

# Safety data sheet

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



## Fatty acid methyl ester mixture ROTICHROM® Ph. Eur., Chapter 2.4.22-2

article number: **1HC5**  
Version: **2.0 en**  
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Version: (1)

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

### 1.1 Product identifier

Identification of the substance **Fatty acid methyl ester mixture ROTICHROM® Ph. Eur., Chapter 2.4.22-2**

Article number 1HC5

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

Relevant identified uses: Laboratory and analytical use  
Laboratory chemical

Uses advised against: 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](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

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
2.6	Flammable liquid	3	Flam. Liq. 3	H226

For full text of abbreviations: see SECTION 16

#### The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

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### 2.2 Label elements

#### Labelling

#### Signal word

Warning

#### Pictograms

GHS02



#### Hazard statements

H226

Flammable liquid and vapour

#### Precautionary statements

##### Precautionary statements - prevention

P210

Keep away from heat, sparks, open flames, hot surfaces. No smoking

P280

Wear protective gloves/eye protection

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not relevant (mixture)

### 3.2 Mixtures

#### Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Myristic acid methyl ester	CAS No 124-10-7 EC No 204-680-1	30 - 40			
methyl laurate	CAS No 111-82-0 EC No 203-911-3	10 - 20			
Capric acid methyl ester	CAS No 110-42-9 EC No 203-766-6	10 - 20	Aquatic Chronic 2 / H411		
Caproic acid methyl ester	CAS No 106-70-7 EC No 203-425-1	5 - 10	Flam. Liq. 3 / H226		

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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Caprylic acid methyl ester	CAS No 111-11-5  EC No 203-835-0	5 – 10	Skin Irrit. 2 / H315		

Name of substance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Myristic acid methyl ester	CAS No 124-10-7  EC No 204-680-1	-	-	-	inhalation: dust/ mist
Capric acid methyl ester	CAS No 110-42-9  EC No 203-766-6	-	-	-	inhalation: dust/ mist

For full text of abbreviations: see SECTION 16

## 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

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

#### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

### 4.3 Indication of any immediate medical attention and special treatment needed

none

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. 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

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe vapour/spray. Avoidance of ignition sources.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Danger of explosion.

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

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

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

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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## 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.

#### 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

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

Keep container tightly closed. Keep in a cool place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Protect against external exposure, such as

high temperatures

#### Consideration of other advice:

Ground/bond container and receiving equipment.

#### Ventilation requirements

Use local and general ventilation.

### 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.

Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Capric acid methyl ester	110-42-9	DNEL	61,4 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Capric acid methyl ester	110-42-9	DNEL	121,8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Capric acid methyl ester	110-42-9	PNEC	0,001 mg/l	aquatic organisms	freshwater	short-term (single instance)
Capric acid methyl ester	110-42-9	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
Capric acid methyl ester	110-42-9	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Capric acid methyl ester	110-42-9	PNEC	0,047 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Capric acid methyl ester	110-42-9	PNEC	0,005 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Capric acid methyl ester	110-42-9	PNEC	10 mg/kg	terrestrial organisms	soil	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	0,048 mg/l	aquatic organisms	water	intermittent release
Caprylic acid methyl ester	111-11-5	PNEC	0,002 mg/l	aquatic organisms	freshwater	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	0,028 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	0,003 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Caprylic acid methyl ester	111-11-5	PNEC	10 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

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

### 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	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	168 °C
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	not determined
Flash point	41 °C

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Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	not determined
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	3,7 hPa at 20 °C
<u>Density and/or relative density</u>	
Density	0,866 g/cm <sup>3</sup> at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none

### 9.2 Other 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

The mixture contains reactive substance(s). Risk of ignition.

