

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

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

1.1. Product identifier

Trade name: Biodiesel

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

Recommended uses: Fuel.

Inadvisable uses: None.

1.3. Details of the supplier of the safety data sheet

Supplier

Company: Equinor ASA (Site: Mongstad)
Address: Forusbeen 50
Zip code: 4035
City: Stavanger
Country: NORWAY
E-mail: chem@equinor.com
Phone: +47 56 34 40 00

1.4. Emergency Telephone Number

Members of the public: 111 (NHS 111 (Scotland: NHS 24))

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification: Flam. Liq. 3;H226 Asp. Tox. 1;H304 Skin Irrit. 2;H315 Acute Tox. 4;H332 Carc. 2;H351 STOT RE 2;H373 Aquatic Chronic 2;H411

Most serious harmful effects: Flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects. The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication.

2.2. Label elements

Pictograms



Signal word: Danger

Contains

Substance: Fuels, Diesel;

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

H-phrases

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

P-phrases

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301/310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.

2.3. Other hazards

The product does not contain any PBT or vPvB substances.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No	EC No	REACH Reg. No.	Concentration	Notes	CLP-classification
Fuels, Diesel	68334-30-5	269-822-7	01-2119484664-27-0019	93 - 95%		Flam. Liq. 3;H226 Asp. Tox. 1;H304 Skin Irrit. 2;H315 Acute Tox. 4;H332 Carc. 2;H351 STOT RE 2;H373 Aquatic Chronic 2;H411
Renewable hydrocarbons (diesel type fraction)	928771-01-1	618-882-6	01-2119450077-42	3 - 4%		Asp. Tox. 1;H304
2-ethylhexyl nitrate	27247-96-7	248-363-6		0.05 %		Acute Tox. 4;H312 Acute Tox. 4;H332

Please see section 16 for the full text of H-phrases.

Ingredient comments: Max. 10 mg/kg sulphur.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:	Seek fresh air. Seek medical advice in case of persistent discomfort.
Ingestion:	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. If vomiting occurs, keep head low so that stomach contents do not enter lungs. Immediately call a POISON CENTER or doctor/physician.
Skin contact:	Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.
Eye contact:	Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Burns: Flush with water until pain ceases. Remove clothing that is not stuck to the skin - seek medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.

General: When obtaining medical advice, show the safety data sheet or label.

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

Harmful by inhalation. Irritating to skin - may cause reddening. May cause chemical pneumonia if ingested or vomited. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication.

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

No special immediate treatment required. Treat symptoms.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Extinguish with powder, foam or water mist. Use water or water mist to cool non-ignited stock.

Unsuitable extinguishing media: Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Can generate harmful flue gases containing carbon monoxide in the event of fire.

5.3. Advice for fire-fighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear respiratory protective equipment. Wear gloves. Wear suitable protective clothing. Wear safety goggles if there is a risk of eye splash. Stay upwind/keep distance from source. Keep unnecessary personnel away. Provide adequate ventilation. Smoking and naked flames prohibited.

For emergency responders: In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water. Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Work under effective process ventilation (e.g. local exhaust ventilation). A safety shower should be available. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk during pregnancy. Do not store, use and/or consume foods, beverages or tobacco products in the work room. Store personal protective equipment separately from other clothing. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Do not store with the following: Strong oxidisers. Store locked up. Keep in tightly closed original packaging. Store in a well-ventilated area.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: Contains no substances subject to reporting requirements.

Legal basis: #Not translated#

PNEC

Fuels, Diesel, cas-no 68334-30-5				
Exposure	Value	Assessment Factor	Extrapolation Method	Note
PNEC aqua (freshwater)	0,083 mg/l	1	Statistic extrapolation	

DNEL - workers

Fuels, Diesel, cas-no 68334-30-5					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Dermal DNEL (long-term exposure - systemic effects)	2,9 mg/m ³ /8h	24	NOEL		
Inhalation DNEL (long-term exposure - systemic effects)	68 mg/m ³ /8h	7,5	NOEL		
Inhalation DNEL (acute/short-term exposure - systemic effects)	4300 mg/m ³ /15m	7,5	NOAEC		
Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	147 mg/m ³				
Dermal DNEL (long-term exposure - systemic effects)	42 mg/kg bw/day				

