

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## $\beta$ -Pinene ROTICHROM® GC

article number: 5172  
Version: 1.0 en

date of compilation: 2015-11-26

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

#### 1.1 Product identifier

Identification of the substance	$\beta$ -Pinene
Article number	5172
Registration number (REACH)	This information is not available.
EC number	204-872-5
CAS number	127-91-3

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

**Identified uses:** laboratory chemical

#### 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](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

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

**e-mail (competent person)** : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

#### 1.4 Emergency telephone number

Emergency information service **Poison Centre Munich: +49/(0)89 19240**

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.6	flammable liquid	(Flam. Liq. 3)	H226
3.2	skin corrosion/irritation	(Skin Irrit. 2)	H315
3.4S	skin sensitisation	(Skin Sens. 1B)	H317
3.10	aspiration hazard	(Asp. Tox. 1)	H304
4.1A	hazardous to the aquatic environment - acute hazard	(Aquatic Acute 1)	H400
4.1C	hazardous to the aquatic environment - chronic hazard	(Aquatic Chronic 1)	H410

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### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## 2.2 Label elements

### Labelling according to Regulation (EC) No 1272/2008 (CLP)

#### Signal word

**Danger**

#### Pictograms



#### Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

##### Precautionary statements - prevention

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

##### Precautionary statements - response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P331	Do NOT induce vomiting.

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P331	Do NOT induce vomiting.

## 2.3 Other hazards

There is no additional information.

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### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Name of substance	$\beta$ -Pinene
EC number	204-872-5
CAS number	127-91-3
Molecular formula	C <sub>10</sub> H <sub>16</sub>
Molar mass	136,2 g/mol

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures



##### General notes

Take off contaminated clothing.

##### Following inhalation

Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

##### Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

##### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

##### Following ingestion

Aspiration hazard. Do NOT induce vomiting. Call a physician immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

Irritation, Allergic reactions, Nausea, Aspiration hazard

#### 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 fire-fighting measures to the fire surroundings  
water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

water jet

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### **5.2 Special hazards arising from the substance or mixture**

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

#### **Hazardous combustion products**

In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

### **5.3 Advice for firefighters**

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**

Do not breathe vapour/spray. Avoid contact with skin and eyes. Avoidance of ignition sources.

### **6.2 Environmental precautions**

Keep away from drains, surface and ground water. Explosive properties.

### **6.3 Methods and material for containment and cleaning up**

#### **Advices on how to contain a spill**

Covering of drains.

#### **Advices on how to clean up a spill**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

#### **Other information relating to spills and releases**

Place in appropriate containers for disposal. Ventilate affected area.

#### **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**

Provide adequate ventilation. Avoid exposure. When not in use, keep containers tightly closed.

#### **• Measures to prevent fire as well as aerosol and dust generation**



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

#### **Advice on general occupational hygiene**

When using do not smoke. Wash hands before breaks and after work.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight.

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**Incompatible substances or mixtures**

Observe hints for combined storage.

**Consideration of other advice**

• **Ventilation requirements**

Use local and general ventilation.

• **Specific designs for storage rooms or vessels**

Recommended storage temperature: 4 °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)**

Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Source
GB	cycloalkanes (>C7)	127-91-3		WEL	800		EH40/2005

**Notation**

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

**Relevant DNELs/DMELs/PNECs and other threshold levels**

• **human health values**

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	0,8 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
DNEL	5,69 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

• **environmental values**

Endpoint	Threshold level	Environmental compartment	Exposure time
PNEC	1,004 µg/l	freshwater	short-term (single instance)
PNEC	0,1004 µg/l	marine water	short-term (single instance)
PNEC	3,26 mg/l	sewage treatment plant (STP)	short-term (single instance)
PNEC	0,337 mg/kg	freshwater sediment	short-term (single instance)
PNEC	0,0337 mg/kg	marine sediment	short-term (single instance)
PNEC	13,1 mg/kg	water	short-term (single instance)
PNEC	0,0671 mg/kg	soil	short-term (single instance)

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### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)



#### Eye/face protection

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.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm.

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

#### Splash protection - Protective gloves

##### Type of material

NBR (Nitrile rubber).

##### Material thickness

>0,11 mm.

##### Breakthrough times of the glove material

>30 minutes (permeation: level 2).

- **other protection measures**

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

#### Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

#### Environmental exposure controls

Keep away from drains, surface and ground water.

