

# SAFETY DATA SHEET

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

Revision date: 13 Feb 2024

Print date: 13 Feb 2024

Version: 8



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BIOFUELS BRUNSBÜTTEL GMBH & CO KG

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## Fatty Acid Methyl Ester (FAME / Biodiesel)

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

#### 1.1. Product identifier

Trade name/designation:

Fatty Acid Methyl Ester (FAME / Biodiesel)

Other means of identification:

UCOME

CAS No.:

85049-31-6

REACH No.:

01-2119675342-38-0010

EC No.:

285-200-8

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

Use of the substance/mixture:

Fuel, fuel component, solvent, carrier liquid for additives

Relevant identified uses:

##### Sector of uses [SU]

- SU 1: Agriculture, forestry, fishery
- SU 2a: Mining (without offshore industries)
- SU 2b: Offshore industries
- SU 5: Manufacture of textiles, leather, fur
- SU 6a: Manufacture of wood and wood products
- SU 6b: Manufacture of pulp, paper and paper products
- SU 7: Printing and reproduction of recorded media
- SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)
- SU 9: Manufacture of fine chemicals
- SU 10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- SU 11: Manufacture of rubber products
- SU 12: Manufacture of plastics products, including compounding and conversion
- SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement
- SU 14: Manufacture of basic metals, including alloys
- SU 15: Manufacture of fabricated metal products, except machinery and equipment
- SU 16: Manufacture of computer, electronic and optical products, electrical equipment
- SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
- SU 18: Manufacture of furniture

##### Product Categories [PC]

- PC 1: Adhesives, sealants
- PC 2: Adsorbents
- PC 3: Air care products
- PC 7: Base metals and alloys
- PC 9a: Coatings and paints, thinners, paint removers
- PC 9b: Fillers, putties, plasters, modelling clay
- PC 9c: Finger paints
- PC 11: Explosives
- PC 12: Fertilizers
- PC 13: Fuels
- PC 14: Metal surface treatment products
- PC 15: Non-metal surface treatment products
- PC 16: Heat transfer fluids
- PC 17: Hydraulic fluids
- PC 18: Ink and toners
- PC 19: Intermediate (precursor)
- PC 20: Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
- PC 21: Laboratory chemicals
- PC 23: Leather treatment products
- PC 24: Lubricants, greases, release products

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- PC 25:** Metal working fluids
- PC 26:** Paper and board treatment products
- PC 27:** Plant protection products
- PC 28:** Perfumes, fragrances
- PC 29:** Pharmaceuticals
- PC 30:** photochemicals
- PC 31:** Polishes and wax blends
- PC 32:** Polymer preparations and compounds
- PC 33:** Semiconductors
- PC 34:** Textile dyes and impregnating products
- PC 35:** Washing and cleaning products
- PC 36:** Water softeners
- PC 39:** Cosmetics, personal care products

### Process categories [PROC]

- PROC 1:** Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC 2:** Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC 3:** Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC 4:** Chemical production where opportunity for exposure arises
- PROC 5:** Mixing or blending in batch processes
- PROC 6:** Calendaring operations
- PROC 7:** Industrial spraying
- PROC 8a:** Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC 8b:** Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC 9:** Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC 10:** Roller application or brushing
- PROC 11:** Non industrial spraying
- PROC 12:** Use of blowing agents in manufacture of foam
- PROC 13:** Treatment of articles by dipping and pouring
- PROC 14:** Tableting, compression, extrusion, pelletisation, granulation
- PROC 15:** Use as laboratory reagent
- PROC 17:** Lubrication at high energy conditions in metal working operations
- PROC 18:** General greasing/lubrication at high kinetic energy conditions
- PROC 19:** Manual activities involving hand contact
- PROC 20:** Use of functional fluids in small devices
- PROC 21:** Low energy manipulation of substances bound in materials and/or articles
- PROC 22:** Manufacturing and processing of minerals and/or metals at substantially elevated temperature
- PROC 23:** Open processing and transfer operations at substantially elevated temperature
- PROC 24:** High (mechanical) energy work-up of substances bound in/on materials and/or articles
- PROC 25:** Other hot work operations with metals

