

Safety Data Sheet

1.0 IDENTIFICATION OF THE SUBSTANCE / MIXTURE

1.1 Product Identification

| | |
|-------------------------|--|
| Substance | Fatty acids, C14-18 and C16-18-unsatd., Me esters |
| Commercial Product Name | FAME (derived from various mixed UCO, animal fats and veg oils) |
| Synonyms | Fatty Acid Methyleneester, Biodiesel |
| CAS | 67762-26-9 |
| ECHA Registration No. | 01-2119471664-32-0072 |

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

| | |
|------------------------|---|
| Specific Use(s) | Component for blending into Diesel Fuel, Fuel for use in diesel engine road vehicles |
| Exposure Scenario(s) | n/a |
| Chemical Safety Report | 2010-07-26 CSR-PI-5.2.6 |

1.3 Details of the supplier of the SDS

| | |
|---------------|--|
| Company | Greenergy Fuels Limited High Holborn London WC1V 7BD UNITED KINGDOM |
| Telephone No. | 02074047700 |
| Email | msds-info@greenergy.com |

1.4 Emergency telephone number

| | |
|----------------------------|----------------------------|
| Emergency telephone number | +44 (0)1235 836 100 |
| Opening Hours | 24 / 7 |

| | |
|--------------|-------------|
| Version No | 4.0 |
| Last Updated | 22 Nov 2016 |
| Supersedes | 3.2 |

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

CLP-Classification: The product is non-hazardous in accordance with Directive 1272/2008/EEC.

2.2 Label elements

Labelling according to Regulation (EU) 1272/2008

No labelling applicable

Labelling according to Directives (67/548/EEC - 1999/45/EC)

Not relevant

Other Hazards

Not relevant

3.0 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

| Substance name | Product Identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP / GHS] |
|--|--|-----|---|
| Fatty acids.C14-18 and C16-18-unsatd Me esters | CAS no: 67762-26-9 EC no: 267-007-0 | 100 | Non-hazardous |

3.2 Mixtures

Not applicable

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

| | |
|---------------|--|
| Inhalation: | Keep at rest. Move to fresh air. Consult a physician if necessary. |
| Skin contact: | Wash immediately with soap and plenty of water. |
| Eye contact: | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist |
| Ingestion: | Do NOT induce vomiting. Rinse mouth with water If feels unwell, seek medical advice (show the MSDS where possible) |

4.2 Most important symptoms and effects, both acute and delayed

| | |
|---------------|---|
| Inhalation: | No adverse effects are expected. May cause irritation of respiratory tract |
| Skin contact: | No adverse effects are expected. Prolonged skin contact may cause skin irritation |
| Eye contact: | No adverse effects are expected. Contact with eyes may cause irritation. |
| Ingestion: | No adverse effects are expected |

4.3 Indication of immediate medical attention and special treatment needed

No data available

5.0 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use dry chemical, CO₂, water spray or alcohol resistant foam.

Extinguishing media which shall not be used for safety reasons: High volume water jet

5.2 Special hazards arising from the substance or mixture

Fire Hazard: Combustible material

Specific hazards: In case of fire hazardous decomposition products may be produced such as: Carbon oxides Fire or intense heat may cause violent rupture of packages. Heating may cause an explosion. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

5.3 Advice for firefighters

Special protective equipment for fire-fighters: Wear personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Evacuate personnel to safe areas. See also section 8. Keep people away from and upwind of spill/leak. Do not breathe vapours or spray mist

6.2 Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Remove all sources of ignition. Do not use tools which may produce sparks. Prevent further leakage or spillage if safe to do so. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dam up. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Dispose of in accordance with local regulations.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling: Avoid contact with skin, eyes and clothing. See also section 8. Use only in well-ventilated areas. Do not smoke. Do not breathe vapours or spray mist

7.2 Conditions for safe storage, including any incompatibilities

Storage: Do not store near or with any of the incompatible materials listed in section 10. Store in original container. Keep tightly closed in a dry, cool and well-ventilated place.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke

