

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Biodiesel
EC no	: 273-606-8
CAS No.	: 68990-52-3
REACH registration No.	: 01-2119485821-32-0016
Product code	: 65E, 9AY; SDS# PbR0175
Synonyms	: Biodiesel B100, BIODIESEL SME Soyoil methyl ester, BIODIESEL TME Tallow methyl ester, BIODIESEL FAME Fatty acid methyl ester, BIODIESEL PME Palmoil methyl ester, BIODIESEL RME Rapeseed methyl ester
Product group	: Trade product

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

##### 1.2.1. Relevant identified uses

Use of the substance/preparation	: Fuels Manufacture of substances
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##### 1.2.2. Uses advised against

No additional information available

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

Petrobras International Braspetro B.V. – PIB BV  
Prins Bernhardplein 200, 1097 – JB Amsterdam  
The Netherlands

All communications shall be addressed exclusively to the following address:

Petrobras Europe Ltd  
4th Floor, 20 North Audley Street  
London W1K 6WL – United Kingdom  
Fax number: +44(0) 20 7355 8750  
E-mail: reach@petrobras.com.br

#### 1.4. Emergency telephone number

Emergency number	: For Chemical Emergency, Spill, Leak, Fire, Exposure or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada (collect calls accepted): 1-703-527-3887
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

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

Not classified

##### Adverse physicochemical, human health and environmental effects

None known.

#### 2.2. Label elements

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

No labelling applicable

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

other hazards which do not result in classification	: May cause minor eye irritation. Produced vapour or mist materials, may irritate the mucous membrane and cause dizziness, and nausea. The hot liquid may cause severe skin burns.
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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type	: UVCB
Name	: Fatty acids, vegetable-oil, Me esters
CAS No.	: 68990-52-3
EC no	: 273-606-8

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according to Regulation (EC) No. 453/2010

EC index no :

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Fatty acids, vegetable-oil, Me esters	(CAS No.) 68990-52-3 (EC no) 273-606-8	100	Not classified

  

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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Full text of R-, H- and EUH-phrases: see section 16.

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air. If you feel unwell, seek medical attention.
- First-aid measures after skin contact : Remove contaminated clothes. Wash skin with plenty of water and soap.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes.
- First-aid measures after ingestion : Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). If the person is fully conscious, make him/her drink water. Never give an unconscious person anything to drink. Seek medical attention if ill effect or irritation develops.

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

- Symptoms/injuries after inhalation : May cause irritation to the respiratory tract and to other mucous membranes. May cause drowsiness or dizziness. Nausea.
- Symptoms/injuries after skin contact : Heated product causes burns.
- Symptoms/injuries after eye contact : Slightly irritating to eyes.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media: : carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam. Water spray.
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

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

- Fire hazard : On combustion forms: Carbon dioxide. Carbon monoxide. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials should be stored in purpose-built containers or in metal containers with tight-fitting self-closing lids.
- Reactivity : Stable under normal conditions.

### 5.3. Advice for firefighters

- Protective equipment for firefighters : Fully enclosed impervious protective suit with integral or tight-fitting gloves, boots, self-contained or supplied air respirator must be worn. Extra personal protection: complete protective clothing including self-contained breathing apparatus. Refer to section 8.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.
- Emergency procedures : Eliminate every possible source of ignition. Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. Respiratory protection. Refer to section 8.
- Emergency procedures : Eliminate all ignition sources if safe to do so. Avoid contact with skin and eyes. Keep upwind. Stop leak if safe to do so.

### 6.2. Environmental precautions

Do not discharge into drains or the environment.

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

- For containment : Contain the spilled material by bunding.

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Methods for cleaning up : Collect spills and put it into appropriated container. Absorb remaining liquid with sand or inert absorbent and remove to safe place. wash floor surface with safety solvent or detergent to remove remaining oil film.

### 6.4. Reference to other sections

Refer to sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink and do not smoke in areas where product is used. Do not smoke.

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

Technical measures: : Ensure adequate ventilation of the storage area.  
Storage condition(s) : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep out of frost. Store at +15 °C to +25 °C.  
Incompatible materials : Strong oxidizing agents. strong alkalis.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>Biodiesel (68990-52-3)</b>	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6.96 mg/m <sup>3</sup> /day
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	23 mg/m <sup>3</sup> /day
Long-term - systemic effects, dermal	5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	2.504 mg/l
PNEC aqua (marine water)	0.2504 mg/l
PNEC aqua (intermittent, freshwater)	25.04 mg/l
PNEC (STP)	
PNEC sewage treatment plant	520 mg/l

### 8.2. Exposure controls

Appropriate engineering controls : not applicable.  
Personal protective equipment : Respiratory protection. Gas mask. Protective goggles. Gloves.



Hand protection : Protective gloves made of PVC.  
Eye protection : Chemical goggles or face shield.  
Respiratory protection : Wear approved mask. Approved organic vapour respirator.  
Environmental exposure controls : not applicable.