### Environmental release categories [ERC]

- ERC 1:** Manufacture of the substance
- ERC 2:** Formulation into mixture (mixtures)
- ERC 3:** Formulation in materials
- ERC 4:** Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- ERC 5:** Use at industrial site leading to inclusion into/onto article
- ERC 6a:** Use of intermediate
- ERC 6b:** Use of reactive processing aid at industrial site (no inclusion into or onto article)
- ERC 6c:** Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
- ERC 6d:** Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
- ERC 7:** Use of functional fluid at industrial site
- ERC 8a:** Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
- ERC 8b:** Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

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- ERC 8c:** Widespread use leading to inclusion into/onto article (indoor)
- ERC 8d:** Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
- ERC 8e:** Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
- ERC 8f:** Widespread use leading to inclusion into/onto article (outdoor)
- ERC 9a:** Widespread use of functional fluid (indoor)
- ERC 9b:** Widespread use of functional fluid (outdoor)
- ERC 10a:** Widespread use of articles with low release (outdoor)
- ERC 10b:** Widespread use of articles with high or intended release (outdoor)
- ERC 11a:** Widespread use of articles with low release (indoor)
- ERC 11b:** Widespread use of articles with high or intended release (indoor)

### 1.3. Details of the supplier of the safety data sheet

#### Supplier (manufacturer/importer/only representative/downstream user/distributor):

**Mercuria Biofuels Brunsbüttel GmbH & Co. KG**

Fährstr. 51

25541 Brunsbüttel

Germany

**Telephone:** +49 4852 836 8035

**Telefax:** +49 4852 836 8003

**E-mail:** fwerner@mercuria.com

**E-mail (competent person):** fwerner@mercuria.com

### 1.4. Emergency telephone number

Company: Laboratory Manager, +49 4852 836 8035 (Only available during office hours.)

GlZ Nord, 24h: +49 (5 51) 1 92 40

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

### 2.2. Label elements

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

According to EC directives or the corresponding national regulations the product does not have to be labelled.

#### Hazard components for labelling:

No

**Hazard statements:** none

**Supplemental hazard information:** none

**Precautionary statements:** none

#### Special rules for supplemental label elements for certain mixtures:

No

### 2.3. Other hazards

#### Adverse human health effects and symptoms:

May cause minor eye irritation.

Vapors produced by heating the substance, or finely misted materials, may irritate the mucous membranes and cause dizziness, and nausea.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### Description:

The substance consists mainly of saturated and unsaturated fatty acids methyl ester (typical chain length C14-C18, partially also C10, C12 and >C18).

The substance may contain residuals of glycerol and partial glycerides (total < 3.5%) and traces of methanol (< 0.2 %).

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To improve the properties the substance may contain additives in small concentrations: Cold flow improvers consisting mainly of oligomers of vinyl acetate and other monomers and oxidation stabilizers containing mainly steric hindered phenols. The single active components do not exceed a concentration of 3000 mg/kg (0.3%) in relation to the whole substance.

Exemption:

Fatty Acid Methyl Ester /CFPP -20°C DIN EN 14114 may contain up to 2000 mg/kg (0.2%) cold flow improver.

### Ingredients / Impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 85049-31-6 EC No.: 285-200-8 REACH No.: 01-2119675342-38-XXXX	<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP]. <b>Additional information:</b> The European Chemicals Agency (ECHA) has proposed the following substance name: C12-18 (even-numbered) and C18 (unsaturated) fatty acids methyl esters, List number 938-765-6	= 100 weight-%

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Following inhalation:

In case of accident by inhalation: remove casualty to fresh air and keep at rest. Seek medical attention if symptoms persist.

#### In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

IF ON CLOTHING: Change contaminated, saturated clothing.

#### After eye contact:

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

#### Following ingestion:

Do NOT induce vomiting.

Rinse mouth thoroughly with water.