7.3 Specific end use(s)

Specific use(s): see Exposure scenarios

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Component: Fatty acids, C14-18 and C16-18-unsatd., Me esters (67762-26-9)
TLV-TWA (mg/m³): Non-hazardous

DNEL: n/a for substance not classified for acute toxicity

8.2 Exposure controls

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment.
 Recommended Filter type: A

Hand protection: Wear chemically resistant gloves tested in accordance with EN374

Eye protection: Safety glasses (EN 166)

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid
Colour: pale yellow/green to golden brown
Odour: characteristic

pH: no data available
Boiling point/boiling range: ca. 300 - 360°C
Melting point/range: ca. -20 to 12°C
Flash point: > 101°C
Explosive properties: no data available
Oxidizing properties: no data available
Evaporation rate: no data available
Vapour pressure: < 1 kPa @ 20°C
Vapour density: no data available
Solubility in water: not soluble (<0.023 mg/l, limit of detection)
Viscosity: 0.35 - 0.5 mm/s² @ 40°C
Density: 860 - 900 kg/m³ @ 15°C
Partition coefficient: Log Kow = 6.2 @ 25°C n-octanol/water

10.0 STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity: See also section 10.5

10.2 Chemical stability

Stability: Stable under normal conditions.

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid

Conditions to avoid: Exposure to sunlight, heat, flames and sparks.

10.5 Incompatible materials

Incompatible materials: Incompatible with strong acids and oxidizing agents. Bases

10.6 Hazardous decomposition products

Hazardous decomposition products: Burning produces noxious and toxic fumes. Possible decomposition products include COx

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

General Information

Acute toxicity

Component: Fatty acids, C14-18 and C16-18-unsatd., Me esters (67762-26-9)

LD50/oral/rat: > 5000 mg/kg

Inhalation: No adverse effects are expected. May cause irritation of respiratory tract

Skin contact: No adverse effects are expected. Prolonged skin contact may cause skin irritation

Eye contact: No adverse effects are expected. May cause eye irritation

Ingestion: No adverse effects are expected

Further information: No data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity effects: Non-hazardous

12.2 Persistence and degradability

Persistence and degradability: Readily biodegradable

12.3 Bioaccumulative potential

Bioaccumulation: Does not bioaccumulate
Partition coefficient: Log Kow = 6.2 @ 25°C n-octanol/water

12.4 Mobility in soil

Mobility: Immiscible

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products: Keep product and empty container away from heat and sources of ignition. Dispose of in accordance with local regulations. Where possible, recycling is preferred to disposal or incineration.

Codes of waste (2001/573/EC, Waste codes should be assigned by the user based on the 75/442/EEC, 91/689/EEC): application for which the product was used

14. TRANSPORT INFORMATION

Transport of dangerous goods regulations not applicable

15.0 REGULATORY INFORMATION

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

15.1.1 EU-Regulations

Not applicable

15.1. National regulations

Not applicable

15.2 Chemical Safety Assessment

Chemical Safety assessment: A Chemical Safety Assessment has been carried out for this substance.

16.0 OTHER INFORMATION

Updated sections: All sections reviewed and re-formatted

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Extended MSDS for Biodiesel - (Fatty Acid Methyl Ester)**Substance Name:** Fatty acids, C14-18 and C16-18-unsatd, Me esters**EC Number:** 267-007-0**CAS Number:** 67762-26-9**Substance Name:** Fatty acids, vegetable oil, Me esters**EC Number:** 273-606-8**CAS Number:** 68990-52-3**SUMMARY OF RISK MANAGEMENT MEASURES**

The substance is not classified as dangerous according to the criteria of the Dangerous Substances Directive (67/548/EEC) and CLP (Regulation CE 1272/2007). It is therefore not mandatory to develop and communicate specific Risk Management Measures to be implemented and it is not mandatory to communicate them by means of an extended MSDS.

Nevertheless, the exposure of workers during and after normal operations should be minimised by the use of good industrial hygiene practice, the general measures necessary for safety and health protection of workers (article 6 of Directive 89/391/EC) and the reduce-to-a-minimum principle (article 6 of Chemical Agents Directive 98/24/EC). The general measures appropriate to this substance are included within sections 4 to 7 of the MSDS: