - 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**
- ◊ **Description: Mixture of substances listed below with nonhazardous additions.**
- ◊ **Dangerous components:**

|                   |  |           |
|-------------------|--|-----------|
| CAS: 138-86-3     | DIPENTENE  | 50-100%   |
| 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: 18172-67-3   | beta-Pinene  | 10-19,99% |
| EINECS: 242-060-2 | Xn R65; Xi R38; Xi R43   |           |
|                   | R10  |           |
|                   | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1B, H317                          |           |
| CAS: 5392-40-5    | 3,7-Dimethyl-2,6-octadien-1-al (cis und trans)   | 2,5-4,99% |
| EINECS: 226-394-6 | Xi R38; Xi R43   |           |
|                   | Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317  |           |
| CAS: 99-87-6      | p-Cymene   | <1%       |
| EINECS: 202-796-7 | Xn R65; N R51/53   |           |
|                   | R10  |           |
|                   | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411   |           |
| CAS: 586-62-9     | Terpinolene  | <1%       |
| EINECS: 209-578-0 | Xn R65; N R51/53   |           |
|                   | R10  |           |
|                   | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411   |           |
| CAS: 7785-26-4    | alpha-Pinene   | <1%       |
| EINECS: 232-077-3 | Xn R65; Xi R38; Xi R43   |           |
|                   | R10  |           |
|                   | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317                           |           |
| CAS: 99-86-5      | alpha-Terpinene  | <1%       |
| EINECS: 202-795-1 | Xn R22-65; N R51/53  |           |
|                   | Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H302                       |           |
- ◊ **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: CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- ◊ For safety reasons unsuitable extinguishing agents: Water with full jet
- ◊ 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).  
Dispose contaminated material as waste according to item 13.  
Treat with 2 % sodium hydroxide solution.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- ◊ 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:  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.
- ◊ 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.

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- ◊ Further information about storage conditions: Keep container tightly sealed.
- ◊ **Specific end use(s)** No further relevant information available.

### 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:**  
**138-86-3 DIPENTENE**  
MAK vgl. Abschn. IIb
- ◊ **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 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.
- ◊ **Flash point:** 50 °C
- ◊ **Flammability (solid, gaseous):** Not applicable.
- ◊ **Ignition temperature:**
- Decomposition temperature: Not determined.
- ◊ **Self-igniting:** Not determined.
- ◊ **Danger of explosion:** 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:** 0,851 g/cm<sup>3</sup>

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- ◊ *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:* No irritating effect.
  - ◊ *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.  
 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:* Very 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.

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Also poisonous for fish and plankton in water bodies.

Very 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

UN1993

◊ **UN proper shipping name**

◊ ADR

UN 1993 FLAMMABLE LIQUID, N.O.S. (DIPENTENE, beta-Pinene), ENVIRONMENTALLY HAZARDOUS

◊ IMDG

FLAMMABLE LIQUID, N.O.S. (DIPENTENE, beta-Pinene), MARINE POLLUTANT

◊ IATA

FLAMMABLE LIQUID, N.O.S. (DIPENTENE, beta-Pinene)

◊ **Transport hazard class(es)**

◊ ADR

◊ Class

3 (F1) Flammable liquids.

◊ Label

3

◊ IMDG, IATA

◊ Class

3 Flammable liquids.

◊ Label

3

◊ **Packing group**

◊ ADR, IMDG, IATA

III

◊ **Environmental hazards:**

Product contains environmentally hazardous substances: DIPENTENE

◊ Marine pollutant:

Yes

Symbol (fish and tree)

Symbol (fish and tree)

◊ Special marking (ADR):

Warning: Flammable liquids.

◊ **Special precautions for user**

◊ Danger code (Kemler):

30

◊ EMS Number:

F-E,S-E

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

Not applicable.

◊ **Transport/Additional information:**

◊ ADR

◊ Limited quantities (LQ)

5L

◊ Transport category

3

◊ Tunnel restriction code

D/E

◊ **UN "Model Regulation":**

UN1993, FLAMMABLE LIQUID, N.O.S. (DIPENTENE, beta-Pinene), ENVIRONMENTALLY HAZARDOUS, 3, III

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### 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



- ◊ Signal word *Danger*
- ◊ Hazard-determining components of labelling:  
DIPENTENE  
beta-Pinene  
3,7-Dimethyl-2,6-octadien-1-al (cis und trans)  
alpha-Pinene
- ◊ Hazard statements  
H226 Flammable liquid and vapour.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H304 May be fatal if swallowed and enters airways.  
H410 Very toxic to aquatic life with long lasting effects.
- ◊ Precautionary statements  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- ◊ National regulations:
- ◊ Classification according to VbF: A II
- ◊ Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- ◊ **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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.  
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.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.
- .....  
R10 Flammable.  
R22 Harmful if swallowed.  
R38 Irritating to skin.  
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

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◇ **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.**