If conscious, give half a litre of water to drink immediately.

Never give anything by mouth to an unconscious person or a person with cramps.

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

May cause minor eye irritation.

Vapors produced by heating the substance, or finely misted materials, may irritate the mucous membranes and cause dizziness, and nausea.

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

No special medical actions required.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

Carbon dioxide (CO2)

Water mist

alcohol resistant foam

Extinguishing powder

#### Unsuitable extinguishing media:

Strong water jet Water stream may splash the burning liquid and spread fire.

Consider halon use may not be permissible in some countries.

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

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Soaked rags or spill absorbents (i.e. oil dry, sacks, sand) can cause spontaneous combustion if stored near combustibles and not handled properly.

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## Fatty Acid Methyl Ester (FAME / Biodiesel)

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

On danger by contact with substance: Wear a self-contained breathing apparatus and chemical protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

**Personal precautions:**

Remove all sources of ignition.

If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point.

Mark out the contaminated area with signs and prevent access to unauthorised personnel.

Turn leaking containers leake side up to prevent the escape of liquid.

**Protective equipment:**

Refer to section 5.3.

#### 6.1.2. For emergency responders

**Personal protection equipment:**

Refer to section 5.3.

### 6.2. Environmental precautions

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Delivery to an approved waste disposal company.

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

**For cleaning up:**

Take up with oil-absorbing compound.

Recover large spills for salvage or disposal. Wash hard surfaces with safety solvent or detergent to remove remaining oil film.

Greasy nature will result in a slippery surface.

### 6.4. Reference to other sections

No data available

### 6.5. Additional information

If appropriate sections 8 and 13 shall be referred to.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Protective measures**

**Advices on safe handling:**

Note: Fatty Acid Methyl Esters with longer chain length are not classified as dangerous according to the criteria of CLP (Regulation CE 1272/2008). Specific Risk Management Measures are therefore not required. Nevertheless, the exposure of workers during and after normal operations should be minimised by the use of good industrial hygiene practice.

Direct contact with the substance should be avoided.

When using do not eat, drink or smoke.

Used working clothes should not be worn outside the work area.

Wash hands and face before breaks and after work and take a shower if necessary.

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

**Requirements for storage rooms and vessels:**

Keep container tightly closed in a cool, well-ventilated place.

Keep away from sources of ignition - No smoking.

Keep away from: Oxidising agent

**Storage class (TRGS 510, Germany):** 10 - Combustible liquids that cannot be assigned to any of the above storage classes

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### Further information on storage conditions:

Recommended storage temperature 15 °C - 25 °C

Below normal ambient temperatures, the material may solidify.

### 7.3. Specific end use(s)

#### Recommendation:

No sector specific guidance is available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

No data available

#### 8.1.2. Biological limit values

No data available

#### 8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	6.96 mg/m <sup>3</sup>	① DNEL worker ② Long-term - inhalation, systemic effects
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	23 mg/m <sup>3</sup>	① DNEL Consumer ② Long-term - inhalation, systemic effects
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	10 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	5 mg/kg bw/day	① DNEL Consumer ② Long-term - dermal, systemic effects
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	5 mg/kg bw/day	① DNEL worker ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	2.504 mg/L	① PNEC aquatic, freshwater
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	0.2504 g/m <sup>3</sup>	① PNEC aquatic, marine water
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	520 mg/L	① PNEC sewage treatment plant

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Substance name	PNEC Value	① PNEC type
<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8	25.04 mg/L	① PNEC aquatic, intermittent release

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

No

#### 8.2.2. Personal protection equipment



##### Eye/face protection:

Wear eye/face protection.

##### Skin protection:

Hand protection: Required properties: liquid-tight Breakthrough times and swelling properties of the material must be taken into consideration.

Suitable material: NBR (Nitrile rubber) FKM (fluoro rubber)

##### Respiratory protection:

Respiratory protection necessary at: aerosol or mist formation

##### Other protection measures:

General health and safety measures: Wash hands before breaks and after work.

