



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

1.1 Product identifier

Trade name: δ-3-CARENE ROTICHROM® GC

Article number: 3572

CAS Number:

13466-78-9

EC number:

236-719-3

Registration number

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Application of the substance / the mixture

Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Carl Roth GmbH + Co. KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

E-Mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

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.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Skin Irrit. 2 H315 Causes skin irritation.

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

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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.

R10-52/53: Flammable. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(Contd. on page 2)

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 1)

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 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.

H412 Harmful 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.

P280 Wear protective gloves.

P233 Keep container tightly closed.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331 Do NOT induce vomiting.

Additional information:

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2.3 Other hazards

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description

13466-78-9 3,7,7-trimethylbicyclo[4.1.0]hept-3-ene

Identification number(s)

EC number: 236-719-3

Formula: C₁₀H₁₆

Molar mass [g/mol]: 136,24

(Contd. on page 3)

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 2)

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; if there is any trouble seek medical help.

After skin contact:

Rinse with water

Seek medical treatment in case of complaints.

After eye contact:

Rinse opened eye for 10 minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink water.

Risk of aspiration!

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects

Allergic reactions

Coughing

Headache

Disziness

Nausea

Vomiting

Hazards

Risk of corneal opacity.

Danger of disturbed cardiac rhythm.

Risk of aspiration

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, powder, foam or water spray.

For safety reasons unsuitable extinguishing agents:

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Forms explosive mixtures with air at elevated temperatures.

In the event of fire development of hazardous combustion gases or vapours possible.

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

(Contd. on page 4)

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 3)

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained respiratory protective device.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Additional information Prevent fire-fighting water from entering surface water or groundwater.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Do not inhale vapours. Avoid contact with the eyes and skin.

Keep away from ignition sources.

6.2 Environmental precautions

Do not allow product to reach sewage system or any water course.

Avoid penetration into drainage system because of danger of explosion.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. Rotisorb® Art.-Nr. 1710.1).

Dispose contaminated material as waste according to item 13.

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.

Prevent formation of aerosols.

Keep containers, equipment and working place clean.

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:

Store away from foodstuffs.

Further information about storage conditions:

Keep container tightly sealed.

Protect from heat and direct sunlight.

Recommended storage temperature: According to product specification.**7.3 Specific end use(s)**

No further relevant information available.

(Contd. on page 5)

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 4)

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: Not required.

Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Do not eat, drink or smoke while working.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:



Required when vapours/aerosols are generated. Filter A.

When selecting your respiratory unit: Consider the "Rules for the use of respiratory protection equipment" (BGR190).

Protection of hands:



Protective gloves

Check protective gloves prior to each use for their proper condition.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Nitrile rubber, thickness: 0.35 mm

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

Value for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, thickness: 0.35 mm

Value for the permeation: Level ≥ 6

(Contd. on page 6)

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 5)

Eye protection:

Tightly sealed goggles

Body protection:

Antistatic and flame-retardant clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	No information available.

pH-value: No information available.

Change in condition

Melting point/Melting range:	No information available.
Boiling point/Boiling range:	166-170 °C

Flash point: 43 °C (c.c.)

Flammability (solid, gaseous): No information available

Ignition temperature: No information available

Decomposition temperature: No information available

Self-igniting: No information available

Danger of explosion: Not classified als explosive.

Explosion limits:

Lower:	No information available.
Upper:	No information available.

Oxidizing properties: No information available.

Vapour pressure at 20 °C: 2.7 hPa

Density at 20 °C: 0.86 g/cm³

Vapour density No information available

Evaporation rate No information available

Solubility in / Miscibility with water:

Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): 4.38 log POW (exp. TOXNET)

Viscosity:

Dynamic:	No information available.
Kinematic at 40 °C:	< 7 mm ² /s

9.2 Other information

No further relevant information available.

(Contd. on page 7)



Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 6)

SECTION 10: Stability and reactivity

10.1 Reactivity

Fumes can combine with air to form an explosive mixture.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Strong reaction possible with:

mineral acids

10.4 Conditions to avoid

Heating

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.5 Incompatible materials:

No information available.

10.6 Hazardous decomposition products:

In case of fire: see item 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

Oral	LD ₅₀	4800 mg/kg (rat) (TOXNET)
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Primary irritant effect:

on the skin:

Irritant to skin and mucous membranes.

Danger through skin adsorption.

on the eye:

Severe irritation.

Risk of corneal opacity.

after inhalation:

After inhalation of vapors:

Irritations in the respiratory tract, coughing, absorption.

Headache, dizziness

Sensitisation:

Sensitisation possible through skin contact.

CMR effects:

Germ cell mutagenicity:

No information available.

Carcinogenicity:

No information available.

Reproductive toxicity:

No information available.

Aspiration hazard:

May be fatal if swallowed and enters airways.

(Contd. on page 8)

**Trade name: δ-3-CARENE ROTICHROM® GC**

(Contd. of page 7)

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:

After swallowing irritations in the mouth, throat, oesophagus and gastrointestinal tract.

gastric pain

Nausea

Vomiting

Systemic effects:

Ataxia

cardiac arrhythmia

Coma

Damage of the kidneys.

Further information:

Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:**

Quantitative data on the ecological effect of this product are not available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water an accumulation in organisms is possible.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:**Remark:**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do not allow to enter waters, waste water, or soil!

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**Waste treatment methods****Recommendation**

This material and its container must be disposed of as hazardous waste.

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31



Printing date 22.08.2014

Version number 2

Revision: 22.08.2014

Trade name: δ-3-CARENE ROTICHROM® GC

(Contd. of page 8)

Uncleaned packaging:**Recommendation:**

Disposal according to official regulations.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA

UN2319

14.2 UN proper shipping name

ADR

2319 TERPENE HYDROCARBONS, N.O.S. (3,7,7-trimethylbicyclo[4.1.0]hept-3-ene)

IMDG, IATA

TERPENE HYDROCARBONS, N.O.S. (3,7,7-trimethylbicyclo[4.1.0]hept-3-ene)

14.3 Transport hazard class(es)

ADR, IMDG, IATA

Class
Label3 Flammable liquids.
3**14.4 Packing group**

ADR, IMDG, IATA

III

14.5 Environmental hazards:**Marine pollutant:**

No

14.6 Special precautions for user**Danger code (Kemler):**

Warning: Flammable liquids.

EMS Number:

30

F-E,S-D

14.7 Transport in bulk according to Annex II of MARPOL73/78 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

E

IMDG**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

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31



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(Contd. of page 9)

UN "Model Regulation":

UN2319, TERPENE HYDROCARBONS, N.O.S.
(3,7,7-trimethylbicyclo[4.1.0]hept-3-ene), 3, III

SECTION 15: Regulatory information

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

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Breakdown regulations:

Waterhazard class:

Water hazard class 2 (Assessment by list): hazardous for water.

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 MSDS: Department: Health, Safety and Environment

Contact: Frau Weckemann

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)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50*: Lethal Dose, 50 percent (Not relevant for classification)

LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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