#### If heated

Risk of ignition. Vapours may form explosive mixtures with air.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser

### 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.



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### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

#### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

#### Classification acc. to GHS

##### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed or if inhaled.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
Myristic acid methyl ester	124-10-7	inhalation: dust/mist	
Capric acid methyl ester	110-42-9	inhalation: dust/mist	

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Myristic acid methyl ester	124-10-7	oral	LD50	>2.000 mg/kg	rat
Myristic acid methyl ester	124-10-7	inhalation: dust/mist	LC50	>5 mg/l/4h	rat
Capric acid methyl ester	110-42-9	oral	LD50	>2.000 mg/kg	rat
Capric acid methyl ester	110-42-9	inhalation: dust/mist	LC50	>5 mg/l/4h	rat
Caproic acid methyl ester	106-70-7	oral	LD50	>5.000 mg/kg	rat
Caprylic acid methyl ester	111-11-5	oral	LD50	>2.000 mg/kg	rat

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

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

#### 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.

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### 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

Data are not available.

#### • If in eyes

Data are not available.

#### • If inhaled

Data are not available.

#### • If on skin

Data are not available.

#### • Other information

Health effects are not known.

### 11.2 Endocrine disrupting properties

None of the ingredients are listed.

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Myristic acid methyl ester	124-10-7	LC50	1.700 mg/l	fish	96 h
Myristic acid methyl ester	124-10-7	EC50	>0,02 mg/l	aquatic invertebrates	48 h
Myristic acid methyl ester	124-10-7	ErC50	>100 mg/l	algae	72 h
Capric acid methyl ester	110-42-9	LC50	1.700 mg/l	orfe (Leuciscus idus)	48 h
Capric acid methyl ester	110-42-9	EC50	1,1 mg/l	aquatic invertebrates	48 h

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Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Capric acid methyl ester	110-42-9	ErC50	>3,93 mg/l	algae	72 h
Caprylic acid methyl ester	111-11-5	LC50	5,6 mg/l	aquatic invertebrates	48 h
Caprylic acid methyl ester	111-11-5	EC50	4,76 mg/l	algae	96 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Capric acid methyl ester	110-42-9	EC50	0,22 mg/l	aquatic invertebrates	21 d
Capric acid methyl ester	110-42-9	LC50	0,252 mg/l	aquatic invertebrates	21 d
Caprylic acid methyl ester	111-11-5	EC50	>1.000 mg/l	microorganisms	3 h

### 12.2 Persistence and degradability

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
Myristic acid methyl ester	124-10-7	biotic/abiotic	63 - 91 %	30 d	geschlossene Flasche	
Myristic acid methyl ester	124-10-7	oxygen depletion	75 %	28 d		ECHA
Capric acid methyl ester	110-42-9	oxygen depletion	78 %	28 d		ECHA
Caprylic acid methyl ester	111-11-5	oxygen depletion	78 %	28 d		ECHA

### 12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture				
Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Myristic acid methyl ester	124-10-7		6,41 (36 °C)	
Capric acid methyl ester	110-42-9		4,42 (36 °C)	
Caproic acid methyl ester	106-70-7		2,34	
Caprylic acid methyl ester	111-11-5		3,32	

### 12.4 Mobility in soil

Data are not available.

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### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

None of the ingredients are 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.

#### 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.

#### Properties of waste which render it hazardous

**HP 3** flammable

**HP 14** ecotoxic

### 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 3272

IMDG-Code UN 3272

ICAO-TI UN 3272

### 14.2 UN proper shipping name

ADRRID ESTERS, N.O.S.

IMDG-Code ESTERS, N.O.S.

ICAO-TI Esters, n.o.s.

Technical name (hazardous ingredients) Caproic acid methyl ester

### 14.3 Transport hazard class(es)

ADRRID 3

IMDG-Code 3



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ICAO-TI	3
<b>14.4 Packing group</b>	
ADRRID	III
IMDG-Code	III
ICAO-TI	III
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	
Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	
The cargo is not intended to be carried in bulk.	
<b>14.8 Information for each of the UN Model Regulations</b>	
<b>Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information</b>	
Proper shipping name	ESTERS, N.O.S.
Particulars in the transport document	UN3272, ESTERS, N.O.S., (contains: Caproic acid methyl ester), 3, III, (D/E)
Classification code	F1
Danger label(s)	3
	
Special provisions (SP)	274, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	D/E
Hazard identification No	30
<b>Emergency Action Code</b>	3Y
<b>Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information</b>	
<b>Classification code</b>	F1
<b>Danger label(s)</b>	3
	
