Camphene ≥95 %



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

1.1 Product identifier

| Identification of the substance | Camphene ≥95 % |
|---------------------------------|-----------------------|
| Article number | 7558 |
| EC number | 201-234-8 |
| CAS number | 79-92-5 |

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|--|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Cat- egory | Hazard class and category | Hazard statement |
|---------|---|---------------|---------------------------|---------------------|
| 2.7 | Flammable solid | 1 | Flam. Sol. 1 | H228 |
| 3.3 | Serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |
| 4.1A | Hazardous to the aquatic environment - acute hazard | 1 | Aquatic Acute 1 | H400 |

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| Section | Hazard class | Cat- egory | Hazard class and category | Hazard statement |
|---------|---|---------------|---------------------------|---------------------|
| 4.1C | Hazardous to the aquatic environment - chronic hazard | 1 | Aquatic Chronic 1 | H410 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS02, GHS07, GHS09



Hazard statements

| H228 | Flammable solid |
|------|--|
| H319 | Causes serious eye irritation |
| H410 | Very toxic to aquatic life with long lasting effects |

Precautionary statements

Precautionary statements - prevention

| P210 | Keep away from heat, sparks, open flames, hot surfaces. No smoking |
|------|--|
| P273 | Avoid release to the environment |
| P280 | Wear protective gloves/eye protection |

Precautionary statements - response

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

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

| Name of substance | Camphene |
|-------------------|-------------------------------------|
| Molecular formula | $C_{10}H_{16}$ |
| Molar mass | 136,2 ^g / _{mol} |
| CAS No | 79-92-5 |
| EC No | 201-234-8 |

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| Substance, Specific Conc. Limits, M-factors, ATE | | | | |
|---|-----------------------------|--|--|--|
| Specific Conc. Limits M-Factors ATE Exposure rout | | | | |
| - | - M-factor (chronic) = 10 - | | | |

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

- **4.2 Most important symptoms and effects, both acute and delayed** Irritation, Spasms
- **4.3 Indication of any immediate medical attention and special treatment needed** none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water, foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)



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5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe dust.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid dust formation.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place. Keep in a cool place.

Incompatible substances or mixtures

Observe hints for combined storage.



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Consideration of other advice:

Specific designs for storage rooms or vessels Recommended storage temperature: 2 – 8 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Human health values

Relevant DNELs and other threshold levels

| Endpoint | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|----------|-------------------------|------------------------------------|-------------------|----------------------------|
| DNEL | 110,2 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| DNEL | 110,2 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| DNEL | 0,21 mg/kg bw/ day | human, dermal | worker (industry) | chronic - systemic effects |
| DNEL | 1,25 mg/kg bw/ day | human, dermal | worker (industry) | acute - systemic effects |

Environmental values

Relevant PNECs and other threshold levels

| End- point | Threshold level | Organism | Environmental com- partment | Exposure time |
|---------------|-------------------------------------|-----------------------|---------------------------------|------------------------------|
| PNEC | 0,001 ^{mg} / _l | aquatic organisms | freshwater | short-term (single instance) |
| PNEC | 0 ^{mg} / _l | aquatic organisms | marine water | short-term (single instance) |
| PNEC | 10 ^{mg} / _l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| PNEC | 0,026 ^{mg} / _{kg} | aquatic organisms | freshwater sediment | short-term (single instance) |
| PNEC | 0,003 ^{mg} / _{kg} | aquatic organisms | marine sediment | short-term (single instance) |
| PNEC | 0,021 ^{mg} / _{kg} | terrestrial organisms | soil | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





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Use safety goggle with side protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| Physical state | solid |
|--|---|
| Form | crystalline |
| Colour | colourless - whitish |
| Odour | characteristic |
| Melting point/freezing point | 43 – 46 °C (ECHA) |
| Boiling point or initial boiling point and boiling range | 156 – 160 °C at 1.013 mbar (ECHA) |
| Flammability | flammable solid in accordance with GHS criteria |