DNEL - general population

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Fuels, Diesel, cas-no 68334-30-5					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (acute/short-term exposure - systemic effects)	2600 mg/m ³ /15m	7,5	NOAEC		
Dermal DNEL (long-term exposure - systemic effects)	1,3 mg/kg	24	NOAEL		
Inhalation DNEL (long-term exposure - systemic effects)	20 mg/m ³ /24h	7,5	NOEL		
Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1					
Exposure	Value	Assessment Factor	Dose Descriptor	Main Impact Parameter	Note
Inhalation DNEL (long-term exposure - systemic effects)	94 mg/m ³				
Dermal DNEL (long-term exposure - systemic effects)	18 mg/kg bw/day				

8.2. Exposure controls

- Exposure controls:** See enclosed exposure scenarios for further information.
- Appropriate engineering controls:** Wear the personal protective equipment specified below.
- Personal protective equipment, eye/face protection:** Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.
- Personal protective equipment, skin protection:** Wear suitable protective clothing.
- Personal protective equipment, hand protection:**
- Light use (small volume, shortterm contact (below 10 min.)): Wear gloves. Type of material: Nitrile rubber. Change gloves immediately if contaminated, and wash hands with soap and water.
 - Medium use (medium volume, medium contact (1-2 hours)): Type of material: Nitrile rubber. Wear coveralls.
 - Heavy use (high volume, longterm contact (more than 2 hours)): Wear gloves. Type of material: Nitrile rubber. Wear coveralls.
- Penetration time: >8 hours.
Gloves must conform to EN 374.
- Personal protective equipment, respiratory protection:**
- Light use (small volume, shortterm contact (below 10 min.)): Not required.
 - Medium use (medium volume, medium contact (1-2 hours)): In case of insufficient ventilation, wear respiratory protective equipment. Filter type: A.
 - Heavy use (high volume, longterm contact (more than 2 hours)): In case of insufficient ventilation, wear respiratory protective equipment. Filter type: A.
- Respiratory protection must conform to one of the following standards: EN 136/140/145.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
State	Liquid
Colour	Brown
Odour	Diesel.
Solubility	Insoluble in the following: Water.
Explosive properties	No data
Oxidising properties	No data

Parameter	Value/unit	Remarks
pH (solution for use)	No data	
pH (concentrate)	No data	
Melting point	-40 - 6 °C	
Freezing point	No data	
Initial boiling point and boiling range	141 - 500 °C	
Flash Point	65 °C	
Evaporation rate	No data	
Flammability (solid, gas)		Flammable
Flammability limits	> 225 °C	
Explosion limits	No data	
Vapour pressure	0.40 kPa	(40 °C)
Vapour density	No data	
Relative density	0.80 - 0.91	
Partition coefficient n-octanol/water	No data	
Auto-ignition temperature	> 225 °C	
Decomposition temperature	No data	
Viscosity	> 1.30 mm ² /s	(40 °C)
Odour threshold	No data	

9.2 Other information

Parameter	Value/unit	Remarks
Pour point:	-40 - 6 °C	

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with the following: Strong oxidisers.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

None known.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

10.4. Conditions to avoid

Avoid heating and contact with ignition sources.

10.5. Incompatible materials

Strong oxidisers.

10.6. Hazardous decomposition products

Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 7600mg/kg		OECD 420	

Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg		Method EC B1 tris	

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met. Ingestion may cause discomfort.

Acute toxicity - dermal

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		4300 mg/kg bw/day			

Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		> 2000mg/kg		Method EC B3	

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - inhalation

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50 (gases)	4h	4.1 mg/l		OECD 403	

Harmful by inhalation.

Skin corrosion/irritation

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit		24h		Irritating	OECD 404	

Irritating to skin - may cause reddening.

Serious eye damage/eye irritation

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit		72h		Non-irritating	OECD 405	

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met. Temporary irritation.

Respiratory sensitisation or skin sensitisation

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Guinea pig				Non-sensitising	OECD 406	

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Germ cell mutagenicity

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat			3000 mg/kg	No mutagenic effects observed.		

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Carcinogenic properties

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Mouse		3 weeks		Neoplastic effects observed.	OECD 451	

Suspected of causing cancer.

Reproductive toxicity

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
	NOAEC Inhalation		> 401ppm			
	NOAEL (Dermal)		125 mg/kg/day			
Rat		20d	125 mg/kg bw/day	Negative		

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Single STOT exposure:

The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication. The product does not have to be classified. Test data are not available.

Repeated STOT exposure

Fuels, Diesel, cas-no 68334-30-5

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat			500 mg/kg bw/day			
	Inhalation NOAEC	90d	> 1710mg/m3			
Rat	NOAEL (Dermal)	28d	0.5 ml/kg			

May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Aspiration hazard: May cause chemical pneumonia if ingested or vomited.

Other toxicological effects: None known.