<b>Special provisions (SP)</b>	274, 601
<b>Excepted quantities (EQ)</b>	E1
<b>Limited quantities (LQ)</b>	5 L
<b>Transport category (TC)</b>	3



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<b>Hazard identification No</b>	30
<b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b>	
Proper shipping name	ESTERS, N.O.S.
Particulars in the shipper's declaration	UN3272, ESTERS, N.O.S., (contains: Caproic acid methyl ester), 3, III, 41°C c.c.
Marine pollutant	-
Danger label(s)	3
	
Special provisions (SP)	223, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, S-D
Stowage category	A
<b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b>	
Proper shipping name	Esters, n.o.s.
Particulars in the shipper's declaration	UN3272, Esters, n.o.s., (contains: Caproic acid methyl ester), 3, III
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L

## 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)

##### Seveso Directive

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
P5c	flammable liquids (cat. 2, 3)	5.000                      50.000	51)

##### Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

##### Deco-Paint Directive

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VOC content	39,94 % 345,9 g/l
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### Industrial Emissions Directive (IED)

VOC content	19,92 %
VOC content	172,5 g/l

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

none of the ingredients are listed

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

none of the ingredients are listed

### Water Framework Directive (WFD)

none of the ingredients are listed

### Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

### Regulation on drug precursors

none of the ingredients are listed

### Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

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

none of the ingredients are listed

### Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

### National regulations(GB)

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

none of the ingredients are listed

### Restrictions according to GB REACH, Annex 17

none of the ingredients are listed

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Fatty acid methyl ester mixture	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

### 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	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed as "ACTIVE"

#### 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

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2	Precautionary statements - response		yes
2.2		Precautionary statements - response: change in the listing (table)	yes



# Safety data sheet

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## Fatty acid methyl ester mixture ROTICHROM® Ph. Eur., Chapter 2.4.22-2

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Warning		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
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: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes
14.8		Proper shipping name: ESTERS, N.O.S.	yes
14.8		Particulars in the transport document: UN3272, ESTERS, N.O.S., (contains: Caproic acid methyl ester), 3, III, (D/E)	yes
14.8		Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information	yes
14.8		Classification code: F1	yes
14.8		Danger label(s): 3	yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Special provisions (SP): 274, 601	yes
14.8		Excepted quantities (EQ): E1	yes
14.8		Limited quantities (LQ): 5 L	yes
14.8		Transport category (TC): 3	yes
14.8		Hazard identification No: 30	yes
14.8		Proper shipping name: ESTERS, N.O.S.	yes
14.8		Particulars in the shipper's declaration: UN3272, ESTERS, N.O.S., (contains: Caproic acid methyl ester), 3, III, 41°C c.c.	yes
14.8		Proper shipping name: Esters, n.o.s.	yes
14.8		Particulars in the shipper's declaration: UN3272, Esters, n.o.s., (contains: Caproic acid methyl ester), 3, III	yes
15.1	Restrictions according to REACH, Annex XVII		yes

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## Fatty acid methyl ester mixture ROTICHROM® Ph. Eur., Chapter 2.4.22-2

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
15.1		Dangerous substances with restrictions (REACH, Annex XVII): change in the listing (table)	yes
15.1	List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list: none of the ingredients are listed		yes
15.1		Regulation on persistent organic pollutants (POP): none of the ingredients are listed	yes
15.1		National regulations(GB)	yes
15.1		List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list: none of the ingredients are listed	yes
15.1		Restrictions according to GB REACH, Annex 17: none of the ingredients are listed	yes
15.1		Dangerous substances with restrictions (GB REACH, Annex 17): change in the listing (table)	yes
15.1		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.	yes
15.1		National inventories: change in the listing (table)	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
COD	Chemical oxygen demand
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 identifier 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

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Abbr.	Descriptions of used abbreviations
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
Flam. Liq.	Flammable liquid
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 Nations
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
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
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)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
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).

### Classification procedure

Physical and chemical properties. The classification is based on tested mixture.  
Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

Code	Text
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H411	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.