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

##### Appearance

Physical state	liquid (fluid)
Colour	colourless
Odour	characteristic
Odour threshold	No data available

##### Other physical and chemical parameters

pH (value)	This information is not available.
Melting point/freezing point	-61 °C
Initial boiling point and boiling range	165 - 166 °C
Flash point	36 °C
Evaporation rate	no data available
Flammability (solid, gas)	not relevant (fluid)
<u>Explosive limits</u>	
• lower explosion limit (LEL)	0,7 vol%
• upper explosion limit (UEL)	this information is not available
Explosion limits of dust clouds	not relevant
Vapour pressure	This information is not available.
Density	0,87 g/cm <sup>3</sup>
Vapour density	This information is not available.
Bulk density	Not applicable
Relative density	Information on this property is not available.
<u>Solubility(ies)</u>	
Water solubility	no data available
<u>Partition coefficient</u>	
n-octanol/water (log KOW)	4,16 (TOXNET) (exp.)
Auto-ignition temperature	255 °C
Decomposition temperature	no data available
Viscosity	not determined
Explosive properties	none
Oxidising properties	none

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### 9.2 Other information

There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

In case of warming: Vapours can form explosive mixtures with air, risk of ignition

### 10.2 Chemical stability

May cause decomposition by long-term light influence.

### 10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

### 10.4 Conditions to avoid

Keep away from heat.

### 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

#### Acute toxicity

Exposure route	Endpoint	Value	Species	Source
oral	LD50	4.700 mg/kg	rat	TOXNET

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

May cause an allergic skin reaction. May cause sensitisation by skin contact.

#### Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor 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

May be fatal if swallowed and enters airways.



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### Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

abdominal pain, gastrointestinal complaints, aspiration hazard

- **If in eyes**

causes slight to moderate irritation

- **If inhaled**

cough, nausea, breathing difficulties, pulmonary oedema, renal impairment

- **If on skin**

causes skin irritation

#### Other information

None.

## SECTION 12: Ecological information

### 12.1 Toxicity

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

#### Aquatic toxicity (acute)

Very toxic to aquatic organisms.

Endpoint	Value	Species	Source	Exposure time
LC50	0,68 mg/l	rainbow trout (Oncorhynchus mykiss)	ECHA	96 hours
EC50	1,09 mg/l	daphnia magna	ECHA	48 hours
ErC50	0,7 mg/l	Pseudokirchneriella subcapitata	ECHA	72 hours

#### Aquatic toxicity (chronic)

May cause long-term adverse effects in the aquatic environment.

### 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.

n-octanol/water (log KOW) 4,16

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Other adverse effects

Strongly hazardous to water.

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### 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.

#### 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	2319
14.2	UN proper shipping name	TERPENE HYDROCARBONS, N.O.S.
	Hazardous ingredients	B-Pinene
14.3	Transport hazard class(es)	
	Class	3 (flammable liquids)
14.4	Packing group	III (substance presenting low danger)
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	<b>Special precautions for user</b>	
	Provisions for dangerous goods (ADR) should be complied within the premises.	
14.7	<b>Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
	The cargo is not intended to be carried in bulk.	
14.8	<b>Information for each of the UN Model Regulations</b>	
	<b>• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)</b>	
	UN number	2319
	Proper shipping name	TERPENE HYDROCARBONS, N.O.S.
	Particulars in the transport document	UN2319, TERPENE HYDROCARBONS, N.O.S., 3, III, (D/E), environmentally hazardous
	Class	3
	Classification code	F1
	Packing group	III
	Danger label(s)	3 + "fish and tree"

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Environmental hazards	yes (hazardous to the aquatic environment)
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30
<b>• International Maritime Dangerous Goods Code (IMDG)</b>	
UN number	2319
Proper shipping name	TERPENE HYDROCARBONS, N.O.S.
Particulars in the shipper's declaration	UN2319, TERPENE HYDROCARBONS, N.O.S., (β-Pinen), 3, III, 36°C c.c., MARINE POLLUTANT
Class	3
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3 + "fish and tree"
Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	A

## 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)

- Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)  
Not listed.

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- **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

Not listed.

- **Regulation 850/2004/EC on persistent organic pollutants (POP)**

Not listed.

- **Restrictions according to REACH, Annex XVII**

not listed

- **List of substances subject to authorisation (REACH, Annex XIV)**

not listed

- **Seveso Directive**

96/82/EC (Seveso II)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes)		Notes
9b	dangerous for the environment (R51/53)	200	500	27)

**Notation**

27) Risk phrases R51/53: 'Toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment'

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100	200	56)

**Notation**

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

- **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 100 %

- **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 100 %

- **Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

not listed

- **Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

- **Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

not listed

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### National inventories

Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)
- REACH (Europe)

### 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EH40/2005	EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
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 (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	short-term exposure limit
TWA	time-weighted average
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative
WEL	workplace exposure limit

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### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

Code	Text
H226	flammable liquid and vapour
H304	may be fatal if swallowed and enters airways
H315	causes skin irritation
H317	may cause an allergic skin reaction
H400	very toxic to aquatic life
H410	very toxic to aquatic life with long lasting effects

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.