SECTION 12: Ecological information

12.1. Toxicity

Fuels, Diesel, cas-no 68334-30-5

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Oncorhynchus mykiss	96h	96hLL50	21 mg/l			
Crustacea	Daphnia magna	48h	48hEL50	68 mg/l			
Algae		72h	72hIL50	22 mg/l			
Fish	Oncorhynchus mykiss	14d	14dNOEL	0.083 mg/l			
Crustacea	Daphnia magna	21d	21dNOEL	0.21 mg/l			

Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Name of species not specified	96 h	96hLL50	> 1000mg/l		OECD 203	
Crustacea	Name of species not specified	48 h	48hEL50	> 100mg/l		OECD 202	
Algae	Name of species not specified	72 h	72hEL50	> 100mg/l		OECD 201	
Crustacea	Name of species not specified	21 d	21dNOEC	1 mg/l		OECD 211	

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Fuels, Diesel, cas-no 68334-30-5

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
					Readily biodegradable.		

Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
					Readily biodegradable.	OECD 301 B	

Not expected to be biodegradable.

12.3. Bioaccumulative potential

Renewable hydrocarbons (diesel type fraction), cas-no 928771-01-1

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Kow	> 6.5		EC A8	

Bioaccumulation can be expected.

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

12.4. Mobility in soil

Not expected to be mobile in soil.

12.5. Results of PBT and vPvB assessment

The product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

The product affects the pH value of the local aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid release to the environment. Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

EWC code: Depends on line of business and use, for instance 13 07 01* fuel oil and diesel

Absorbent/cloth contaminated with the product: EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN-No.: 1202 14.2. UN proper shipping name: DIESEL FUEL	14.3. Transport hazard class(es): 3 Hazard label(s): 3 Hazard identification number: 30 Other Information: -	14.4. Packing group: III 14.5. Environmental hazards: The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.	Tunnel restriction code: D/E
--	---	--	-------------------------------------

Inland water ways transport (ADN)

14.1. UN-No.: 1202 14.2. UN proper shipping name: DIESEL FUEL	14.3. Transport hazard class(es): 3 Hazard label(s): 3 Transport in tank vessels: F + N2	14.4. Packing group: III 14.5. Environmental hazards: The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.	Other Information: -
--	---	--	-----------------------------

Sea transport (IMDG)

14.1. UN-No.: 1202	14.4. Packing group: III
---------------------------	---------------------------------

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

14.2. UN proper shipping name:	DIESEL FUEL	14.5. Environmental hazards:	The product must be labelled as a Marine Pollutant (MP) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	3	Environmental Hazardous Substance Name(s):	Fuels, Diesel
Hazard label(s):	3	IMDG Code segregation group:	- None -
EmS:	F-E, S-E		
Other Information:	-		

Air transport (ICAO-TI / IATA-DGR)

14.1. UN-No.:	1202	14.4. Packing group:	III
14.2. UN proper shipping name:	DIESEL FUEL	14.5. Environmental hazards:	The product must be labelled as an environmental hazard (symbol: fish and tree) in packaging sizes of more than 5 kg/l.
14.3. Transport hazard class(es):	3	Other Information:	-
Hazard label(s):	3		

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

Special Provisions:	<p>Special care should be applied for employees under the age of 18. Young people under the age of 18 may not carry out any work causing harmful exposure to this product.</p> <p>Directive 2012/18/EU (Seveso), E2 Hazardous to the Aquatic Environment in Category Chronic 2: Column 2: 200 t, Column 3: 500 t.</p> <p>Directive 2012/18/EU (Seveso), P5c FLAMMABLE LIQUIDS: Column 2: 5000 t, Column 3: 50000 t.</p> <p>Covered by: Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work. Council Directive 92/85/EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding</p>
----------------------------	---

15.2. Chemical Safety Assessment

Other Information:	Chemical safety assessments have been performed for the following substances: Fuels, diesel (68334-30-5 / 269-822-7)
---------------------------	---

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.0.0	24/08/2018	Bureau Veritas HSE/ SRU	New

Safety Data Sheet

Biodiesel

Issued: 24/08/2018
Version: 1.0.0

Abbreviations: PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
STOT: Specific Target Organ Toxicity
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration

Other Information: This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

Training advice: A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method: Calculation based on the hazards of the known components. Test data.

List of relevant H-statements

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

SDS is prepared by

Company: Bureau Veritas HSE Denmark A/S
Address: Oldenborggade 25
Zip code: 7000
City: Fredericia
Country: DENMARK
E-mail: infohse@dk.bureauveritas.com
Phone: +45 75 50 88 11
Fax: +45 75 50 88 10
Homepage: www.hse.bureauveritas.dk

Document language: GB