

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2



Page 1/10

Oxidation Stability Quality Check Material: PR1759

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

1.1. Product identifier

Trade name/designation:

Oxidation Stability Quality Check Material: PR1759

Other means of identification:

Biodiesel, Fatty Acid Methyl Ester, FAME

CAS No.:

67762-38-3

EC No.:

267-015-4

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

Use of the substance/mixture:

The product is intended for research, analysis and scientific education.

Scope of Application – Quality Check Material OS:

EN 14112: Determination of oxidation stability (accelerated oxidation test) - Fat and oil derivatives - Fatty acid methylesters (FAME)

EN 15751: Determination of oxidation stability by accelerated oxidation method - Automotive fuels - Fatty acid methyl ester (FAME) fuel and blends with diesel fuel

Relevant identified uses:

Life cycle stage [LCS]

SL: Service life

Sector of uses [SU]

SU 24: Scientific research and development

Product Categories [PC]

PC 21: Laboratory chemicals

Process categories [PROC]

PROC 9: Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC 15: Use as laboratory reagent

PROC 19: Manual activities involving hand contact

Environmental release categories [ERC]

ERC 2: Formulation into mixture (mixtures)

1.3. Details of the supplier of the safety data sheet

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

Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e.V. (AGQM)

Am Weidendamm 1A

10117 Berlin

Germany

Telephone: +49 (30) 726 259 80

Telefax: +49 (30) 726 259 85

E-mail: info@agqm-biodiesel.de

Website: www.agqm-biodiesel.de

E-mail (competent person): reach@agqm-biodiesel.de

1.4. Emergency telephone number

Giftnotruf Berlin/ Charité, 24h: +49 (30) 19240

REACH Compliance Office, +49 (30) 726 259 83 (Only available during office hours.)

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 2/10



Oxidation Stability Quality Check Material: PR1759

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 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 (chain length C16-C18).

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

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 1000 mg/kg (0.1%) in relation to the whole substance.

Ingredients / Impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 67762-38-3 EC No.: 267-015-4 REACH No.: 01-2119471664-32-XXXX	Fatty acids, C16-18 and C18-unsatd., Me esters The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	= 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:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion:

Do NOT induce vomiting.

Rinse mouth thoroughly with water.

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

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 3/10



Oxidation Stability Quality Check Material: PR1759

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.

5.3. Advice for firefighters

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

On danger by contact with substance: Wear protective gloves/protective clothing and eye protection/face protection.

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 leakside up to prevent the escape of liquid.

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.
Do not allow to enter into surface water or drains.

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.

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 4/10



Oxidation Stability Quality Check Material: PR1759

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 before breaks and after work.

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.

Hints on storage assembly:

Do not store together with: Oxidising agent, strong

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

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
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	6.96 mg/m ³	① DNEL worker ② Long-term - inhalation, systemic effects
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	23 mg/m ³	① DNEL Consumer ② Long-term - inhalation, systemic effects
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	10 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	5 mg/kg bw/ day	① DNEL worker ② Long-term - dermal, systemic effects

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2



Page 5/10

Oxidation Stability Quality Check Material: PR1759

Substance name	DNEL value	① DNEL type ② Exposure route
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	5 mg/kg bw/ day	① DNEL worker ② Long-term - oral, systemic effects

Substance name	PNEC Value	① PNEC type
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	2.504 mg/L	① PNEC aquatic, freshwater
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	0.2504 mg/L	① PNEC aquatic, marine water
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	520 mg/L	① PNEC sewage treatment plant
Fatty acids, C16-18 and C18-unsatd., Me esters CAS No.: 67762-38-3 EC No.: 267-015-4	25.04 mg/L	① PNEC aquatic, intermittent release

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment



Eye/face protection:

Wear eye/face protection.

Skin protection:

Hand protection: Wear protective gloves.

Suitable material: NBR (Nitrile rubber), Fluoropolymers

Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Other protection measures:

Has degreasing effect on the skin.

