

1 Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**Trade name: (-)-Fenchone ROTICHROM® GC

Article number: 9377

CAS Number:

7787-20-4

EC number:

232-107-5

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

No further relevant information available.

Application of the substance / the preparation

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

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.

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

R10: Flammable.

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

Signal word Warning

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Hazard statements

H226 Flammable liquid and vapour.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Additional information:

-

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.

3 Composition/information on ingredients**3.1 Chemical characterization: Substances****CAS No. Description**

7787-20-4 1,3,3-trimethylnorbornan-2-one

Identification number(s)

EC number: 232-107-5

Formula: C₁₀H₁₆O

Molar mass [g/mol]: 152,24

4 First aid measures**4.1 Description of first aid measures****General information:**

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

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for 10 minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and drink a glass of water. Do not induce vomiting.

If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms.

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4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**Use fire extinguishing methods suitable to surrounding conditions.
CO₂, powder, foam.**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

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

5.3 Advice for firefighters**Protective equipment:**Wear self-contained respiratory protective device.
Wear fully protective suit.**6 Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**Keep away from ignition sources.
Do not breathe vapour/spray.
Avoid contact with the eyes and skin.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation**6.2 Environmental precautions**

Do not allow to enter sewers/ground water or penetrate the soil.

6.3 Methods and material for containment and cleaning upAbsorb with liquid-binding material (e.g. Rotisorb® Art.-Nr. 1710.1).
Dispose of the material collected according to regulations.**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.**7 Handling and storage****7.1 Precautions for safe handling**Do not spray on an open flame or other ignition source.
Handling corresponding to laboratory safety guidelines.
Ensure good ventilation/exhaustion at the workplace.

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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:

Store in a cool location.

Information about storage in one common storage facility:

Store away from foodstuffs.

Further information about storage conditions:

Protect from exposure to the light.

Store in cool, dry conditions in well sealed receptacles.

Recommended storage temperature:

+4 °C

7.3 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.

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, smoke or sniff while working.

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 eyes and skin.

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:



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Required when vapours/aerosols are generated. Filter A (colour code: brown).

Protection of hands:

Protective gloves

Due to missing tests no recommendation to the glove material can be given for the product.

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.

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

Body protection:

Protective work clothing

9 Physical and chemical properties

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

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

pH-value: Not determined.

Change in condition

Melting point/Melting range:	5 °C
Boiling point/Boiling range:	192-194 °C

Flash point: 52 °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: Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

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Explosion limits:	
Lower:	No information available.
Upper:	No information available.
Oxidizing properties:	No information available.
Vapour pressure:	Not determined.
Density at 20 °C:	0.948 g/cm ³
Relative density	No Information available.
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):	No information available
Viscosity:	
Dynamic:	No information available.
Kinematic:	No information available.
9.2 Other information	No further relevant information available.

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

No information available.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials:

Strong oxidizing agents.

10.6 Hazardous decomposition products:

In case of fire: see item 5.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

LD/LC50 values relevant for classification:

Quantitative data on the toxicity of this product are not available.

Primary irritant effect:

on the skin:

No information available.

on the eye:

No information available.

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after inhalation:

No information available.

Sensitization:

No sensitizing effects known.

CMR effects:**Germ cell mutagenicity:**

No information available.

Carcinogenicity:

No information available.

Reproductive toxicity:

No information available.

Aspiration hazard:

No information available.

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:

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

Further information:

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

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

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:**Remark:**

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.

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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.

Uncleaned packaging:

Recommendation:

Disposal according to official regulations.

14 Transport information

14.1 UN-Number

ADR, IMDG, IATA UN1224

14.2 UN proper shipping name

ADR 1224 KETONES, LIQUID, N.O.S. (1,3,3-trimethylnorbornan-2-one)
IMDG, IATA KETONES, LIQUID, N.O.S. (1,3,3-trimethylnorbornan-2-one)

14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class 3 Flammable liquids.
Label 3

14.4 Packing group

ADR, IMDG, IATA III

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Warning: Flammable liquids.
Danger code (Kemler): 30
EMS Number: 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
Transport category 3
Tunnel restriction code D/E
Remarks: Not subject to transport regulations.

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Safety data sheet

according to Regulation (EC) No. 1907/2006



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UN "Model Regulation":

UN1224, KETONES, LIQUID, N.O.S. (1,3,3-trimethylnorbornan-2-one), 3, III

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.

Waterhazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

15.2 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.

Department issuing MSDS: Department: Health, Safety and Environment

Contact: Herr Heine

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 Organization

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

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