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Colour : colourless to slightly yellow.  
Odour : Mild.  
Odour threshold : No data available  
pH : Not applicable.  
Melting point : -16.92 - 15.59 °C  
Solidification point : No data available  
Boiling point : 354.3 °C  
Flash point : 172 - 174 °C  
Relative evaporation rate (butylacetate=1) : No data available  
Flammability (solid, gas) : Not flammable.

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Explosive limits	: No data available
Vapour pressure	: 4.2 mbar at 25 °C and 3.6 mBar at 20 °C
Relative vapour density at 20 °C	: Not available
Relative density	: 0.8881 g/cm <sup>3</sup> at 20 °C
Solubility	: Water: < 0.023 mg/l
Log Pow	: 6.2 at 25 °C
Log Kow	: No data available
Self ignition temperature	: 256 - 266 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 6.87 mm <sup>2</sup> /s at 20 °C
Viscosity, dynamic	: 6.1 mPa.s at 20 °C
Explosive properties	: No data available
Oxidising properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Stable. The product is stable at normal handling- and storage conditions.

### 10.3. Possibility of hazardous reactions

Reacts with (some) bases. produce methanol.

### 10.4. Conditions to avoid

Incompatible materials.

### 10.5. Incompatible materials

Strong oxidizing agents. strong alkalis.

### 10.6. Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Biodiesel (68990-52-3)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE (oral)	mg/kg
ATE (dermal)	mg/kg

Skin corrosion/irritation : Not classified

Not irritating  
pH: Not applicable.

Serious eye damage/irritation : Not classified

Not irritating  
pH: Not applicable.

Respiratory or skin sensitisation : Not classified

respiratory sensitisation: no data available  
This product has been reported not to cause skin sensitization.

Germ cell mutagenicity : Not classified

Negative

Carcinogenicity : Not classified

No carcinogenic effect

Reproductive toxicity : Not classified

Toxicity for Reproduction: based upon available data of the substances, classification criteria are not met.

Specific target organ toxicity (single exposure) : Not classified

No data available

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Specific target organ toxicity (repeated exposure) : Not classified

<b>Biodiesel (68990-52-3)</b>	
NOAEL (subchronic,oral, animal/male,90 days)	1000 mg/kg bodyweight

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : May cause minor eye irritation. Produced vapour or mist materials, may irritate the mucous membrane and cause dizziness, and nausea. The hot liquid may cause severe skin burns.

### SECTION 12: Ecological information

#### 12.1. Toxicity

<b>Biodiesel (68990-52-3)</b>	
LC50 fishes 1	100000 mg/l OECD 203/ Acute toxicity test
EC50 Daphnia 1	2504 mg/l OECD 202/ Daphnia sp. Acute Immobilisation (48 hours)
EC50 other aquatic organisms 1	73729 mg/l OECD 201/ Alga, Growth Inhibition test (72 hours) test mat. (nominal) Based on growth rate.

#### 12.2. Persistence and degradability

<b>Biodiesel (68990-52-3)</b>	
Persistence and degradability	Readily biodegradable.

#### 12.3. Bioaccumulative potential

<b>Biodiesel (68990-52-3)</b>	
Log Pow	6.2 at 25°C

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

<b>Biodiesel (68990-52-3)</b>	
This substance/mixture does not meet the PBT criteria of REACH, annex XIII.	
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.	

#### 12.6. Other adverse effects

Other adverse effects : The substance is considered stable in the environment range of pH that Hydrolysis happens with the presence of strong acids or basis, with release of methanol and fatty acid molecule.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations. Dispose of this material and its container to hazardous or special waste collection point.

Waste treatment methods : Incineration.

### SECTION 14: Transport information

Not a dangerous good in sense of transport regulations.

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

Contains no REACH candidate substance

##### 15.1.2. National regulations

Regional legislation : Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point.

#### 15.2. Chemical safety assessment

CSA has not been established

### SECTION 16: Other information

Sources of Key data : EBB - European Biodiesel Board.

Abbreviations and acronyms : ACGIH (American Conference of Government Industrial Hygienists). ASTM - American Society for Testing and Materials . CAS (Chemical Abstracts Service) number. CLP - Classification, Labelling and Packaging. CSR - Chemical Safety Report. EC - European Community. EEC - European Economic Community. GHS - Globally Harmonised System. IARC (International Agency for Research on Cancer). Overland transport (ADR). PVC (Polyvinyl chloride). REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals. SDS - Safety Data Sheet.

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SDS EU (REACH Annex II)

*The information presented in this Safety Data Sheet is based on current knowledge and is believed to be complete and accurate. It describes the product for the purposes of health, safety and environment requirements only and shall, therefore, be used only as a guide. The data refers to a specific product and may not be valid for combined uses with other products. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. Petrobras shall not be responsible for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices.*