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| Lower and upper explosion limitnot determinedFlash point29,5 °C at 1.013 hPa (ECHA)Auto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)5,5 (22 °C) (aqueous solution of the substance)Kinematic viscositynot relevantDynamic viscosity1,6 mPa s at 50 °CSolubility(ies)(poorly soluble (1 till < 10 mg/l))Partition coefficient4,22 (pH value: 7,2, 37 °C) (ECHA)Partition coefficient n-octanol/water (log value):4,22 (pH value: 7,2, 37 °C) (ECHA)Soil organic carbon/water (log KOC)3,081 (ECHA)Vapour pressure3,8 hPa at 20 °CDensity and/or relative densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parameters Oxidising propertiesnoneInformation with regard to physical hazard classes:There is no additional information. | icle | e number: 7558 | |
|---|------|---|--|
| Auto-ignition temperaturenot determinedDecomposition temperaturenot relevantPH (value)5,5 (22 °C) (aqueous solution of the substance)Kinematic viscositynot relevantDynamic viscosity1,6 mPa s at 50 °CSolubility(ies)(poorly soluble (1 till < 10 mg/l)) | | Lower and upper explosion limit | not determined |
| Decomposition temperaturenot relevantpH (value)5,5 (22 °C) (aqueous solution of the substance)Kinematic viscositynot relevantDynamic viscosity1,6 mPa s at 50 °CSolubility(ies)(poorly soluble (1 till < 10 mg/l)) | | Flash point | 29,5 °C at 1.013 hPa (ECHA) |
| pH (value)5,5 (22 °C) (aqueous solution of the substance) not relevantDynamic viscositynot relevantDynamic viscosity1,6 mPa s at 50 °CSolubility(ies) Water solubility(poorly soluble (1 till < 10 mg/l)) | | Auto-ignition temperature | not determined |
| Kinematic viscositynot relevantDynamic viscosity1,6 mPa s at 50 °CSolubility(ies)(poorly soluble (1 till < 10 mg/l)) | | Decomposition temperature | not relevant |
| Dynamic viscosity1,6 mPa s at 50 °CSolubility(ies) Water solubility(poorly soluble (1 till < 10 mg/l)) | | pH (value) | 5,5 (22 °C) (aqueous solution of the substance) |
| Solubility(ies) (poorly soluble (1 till < 10 mg/l)) | | Kinematic viscosity | not relevant |
| Water solubility(poorly soluble (1 till < 10 mg/l))Partition coefficient Partition coefficient n-octanol/water (log value): Soil organic carbon/water (log KOC)4,22 (pH value: 7,2, 37 °C) (ECHA) 3,081 (ECHA)Vapour pressure3,8 hPa at 20 °CDensity and/or relative density Density0,87 9/cm³ at 20 °C (ECHA) information on this property is not availableParticle characteristicsNo data available.Other safety parameters Oxidising propertiesnoneOther information Liformation with regard to physical hazard classes:There is no additional information. | | Dynamic viscosity | 1,6 mPa s at 50 °C |
| Water solubility(poorly soluble (1 till < 10 mg/l))Partition coefficient Partition coefficient n-octanol/water (log value): Soil organic carbon/water (log KOC)4,22 (pH value: 7,2, 37 °C) (ECHA) 3,081 (ECHA)Vapour pressure3,8 hPa at 20 °CDensity and/or relative density Density0,87 9/cm³ at 20 °C (ECHA) information on this property is not availableParticle characteristicsNo data available.Other safety parameters Oxidising propertiesnoneOther information Liformation with regard to physical hazard classes:There is no additional information. | | Solubility/ies) | |
| Partition coefficientPartition coefficient n-octanol/water (log value):4,22 (pH value: 7,2, 37 °C) (ECHA)Soil organic carbon/water (log KOC)3,081 (ECHA)Vapour pressure3,8 hPa at 20 °CDensity and/or relative density0,87 9/cm³ at 20 °C (ECHA)Density0,87 9/cm³ at 20 °C (ECHA)Relative vapour densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parameters Oxidising propertiesnoneOther informationInformation with regard to physical hazard classes: | | · | (poorly soluble (1 till < 10 mg/l)) |
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| Soil organic carbon/water (log KOC)3,081 (ECHA)Vapour pressure3,8 hPa at 20 °CDensity and/or relative density Density0,87 g/cm³ at 20 °C (ECHA)Relative vapour densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parameters Oxidising propertiesnoneOther information Linformation with regard to physical hazard classes:There is no additional information. | | Partition coefficient | |
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| Density and/or relative density 0,87 g/cm³ at 20 °C (ECHA) Density 0,87 g/cm³ at 20 °C (ECHA) Relative vapour density information on this property is not available Particle characteristics No data available. Other safety parameters none Oxidising properties none Other information There is no additional information. | | | |
| Density0,87 g/cm³ at 20 °C (ECHA)Relative vapour densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parametersnoneOxidising propertiesnoneOther informationThere is no additional information. | | Vapour pressure | 3,8 hPa at 20 °C |
| Density0,87 g/cm³ at 20 °C (ECHA)Relative vapour densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parametersnoneOxidising propertiesnoneOther informationThere is no additional information. | | Density and/or relative density | |
| Relative vapour densityinformation on this property is not availableParticle characteristicsNo data available.Other safety parametersNo data available.Oxidising propertiesnoneOther informationInformation with regard to physical hazard classes: | | | 0.87 ^g / _{cm³} at 20 °C (ECHA) |
| Particle characteristicsNo data available.Other safety parameters | | - | |
| Other safety parametersOxidising propertiesnoneOther informationInformation with regard to physical hazard classes: | | | |
| Oxidising properties none Other information Information with regard to physical hazard classes: | | Particle characteristics | No data available. |
| Oxidising properties none Other information Information with regard to physical hazard classes: | | | |
| Other information Information with regard to physical hazard classes: There is no additional information. | | Other safety parameters | |
| Information with regard to physical hazard There is no additional information. classes: | | Oxidising properties | none |
| classes: | 2 | Other information | |
| Other safety characteristics: There is no additional information. | | Information with regard to physical hazard classes: | There is no additional information. |
| | | Other safety characteristics: | There is no additional information. |