General health and safety measures: Wash hands and face before breaks and after work and take a shower if necessary.

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

Odour: mild

Colour: yellowish

flammability: No data available

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2



Page 6/10

Oxidation Stability Quality Check Material: PR1759

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	not applicable		② Dissolved substance quantity: < 0.023 mg/l
Melting point	$\geq -17 - \leq 16$ °C		① DIN ISO 3016
Freezing point	not applicable		
Initial boiling point and boiling range	$\geq 302.5 - \leq 570$ °C		① ASTM D 7169 ② pressure: 1013 mbar
Flash point	$\geq 120 - < 180$ °C		① EN ISO 2719
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	not applicable		
Vapour pressure	$\geq 2 - \leq 6$ mbar	25 °C	① EN 13016-1
Vapour density	No data available		
Density	$\geq 878 - \leq 895$ kg/m ³	15 °C	① EN ISO 3675
Bulk density	not applicable		
Water solubility	≈ 0.023 mg/L		
Partition coefficient: n-octanol/water	≥ 6.2		① OECD 107
Dynamic viscosity	$\geq 5.5 - \leq 8$ mPa·s	25 °C	① EN ISO 3104
Kinematic viscosity	No data available		
Self-ignition	$\geq 256 - \leq 266$ °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

Substance is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. The product is chemically stable under recommended conditions of storage, use and temperature.

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.

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 7/10



Oxidation Stability Quality Check Material: PR1759

SECTION 11: Toxicological information

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

Acute oral toxicity:

Acute toxicity (oral): LD₅₀: > 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:

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.

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)

Germ cell mutagenicity:

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

Carcinogenicity:

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.

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

Aspiration hazard:

-

* 11.2. Information on other hazards

Endocrine disrupting properties:

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

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2



Page 8/10

Oxidation Stability Quality Check Material: PR1759

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

EC₅₀ (48 h): 2504 mg/l Methode: OECD 202

EC₅₀ (72 h): 73729 mg/l Methode: OECD 201

Terrestrial toxicity:

LC₅₀: (freshwater fish) 100000 mg/l

12.2. Persistence and degradability

Additional information:

Further ecological information: 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

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, C16-18 and C18-unsatd., Me esters	CAS No.: 67762-38-3	EC No.: 267-015-4
---	---------------------	-------------------

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 non-target organisms.

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.

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 9/10



Oxidation Stability Quality Check Material: PR1759

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

07 01 99	(07) WASTES FROM ORGANIC CHEMICAL PROCESSES (01) Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals (99) wastes not otherwise specified
07 06 99	(07) WASTES FROM ORGANIC CHEMICAL PROCESSES (06) Wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics (99) Wastes not otherwise specified
07 07 99	(07) WASTES FROM ORGANIC CHEMICAL PROCESSES (07) wastes from the MFSU of fine chemicals and chemical products not otherwise specified (99) Wastes not otherwise specified

Waste treatment options

Appropriate disposal / Product:

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)
14.1. UN number or ID number			
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.
14.2. UN proper shipping name			
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.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Synthetic polymer microparticles (as per entry 78 in Annex XVII of Regulation (EC) No. 1907/2006)

No synthetic microparticles are present.

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compound (VOC) content: 0 weight-%

SAFETY DATA SHEET

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

Date of creation: 5 Jul 2020

Revised on: 17 Aug 2026

Version: 3, replaces version 2

Page 10/10



Oxidation Stability Quality Check Material: PR1759

15.1.2. National regulations

[DE] National regulations

Störfallverordnung (12. BlmschV)

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

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

16.1. Indication of changes

1.2.	Relevant identified uses of the substance or mixture and uses advised against
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
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

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://webriigoletto.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.

* Data changed compared with the previous version.

Literature

Allan J (2010). combined Repeated Dose Toxicity Study with the reproduction/Developmental Toxicity screening Test in Rats. Testing laboratory: Charles River. Report no.: 495325. Owner company: European Biodiesel Board.

