

Safety data sheet
according to ChemV 2015 - SR 813.11

Printing date 21.01.2019

Version 571

Revision: 21.01.2019

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

◊ **1.1 Product identifier**

◊ Trade name: **Campher rac. EuAB / 06-2435**

◊ Article number: S0400870

◊ CAS Number:

76-22-2

◊ EC number:

200-945-0

◊ Registration number

-
01-2119966156-31-xxxx

◊ **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. Sol. 1 H228 Flammable solid.

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

STOT SE 2 H371 May cause damage to the lung. Route of exposure: Inhalation.

◊ **2.2 Label elements**

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

◊ Hazard pictograms



GHS02 GHS07 GHS08

◊ Signal word Danger

◊ Hazard-determining components of labelling:

Bornan-2-on

◊ Hazard statements

H228 Flammable solid.

H302+H332 Harmful if swallowed or if inhaled.

H371 May cause damage to the lung. Route of exposure: Inhalation.

◊ 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.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

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.

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◊ vPvB: Not applicable.

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. SECTION 3: Composition/information on ingredients

◊ **3.1 Chemical characterisation: Substances**

- ◊ CAS No. Description
76-22-2 Bornan-2-on
- ◊ Identification number(s)
- ◊ EC number: 200-945-0
- ◊ CAS-No: 76-22-2
- ◊ EINECS-No: 200-945-0

. SECTION 4: First aid measures

◊ **4.1 Description of first aid measures**

- ◊ **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- ◊ **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- ◊ **After skin contact:** Generally the product does not irritate the skin.
- ◊ **After eye contact:** Rinse opened eye for several minutes under running water.
- ◊ **After swallowing:** 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** During heating or in case of fire poisonous gases are produced.
- ◊ **5.3 Advice for firefighters**
- ◊ Protective equipment: Mouth respiratory protective device.

. SECTION 6: Accidental release measures

◊ **6.1 Personal precautions, protective equipment and emergency procedures**

- Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- ◊ **6.2 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.
- ◊ **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Treat with 2 % sodium hydroxide solution.
Ensure adequate ventilation.
- ◊ **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.

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. SECTION 7: Handling and storage

◊ **7.1 Precautions for safe handling**

Thorough dedusting.

Prevent formation of dust.

◊ **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect from heat.

Protect against electrostatic charges.

Keep respiratory protective device available.

◊ **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:** 4.1 B

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

. 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:**

76-22-2 Bornan-2-on

MAK (Switzerland) Long-term value: 13 mg/m³, 2 ppm

◊ **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.

Store protective clothing separately.

◊ **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

◊ **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.

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:** Not required.

. SECTION 9: Physical and chemical properties

◊ **9.1 Information on basic physical and chemical properties**

◊ **General Information**

◊ **Appearance:**

Form: Crystalline

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Colour:	Not determined.
◊ Odour:	Characteristic
◊ Odour threshold:	Not determined.
◊ pH-value:	Not applicable.
◊ Melting point/freezing point:	174 °C
◊ Flash point:	65 °C
◊ Flammability (solid, gas):	Highly flammable.
◊ Ignition temperature:	460 °C
◊ Decomposition temperature:	Not determined.
◊ Auto-ignition temperature:	Not determined.
◊ Explosive properties:	Not determined.
◊ Explosion limits:	
Lower:	0,6 Vol %
Upper:	4,5 Vol %
◊ Density at 20 °C:	1 g/cm ³
◊ Bulk density:	2 kg/m ³
◊ Relative density	Not determined.
◊ Vapour density	Not applicable.
◊ Evaporation rate	Not applicable.
◊ Solubility in / Miscibility with water:	Not miscible or difficult to mix.
◊ Partition coefficient: n-octanol/water:	Not determined.
◊ VOC (EC)	0,00 %
◊ 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:** 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**
Harmful if swallowed or if inhaled.
- ◊ **LD/LC50 values relevant for classification:**
ATE (Acute Toxicity Estimates)
Oral LD50 1.310 mg/kg (mouse)
Inhalative LC50 1,5 mg/l
76-22-2 Bornan-2-on
Oral LD50 1.310 mg/kg (mouse)
Dermal LD50 >5.000 mg/kg (rabbit)
Inhalative LC50 1,5 mg/l (ATE)

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- ◊ **Primary irritant effect:**
- ◊ **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- ◊ **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- ◊ **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- ◊ **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**
May cause damage to the lung. Route of exposure: Inhalation.
- ◊ **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:** Harmless to fish up to the tested concentration
- ◊ **Additional ecological information:**
- ◊ **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- ◊ **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 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** UN2717
- ◊ **14.2 UN proper shipping name**
- ◊ **ADR, IMDG, IATA** CAMPHOR, synthetic
- ◊ **14.3 Transport hazard class(es)**
- ◊ **ADR, IMDG, IATA** 4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
- ◊ **Class** 4.1
- ◊ **Label**
- ◊ **14.4 Packing group**
- ◊ **ADR, IMDG, IATA** III
- ◊ **14.5 Environmental hazards:**
- ◊ **Marine pollutant:** No

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<ul style="list-style-type: none"> ◊ 14.6 Special precautions for user ◊ Danger code (Kemler): ◊ EMS Number: ◊ Stowage Category ◊ 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code ◊ Transport/Additional information: <hr/> <ul style="list-style-type: none"> ◊ ADR ◊ Limited quantities (LQ) ◊ Excepted quantities (EQ) <hr/> <ul style="list-style-type: none"> ◊ Transport category ◊ Tunnel restriction code <hr/> <ul style="list-style-type: none"> ◊ IMDG ◊ Limited quantities (LQ) ◊ Excepted quantities (EQ) <hr/> <ul style="list-style-type: none"> ◊ UN "Model Regulation": 	<p>Warning: Flammable solids, self-reactive substances and solid desensitised explosives.</p> <p>40 F-A, S-I A</p> <p>Not applicable.</p> <p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p> <p>3 E</p> <p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g UN 2717 CAMPHOR, SYNTHETIC, 4.1, III</p>
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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 substance is classified and labelled according to the CLP regulation.
 - ◊ Hazard pictograms
- 



GHS02 GHS07 GHS08
- ◊ Signal word Danger
 - ◊ Hazard-determining components of labelling:
 - Bornan-2-on
 - ◊ Hazard statements
 - H228 Flammable solid.
 - H302+H332 Harmful if swallowed or if inhaled.
 - H371 May cause damage to the lung. Route of exposure: Inhalation.
 - ◊ 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.
 - P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
 - ◊ Directive 2012/18/EU
 - ◊ Named dangerous substances - ANNEX I Substance is not listed.
 - ◊ **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.

- ◊ Department issuing SDS: 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 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
 - 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. Sol. 1: Flammable solids – Category 1
 - Acute Tox. 4: Acute toxicity – Category 4
 - STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

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