SECTION 10: Stability and reactivity

10.1 Reactivity

9.2

It's a reactive substance. Risk of ignition. The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

If heated

Risk of ignition.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

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10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Strong alkali

- **10.4 Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- **10.5 Incompatible materials** There is no additional information.
- 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

gastrointestinal complaints

• If in eyes

Causes serious eye irritation

• If inhaled

Data are not available.



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• If on skin

Data are not available.

Other information

Other adverse effects: Spasms

11.2 Endocrine disrupting properties Not listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

| Aquatic toxicity (acute) | | | | |
|----------------------------|-------------------------------------|-----------------------|--------|------------------|
| Endpoint | Value | Species | Source | Exposure time |
| LC50 | 0,72 ^{mg} / _l | fish | ECHA | 96 h |
| EC50 | 0,72 ^{mg} / _l | aquatic invertebrates | ECHA | 48 h |
| ErC50 | >1.000 ^{mg} / _l | algae | ECHA | 72 h |
| Aquatic toxicity (chronic) | | | | |
| Endpoint | Value | Species | Source | Exposure time |

microorganisms

ECHA

Biodegradation

EC50

Not readily biodegradable.

12.2 **Process of degradability**

Theoretical Oxygen Demand: 3,288 ^{mg}/_{mg} Theoretical Carbon Dioxide: 3,23 ^{mg}/_{mg}

12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

>1.000 mg/1

| n-octanol/water (| log KOW) | 4,22 (pH value: 7,2, 37 °C) (ECHA) |
|-------------------|----------|------------------------------------|
|-------------------|----------|------------------------------------|

12.4 Mobility in soil

| Henry's law constant | 0,161 ^{Pa m³} / _{mol} at 25 °C (ECHA) |
|--|---|
| The Organic Carbon normalised adsorption coefficient | 3,081 (ECHA) |

12.5 Results of PBT and vPvB assessment

Data are not available.





3 h

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12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

| 14.1 | UN number or ID number | |
|------|----------------------------|----------------------------------|
| | ADRRID | UN 1325 |
| | IMDG-Code | UN 1325 |
| | ICAO-TI | UN 1325 |
| 14.2 | UN proper shipping name | |
| | ADRRID | FLAMMABLE SOLID, ORGANIC, N.O.S. |
| | IMDG-Code | FLAMMABLE SOLID, ORGANIC, N.O.S. |
| | ICAO-TI | Flammable solid, organic, n.o.s. |
| | Technical name | Camphene |
| 14.3 | Transport hazard class(es) | |
| | ADRRID | 4.1 |
| | IMDG-Code | 4.1 |
| | ICAO-TI | 4.1 |
| 14.4 | Packing group | |
| | ADRRID | II |
| | | |



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| Camp | onene 295 % | |
|---------|---|---|
| article | e number: 7558 | |
| | IMDG-Code | II |
| | ICAO-TI | II |
| 14.5 | Environmental hazards | hazardous to the aquatic environment |
| 14.6 | Special precautions for user | |
| | Provisions for dangerous goods (ADR) should be | e complied within the premises. |
| 14.7 | Maritime transport in bulk according to IMO | instruments |
| | The cargo is not intended to be carried in bulk. | |
| 14.8 | Information for each of the UN Model Regula | itions |
| | Transport of dangerous goods by road, rail an information | nd inland waterway (ADR/RID/ADN) - Additional |
| | Proper shipping name | FLAMMABLE SOLID, ORGANIC, N.O.S. |
| | Particulars in the transport document | UN1325, FLAMMABLE SOLID, ORGANIC, N.O.S., (Camphene), 4.1, II, (E), environmentally hazard- ous |
| | Classification code | F1 |
| | Danger label(s) | 4.1, "Fish and tree" |
| | | |
| | Environmental hazards | Yes (hazardous to the aquatic environment) |
| | Special provisions (SP) | 274 |
| | Excepted quantities (EQ) | E2 |
| | Limited quantities (LQ) | 1 kg |
| | Transport category (TC) | 2 |
| | Tunnel restriction code (TRC) | E |
| | Hazard identification No | 40 |
| | Emergency Action Code | 1Z |
| | Regulations concerning the International Can information | rriage of Dangerous Goods by Rail (RID)Additional |
| | Classification code | F1 |
| | Danger label(s) | 4.1 Fish and tree |
| | | |
| | Environmental hazards | Yes Hazardous to water |
| | Special provisions (SP) | 274 |
| | Excepted quantities (EQ) | E2 |
| | Limited quantities (LQ) | 1 kg |
| | Transport category (TC) | 2 |
| | | |