Andre D, Mariette-Korotkoff I (2009). Flash Point determination of Esterol A - Equilibrium method, closed cup. Testing laboratory: Centre de Recherche Rhone-Alpes. Report no.: ANA GSP 1797-08. Owner company: Arkema. Report date: 2009-03-31.

Arffmann E., Glavind J. (1971). Tumor promoting activity of fatty acid methyl esters in mice. *Experientia* 27 (12), 1465-1466 (1971).

Arffmann E., Glavind J. (1974). Carcinogenicity in mice of some fatty acid methyl esters. Skin application. *Acta Pathol. Microbiolog. Scand.*, 1974;82:127-136.

Baxter S., Fish A. L. (1981). PARALLEL ACTIVITIES OF FATTY ACID METHYL ESTERS AND ANALOGOUS PHORBOL DIESTERS TOWARD MOUSE LYMPHOCYTES. Vol. 103, No. 1, 1981 BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS November 16, 1981 Pages 168-174.

Colas, S., Phycher (2010). FAME, according SDA group C10-C18 and C12-C22 (Biodiesel, broadband) Oral Toxicity on rats, OECD 423/EU-Method B.1-tris, 1 dose with 6 animals (incl. verification), Report no.: TAO423-PH-10/0284. Owner company: Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e.V.

Colas, S., Phycher (2010). FAME, according SDA group C10-C18 and C12-C22 (Biodiesel, broadband): Eye – Irritation, OECD 405/EU-Method B.5, 3 animals, Report no.: IO-OCDE-PH-10/0284. Owner company: Arbeitsgemeinschaft Qualitätsmanagement Biodiesel e.V.

Defleur P (1999). Ester methylique de colza. Etude eco toxicologique pour determination du WGK. Testing laboratory: Laboratoire BFB oil research S. A. Report no.: 15728. Owner company: Diester Industries.

Fina Research (1997). Assessment of the bioconcentration factor (BCF) of the fluid (67762-26-9) in the blue Mussel *Mytilus edulis*. Testing laboratory: Fina Research Laboratories. Report no.: ERT 97/241. Owner company: Fina Research. Study number: 184-6-2.

Gancet C (2009a). Fatty acids, C16-C18 and C18 unsaturated, methyl esters - Estimation of Adsorption Coefficient (Koc) on Soil and Sewage Sludge. Testing laboratory: Arkema Groupement de Recherches de Lacq - Analysis department. Report no.: 0066/09/A1. Owner company: Arkema France. Report date: 2010-01-14.

Gancet C (2009b). Fatty acids, C16 C18 and C18 unsaturated, methyl esters - fish (*Danio rerio*), acute toxicity test under semistatic conditions. Testing laboratory: Groupement de recherches de LACQ (GRL). Report no.: 0048/08/B. Owner company: Arkema. Report date: 2009-08-20.

Haddouk H. (1999). Bacterial reverse mutation test. Testing laboratory: CIT. Report no.: 18051 MMO. Owner company: ARKEMA former ATOCHEM. Report date: 1999-07-27.

Haddouk H. (2000). In vitro mammalian chromosome aberration test in cultured human lymphocytes. Testing laboratory: CIT. Report no.: 19877MLH. Owner company: ARKEMA former Elf Atochem SA. Report date: 2000-12-08.

Jackson D., Ogilvie S: (1994). Acute Dermal Toxicity (Limit) Test in Rabbit. Testing laboratory: Inveresk Research International. Report no.: 555703:94018/COCH:10482.

Fatty Acid Methyl Ester (FAME / Biodiesel)

Assigned to 'Fatty acids, C16-18 and C18-unsatd., methyl esters' and 'Vegetable oil, methyl esters'

Kaysen A. (1984a). METILOIL A. Evaluation de la toxicité aiguë chez le rat par voie orale. Testing laboratory: CIT. Report no.: 576 TAR. Owner company: ARKEMA former ATOCHEM. Report date: 1984-08-08.