Wash contaminated clothing before reuse.

#### 8.2.3. Environmental exposure controls

No data available

## SECTION 9: Physical and chemical properties

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

#### Appearance

Physical state: Liquid

Colour: yellowish

Odour: mild

#### Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		② Dissolved substance quantity: < 0.023 mg/l
Melting point	≥ -17 - ≤ 16 °C		① DIN ISO 3016
Freezing point	<i>not applicable</i>		
Initial boiling point and boiling range	≥ 302.5 - ≤ 570 °C		① ASTM D 7169 ② pressure: 1013 mbar
Flash point	≥ 120 - ≤ 180 °C		① EN ISO 2719
Evaporation rate	<i>not applicable</i>		
Auto-ignition temperature	<i>No data available</i>		
Upper/lower flammability or explosive limits	<i>not applicable</i>		
Vapour pressure	≥ 2 - ≤ 6 mbar	25 °C	① EN 13016-1
Vapour density	<i>not applicable</i>		
Density	≥ 878 - ≤ 895 kg/m <sup>3</sup>	15 °C	① EN ISO 3675
Bulk density	<i>not applicable</i>		
Water solubility	≈ 0.023 mg/L	25 °C	

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Parameter	Value	at °C	① Method ② Remark
Partition coefficient: n-octanol/water	≈ 6.2		① OECD 107
Dynamic viscosity	≥ 5.5 - ≤ 8 mPa*s	25 °C	① EN ISO 3104
Kinematic viscosity	No data available		
Self-ignition	≥ 256 - ≤ 266 °C		① Closed flask ② The ignition delay observed at this temperature was 60 seconds and a Temperature increase at middle of the flask was 14 °C.

### 9.2. Other information

Flammability: Not readily flammable, > Flam. Liq. 4

Oxidising properties: Not oxidising.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

The substance reacts with strong bases to form methanol.

### 10.4. Conditions to avoid

See incompatible materials.

### 10.5. Incompatible materials

Oxidising agent, strong  
Alkali (lye), concentrated

### 10.6. Hazardous decomposition products

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute oral toxicity:

Acute toxicity (oral): LD<sub>50</sub>: > 5000 mg/kg (Study is closely comparable to OECD 401; GLP)

#### Acute dermal toxicity:

Acute toxicity (dermal): Has been tested in a fixed dose test at 2000 mg/kg (C6-C12 ME, Rabbit): No sign of toxicity, Methode: EPA OPPTS 870.1200

#### Acute inhalation toxicity:

No data available

#### Skin corrosion/irritation:

Skin corrosion/irritation: In general, esters of long-chain fatty acid methyl esters are always negative with relation to irritation (from C18 onward), while esters of short-chain fatty acids are always (slightly) positive (up to C10). Methode: OECD 404

#### Serious eye damage/irritation:

Serious eye damage/irritation: Conjunctivae effects were observed 1 hour after exposure. Slight chemosis and slight conjunctivae were observed in two animals and four animals, respectively. Two animals presented conjunctivae with diffuse, crimson colour and individual vessels not easily discernible. These effects were fully reversible within 1 day. Methode: OECD 405

#### Respiratory or skin sensitisation:

Respiratory sensitisation: No information but no respiratory sensitisation is expected.

Skin sensitisation: Esterol C in corn oil was tested using the Guinea pig maximisation test.



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No clinical signs and no deaths were noted during the study. No cutaneous reactions were observed after the challenge application. Under the experimental conditions of the study, it is concluded that Esterol C does not induce delayed contact hypersensitivity in guinea pig. Methode: OECD 406 (GLP)

### **Carcinogenicity:**

Germ cell mutagenicity (bacteria), Esterol C: Ames test negative. Methode: OECD 471

In vitro cytogenicity test, Esterol C: Investigation in lymphocytes. negative Methode: OECD 473

In mammalian mutation test: Methyl myristate alone had no mitogenic activity. In combination with phytohemagglutinin, however, a comitogenic activity was found. Methode: EU Method B.17

Carcinogenicity: Methyl oleate and methyl 12-oxo-trans-10-octadecenoate have been tested for carcinogenicity by oral and subcutaneous administration. A positive effect of methyl oleate could not be assessed, while the results pointed to a promoter effect of methyl oxo-octadecenoate. Methode: EU Method B.32

Overall assessment on CMR properties No CMR properties are expected.