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| Hazard identification No | 40 |
|--|--|
| International Maritime Dangerous Goods Cod | e (IMDG) - Additional information |
| Proper shipping name | FLAMMABLE SOLID, ORGANIC, N.O.S. |
| Particulars in the shipper's declaration | UN1325, FLAMMABLE SOLID, ORGANIC, N.O.S., (Camphene), 4.1, II, 29,5°C c.c., MARINE POLLUT- ANT |
| Marine pollutant | Yes (hazardous to the aquatic environment) |
| Danger label(s) | 4.1, "Fish and tree" |
| | |
| Special provisions (SP) | 274 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 1 kg |
| EmS | F-A, S-G |
| Stowage category | В |
| International Civil Aviation Organization (ICA | O-IATA/DGR) - Additional information |
| Proper shipping name | Flammable solid, organic, n.o.s. |
| Particulars in the shipper's declaration | UN1325, Flammable solid, organic, n.o.s., (Camphene), 4.1, II |
| Environmental hazards | Yes (hazardous to the aquatic environment) |
| Danger label(s) | 4.1 |
| | |
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E2 |
| Limited quantities (LQ) | 5 kg |
| | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

| 2012/18/EU (Seveso III) | | | | |
|-------------------------|---|---|--|-------|
| Νο | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements | | Notes |
| E1 | environmental hazards (hazardous to the aquatic en- vironment, cat. 1) | 100 200 | | 56) |

Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

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Deco-Paint Directive VOC content 100 % 870 ^g/₁

Industrial Emissions Directive (IED)

| VOC content | 100 % |
|-------------|---------------------------------|
| VOC content | 870 ^g / _l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) | | | |
|---|------------------------|--------|----|
| Name of substance | Name acc. to inventory | CAS No | No |
| Camphene | flammable / pyrophoric | | 40 |

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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National inventories

| Country | Inventory | Status |
|---------|------------|---------------------|
| AU | AIIC | substance is listed |
| CA | DSL | substance is listed |
| CN | IECSC | substance is listed |
| EU | ECSI | substance is listed |
| EU | REACH Reg. | substance is listed |
| JP | CSCL-ENCS | substance is listed |
| KR | KECI | substance is listed |
| MX | INSQ | substance is listed |
| NZ | NZIoC | substance is listed |
| PH | PICCS | substance is listed |
| TW | TCSI | substance is listed |
| US | TSCA | substance is listed |

Legend

| AIIC | Australian Inventory of Industrial Chemicals |
|------------|---|
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|--|---|--------------------------|
| 2.1 | | Classification acc. to GHS: change in the listing (table) | yes |
| 2.1 | | The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of watercourses. | yes |
| 2.2 | Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger | | yes |
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |

acc. to Regulation (EC) No. 1907/2006 (REACH)

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Camphene ≥95 %

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| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|---|--|--------------------------|
| 2.2 | | Labelling of packages where the contents do not exceed 125 ml: change in the listing (table) | yes |
| 2.3 | Other hazards: There is no additional information. | Other hazards | yes |
| 2.3 | | Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations | |
|-----------|--|--|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways) | |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road) | |
| ATE | Acute Toxicity Estimate | |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) | |
| DGR | Dangerous Goods Regulations (see IATA/DGR) | |
| DNEL | Derived No-Effect Level | |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval | |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union) | |
| EINECS | European Inventory of Existing Commercial Chemical Substances | |
| ELINCS | European List of Notified Chemical Substances | |
| EmS | Emergency Schedule | |
| ErC50 | = EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control | |
| GB REACH | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) | |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions | |
| IATA | International Air Transport Association | |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) | |
| ICAO | International Civil Aviation Organization | |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air | |
| IMDG | International Maritime Dangerous Goods Code | |
| IMDG-Code | International Maritime Dangerous Goods Code | |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval | |
| M-factor | Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present | |

acc. to Regulation (EC) No. 1907/2006 (REACH)



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| Abbr. | Descriptions of used abbreviations | |
|-------|--|--|
| NLP | No-Longer Polymer | |
| PBT | Persistent, Bioaccumulative and Toxic | |
| PNEC | Predicted No-Effect Concentration | |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals | |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail) | |
| VOC | Volatile Organic Compounds | |
| vPvB | Very Persistent and very Bioaccumulative | |

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text |
|------|---|
| H228 | Flammable solid. |
| H319 | Causes serious eye irritation. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.