Kaysen A. (1984b). METILOIL A. Evaluation de l'irritation cutanée chez le lapin. Testing laboratory: CIT. Report no.: 577 TAL. Owner company: ARKEMA former ATOCHEM. Report date: 1984-07-31.

Kaysen A. (1984c). METILOIL A. Evaluation de l'irritation oculaire chez le lapin. Testing laboratory: CIT. Report no.: 578 TAL. Owner company: ARKEMA former ATOCHEM. Report date: 1984-07-30.

Kenneth May (2008). Bacterial Reverse Mutation Test. Testing laboratory: Huntingdon Life Sciences. Owner company: Perstorp Specialty Chemicals AB. Study number: PGF0001. Report date: 2008-09-02.

Kiaer H. W., Arffmann, Glavind (1975). Carcinogenicity in mice of some fatty acid methyl esters. 2. Peroral and subcutaneous application. Acta Pathol Microbiol Scand A. 1975 Sep;83(5):550-8.

L'Haridon J (2003). Esterol A, Algal inhibition test. Testing laboratory: CIT, Evreux, France. Report no.: 23691. Owner company: Arkema formerly Atofina. Report date: 2003-04-02.

Manciaux X. (1999). Skin sensitization test in guinea-pigs (Maximization method of Magnusson, B. and Kligman, A. M.). Testing laboratory: CIT. Report no.: 18050. Owner company: ARKEMA former Elf Atochem S. A. Report date: 1999-08-20.

Mattson F. H. (1972). Hydrolysis of fully esterified alcohols containing from one to eight hydroxyl groups by the lipolytic enzymes of rat pancreatic juice. Journal of Lipid Research Volume 13, 1972.

Murray T. K., Campbell J. A., Hopkins C. Y., Chisholm M. J. (1958). The effect of mono-enoic fatty acid esters on the growth and fecal lipides of rats. Journal of the American Oil Chemists' Society, 35, 156-158.

Renner H. W. (1986). The anticlastogenic potential of fatty acid methyl esters. Mutation Research/Genetic Toxicology Volume 172, Issue 3, December 1986, Pages 265-269.

Stolz, JF, Follis, P, Donofrio, R, Buzzelli, J, Griffin, M (1995). Aerobic and Anaerobic Biodegradation of the Methyl Esterified Fatty Acids of Soy Diesel in Freshwater and Soil Environments. www.biodiesel.org/resources/reportsdatabase/viewall.asp. Testing laboratory: Duquesne University, Pittsburg.

Swern D et al (1970). Investigation of Fatty Acids and Derivatives for Carcinogenic Activity. CANCER RESEARCH 30, 1037-1046, April 1970.

Thiebaud H (1997). Esterol A Toxicité aiguë vis à vis des daphnies. Testing laboratory: DCRD Centre d'Application de Levallois, Service Analyse Environnement. Report no.: 97-SAEK/1356/CKE. Owner company: Arkema formerly ELF ATOCHEM S. A. Study number: 3714/94/A. Report date: 1997-11-06.

Thiébaud H (1995). Esterol A, détermination de la biodégradabilité facile, essai de dégagement de CO₂. Testing laboratory: DCRD, Centre d'application de Levallois, Service Analyse Environnement. Report no.: 3714/94/B. Owner company: Arkema formerly ELF ATOCHEM S. A. Report date: 1995-04-21.

Van Divoet (1999). Etude toxicologique. Testing laboratory: BFB research. Owner company: BFB research. Study number: 14447. Report date: 2000-07-21.

Wertz, W, Downing D. T. (1990). Metabolism of topically applied fatty acid methyl esters in BALB/C mouse epidermis. Journal of dermatological science, 1 (1990) 33-38 - Elsevier.

Zhang X., Peterson C. L., Reece D., Möller G., Haws R. (1998). Biodegradability of Biodiesel in the Aquatic Environment. Testing laboratory: Analytical Science Lab, Food Science and Toxicology. Owner company: University of Idaho, USA.