### **Additional information:**

Repeated dose toxicity (subacute, subchronic, chronic): Reproductive toxicity Developmental effects/ Fertility effects: The tested substance revealed no effect in Screening for reproduction for a dose of until 1000 mg/kg. Methode: OECD 422

STOT-single exposure: No information available.

STOT- repeated exposure: The tested substance revealed no effect in Screening for reproduction for a dose of until 1000 mg/kg. Methode: OECD 422

### \* **11.2. Information on other hazards**

#### **Endocrine disrupting properties:**

This substance does not have endocrine disrupting properties with respect to humans.

## SECTION 12: Ecological information

### **12.1. Toxicity**

#### **Aquatic toxicity:**

EC<sub>50</sub> (48 h): 2504 mg/l Methode: OECD 202

EC<sub>50</sub> (72 h): 73729 mg/l Methode: OECD 201

#### **Terrestrial toxicity:**

LC<sub>50</sub>: (freshwater fish) 100000 mg/l

### **12.2. Persistence and degradability**

<b>Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters</b> CAS No.: 85049-31-6 EC No.: 285-200-8
--

<b>Biodegradation:</b> Yes, rapidly
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#### **Biodegradation:**

All methyl esters of fatty acids are readily biodegradable in water, soil and sediments. They pass the 10 days windows with 62% of degradation. Half life in the three compartment is less than 2 -3 days. In some case even less than 1 day. Methode: ISO 10712

### **12.3. Bioaccumulative potential**

#### **Partition coefficient: n-octanol/water:**

≈ 6.2; Method: OECD 107

#### **Accumulation / Evaluation:**

All methyl esters of fatty acids are readily biodegradable in water, soil and sediments. They pass the 10 days windows with 62% of degradation. Half life in the three compartment is less than 2 -3 days. In some case even less than 1 day. Methode: ISO 10712

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### 12.4. Mobility in soil

The substance is very poorly soluble in water and readily biodegradable. The equilibrium partitioning method, following a fugacity model III indicate a partition of the substance on sediments of 85.5%, based on  $\log K_{oc} > 5.63$  at 22°C.

According to equilibrium partitioning Fugacity model III, the soil % is 1.61%, FAME have a soil primary biodegradation of less than 2 days.

### 12.5. Results of PBT and vPvB assessment

Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters CAS No.: 85049-31-6  
EC No.: 285-200-8

Results of PBT and vPvB assessment: —

Fatty acids, C16-18 and C18-unsatd., Me esters is not regarded as PBT or vPvB based on physicochemical, environmental and toxicological properties. Fatty acids, C16-18 and C18-unsatd., Me esters is not regarded as P or vP based on readily biodegradability. Fatty acids, C16-18 and C18-unsatd., Me esters is not regarded as bioaccumulative based on the measured BCF of 3. The long-term no-observed effect concentration (Noec) for marine or freshwater organisms is not available because of the high biodegradation rate in environmental conditions.

The substance is not classified as carcinogenic (category 1A or 1B), mutagenic (category 1A or 1B), or toxic for reproduction (category 1A, 1B or 2).

### \* 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to humans.

### 12.7. Other adverse effects

Further ecological information: The substance is considered as stable in the environmental range of pH. Hydrolysis happens with the presence of strong acids or basis, with release of methanol and fatty acids or its salts.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Incineration is recommended.

#### 13.1.1. Product/Packaging disposal

#### Waste codes/waste designations according to EWC/AVV

##### Waste code product

07 01 99	wastes not otherwise specified
07 06 99	Wastes not otherwise specified
07 07 99	Wastes not otherwise specified

#### Remark:

Dispose of waste according to applicable legislation.

## SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.1. UN number or ID number</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.2. UN proper shipping name</b>			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
<b>14.3. Transport hazard class(es)</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.4. Packing group</b>			
not relevant	not relevant	not relevant	not relevant

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## Fatty Acid Methyl Ester (FAME / Biodiesel)

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
<b>14.5. Environmental hazards</b>			
not relevant	not relevant	not relevant	not relevant
<b>14.6. Special precautions for user</b>			
not relevant	not relevant	not relevant	not relevant

### 14.7. Maritime transport in bulk according to IMO instruments

IBC-Code/2014: Pollution Category Y

#### Additional information:

Product name: Fatty acid methyl esters (m)

Hazards: S/P (safety and pollution)

Ship type: 2 (2.1.2.2)

Tank type: 2G (integral tank (4.1.2), gravity tank (4.1.3))

Tank vents: Cont. (controlled venting)

Tank environmental control: No

Electrical equipment: Temperature classes (i'): -

Electrical equipment: Apparatus group (i''): -

Electrical equipment: Flashpoint (i'''): Yes (flashpoint exceeding 60°C (10.1.6))

Gauging: R (restricted gauging (13.1.1.2))

Vapour detection: T (toxic vapours)

Fire protection: ABC (alcohol-resistant foam or multi-purpose foam, regular foam; encompasses all foams that are not of an alcohol-resistant type, including fluoro-protein and aqueous-film-forming foam (AFFF), water-spray

Emergency equipment: No (no special requirements under this Code)

Specific and operational requirements: 15.12.3, 15.12.4, 15.19.6, 16.2.6, 16.2.9

## SECTION 15: Regulatory information

### \* 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU legislation

##### Other regulations (EU):

This product is not assigned to a hazard category.

The substance has NOT to be accounted to the tonnage threshold according EC Directive 2012/18/EU (Seveso III), annex 1 - part 2 (no. 34 e).

Substance/mixture is not VOC relevant.

#### 15.1.2. National regulations

##### [DE] National regulations

##### Restrictions of occupation

No

##### Störfallverordnung (12. BImSchV)

##### for substances contained in the product:

This product is not assigned to a hazard category.

##### Water hazard class

##### WGK:

1 - slightly hazardous to water

##### Source:

AwSV, Nr. 834 (Rigoletto)

##### Other regulations, restrictions and prohibition regulations

Mainly local/national tax legislation and quality requirements (EN 14214 + additional regulations).

### 15.2. Chemical Safety Assessment

CSA has been carried out.

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### SECTION 16: Other information

#### 16.1. Indication of changes

11.2.	Information on other hazards
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 16.2. Abbreviations and acronyms

Abbreviations:

CSA: Chemical Safety Assessment

PBT: Substance with persistent, bioaccumulative and toxic properties.

vPvB: Substance with very persistent and very bioaccumulative properties.

MFSU: Manufacture, formulation, supply and use

Rigoletto: Database of the German Federal Environmental Agency, which contains the classification of substances according to their water hazard class (<https://webrigoletto.uba.de/Rigoletto/Home/Search>).

#### 16.3. Key literature references and sources for data

See annex

#### 16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

#### 16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

No data available

#### 16.6. Training advice

No data available

#### 16.7. Additional information

This SDS is not required by Article 31 of Regulation 1907/2006/EU as the substance is not classified as hazardous, however, to comply with Article 32 of REACH and provide customers with relevant information the format of the SDS (according to Regulation 2015/830/EU) has been used.

Given data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship.

The safety data sheet is designed in accordance with the requirements of Regulation (EU) 2020/878.

\* Data changed compared with the previous version.

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Fatty Acid Methyl Ester (FAME / Biodiesel)

Assigned to 'Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters' and mixtures

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Fatty Acid Methyl Ester (FAME / Biodiesel)

Assigned to 'Fatty acids, C10-18 and C12-22-unsatd., C14-18 and C16-18-unsatd. alkyl esters' and mixtures

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