



SAFETY DATA SHEET

SDS ID NO.: 0282MAR019
Revision Date: 03/16/2016

1. IDENTIFICATION

Product Name: Marathon Petroleum Biodiesel B100

Synonym: B100 Biodiesel; Virgin Biodiesel; Soy Biodiesel; Rapeseed Biodiesel; Tallow Biodiesel; Canola Biodiesel; Soybean Esters B100 Biodiesel; SME, Soy Methyl Ester; Biodiesel; Biomass Based Diesel; Fatty Acid Methyl Esters

Chemical Family: Fatty Acid Methyl Esters

Recommended Use: Fuel.
Use Restrictions: All others.

Supplier Name and Address:
Cincinnati Renewable Fuels LLC
A Subsidiary of Marathon Petroleum Corporation
4700 Este Ave
Cincinnati, OH 45232

SDS information: 1-419-421-3070

Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization	Category 1B
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)

Not applicable.

Label elements

EMERGENCY OVERVIEW

Danger

May be fatal if swallowed and enters airways
May cause an allergic skin reaction
Toxic to aquatic life

**Appearance** Clear Liquid**Physical State** Liquid**Odor** No data available.**Precautionary Statements - Prevention**

Avoid breathing mist/vapors/spray
 Wear protective gloves
 Contaminated work clothing should not be allowed out of the workplace
 Avoid release to the environment

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water
 If skin irritation or rash occurs: Get medical attention
 Wash contaminated clothing before reuse
 IF SWALLOWED: Immediately call a POISON CENTER or doctor
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Biodiesel is a complex mixture of C16-C18 methyl esters derived from the processing of vegetable oils.

Composition Information:

Name	CAS Number	% Concentration
Biodiesel (Soybean derived)	67784-80-9	98.7-99.9

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures

General Advice:	In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation:	Move victim to fresh air. Provide respiratory support, if necessary. Get medical attention if cough or other respiratory symptoms develop.
Skin Contact:	Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation or rash occurs. Wash contaminated clothing before re-use.
Eye Contact:	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: If swallowed, DO NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Get immediate medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: May cause sensitization by skin contact. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking. Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Indication of any immediate medical attention and special treatment needed

Notes To Physician: INGESTION: Do not induce vomiting. Low viscosity product can be sucked into the lungs and cause damage after swallowing or vomiting. The metabolism of fatty acid methyl ester may release free methanol in the body that could induce metabolic acidosis with delayed effects. If a large amount of product is ingested, i.e. several ounces, consider the use of ethanol or fomepizole (Antizol) and hemodialysis. Consult standard literature or contact a poison control center for treatment details.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam or water spray can be used. For large fires, water spray, fog or foam can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product is not a flammable liquid per the OSHA Hazard Communication Standard, but may ignite and/or burn at temperatures exceeding the flash point. Spontaneous combustion may occur under high temperature, closed conditions if material is absorbed in various fiber matrices and oxygen is present (e.g. oily rags).

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Additional firefighting tactics

Not applicable.

NFPA

Health 2

Flammability 1

Instability 0

Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. All contaminated surfaces will be slippery.

Protective equipment: Use personal protection measures as recommended in Section 8.

Emergency procedures:	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions:	Avoid release to the environment. Avoid subsoil penetration.
Methods and materials for containment:	Contain liquid with sand or soil.
Methods and materials for cleaning up:	Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Safe Handling Precautions:	NEVER SIPHON THIS PRODUCT BY MOUTH. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Avoid repeated and prolonged skin contact. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.
Storage Conditions:	Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Store wiping rags in metal cans with tightly fitting lids. Corrosion and microbial growth are promoted by the presence of water. Avoid contamination by storing in water-free tanks with scheduled water drainage. Contact with copper/alloys, lead, tin and zinc may result in increased sediment and deposits that can plug filters. Degradation can be avoided by preventing temperature extremes and the presence of air during storage.
Incompatible Materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Biodiesel (Soybean derived) 67784-80-9	-	-	-	-

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures:	Ensure adequate ventilation, especially in confined areas. Local or general exhaust required when using at elevated temperatures that generate vapors or mists. Use mechanical ventilation equipment that is explosion-proof.
<u>Personal protective equipment</u>	
Eye protection:	Use goggles or face-shield if the potential for splashing exists.
Skin and body protection:	Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.
Respiratory protection:	Breathing apparatus needed when aerosol or mist is formed. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear Liquid
Color	Clear
Odor	No data available.
Odor Threshold	No data available.
Property	Values (Method)
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	288-366 °C / 550-690 °F (ASTM D1160)
Flash Point	171-199 °C / 340-390 °F (ASTM D93)
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion limits:	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.
Specific Gravity / Relative Density	0.88 (ASTM D4052)
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	No data available.
Decomposition temperature	No data available.
pH:	Not applicable.
Autoignition Temperature	374-449 °C / 705-840 °F
Kinematic Viscosity	3.90-4.05 cSt @ 40°C (ASTM D445)
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	No data available.
Density	No data available.

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	The product is non-reactive under normal conditions.
<u>Chemical stability</u>	The material is stable at 70°F, 760 mmHg pressure.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Hazardous polymerization</u>	Will not occur.
<u>Conditions to avoid</u>	Excessive heat, sources of ignition, open flame. Water contamination during storage.
<u>Incompatible Materials</u>	Strong oxidizing agents.
<u>Hazardous decomposition products</u>	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation	Excessive inhalation of mist may result in respiratory irritation. Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.
Eye contact	Produces little or no irritation on direct contact with the eye.
Skin contact	May cause sensitization by skin contact. Prolonged and repeated contact may cause defatting and drying of the skin and may lead to irritation and/or dermatitis.

Ingestion

Ingestion of large amounts may cause gastrointestinal disturbances. Aspiration into lungs may cause chemical pneumonia and lung damage.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Biodiesel (Soybean derived) 67784-80-9	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

BIODIESEL (SOYBEAN DERIVED): Dermal sensitization study (Guinea Pigs) repeat insult patch procedure with induction and challenge patches indicated a positive sensitization response.

Adverse effects related to the physical, chemical and toxicological characteristics**Signs and Symptoms**

May cause allergic skin reaction. Symptoms may include redness, itching, and inflammation. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking. Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Sensitization

May cause sensitization by skin contact. Not expected to be a respiratory sensitizer.

Mutagenic effects

None known.

Carcinogenicity

None known

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Biodiesel (Soybean derived) 67784-80-9	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity

None known.

Specific Target Organ Toxicity (STOT) - single exposure

Not classified.

Specific Target Organ Toxicity (STOT) - repeated exposure

Not classified.

Aspiration hazard

May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The 24-hour LC50 for biodiesel is 4.65 mg/L in Daphnia magna (water flea) juveniles (J. Air & Waste Manage. Assoc. 57:286–296). This product should be considered toxic to aquatic organisms.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Biodiesel (Soybean derived) 67784-80-9	-	-	-	-

Persistence and degradability

Expected to be readily biodegradable under aerobic conditions.

Bioaccumulation

Not expected to bioaccumulate in aquatic organisms.

Mobility in soil

May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues

Long-term storage may result in decomposition of the oil and could result in a rancid odor.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Do not expose to heat, open flames, strong oxidizers or other sources of ignition.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Not Regulated
UN/Identification No:	Not applicable
Transport Hazard Class(es):	Not applicable.
Packing Group:	Not applicable.

TDG (Canada):

UN Proper Shipping Name:	Not Regulated
UN/Identification No:	Not applicable.
Transport Hazard Class(es):	Not applicable.
Packing Group:	Not applicable.

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b):	This product and/or its components are listed on the TSCA Chemical Inventory.
--	---

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Biodiesel (Soybean derived)	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Biodiesel (Soybean derived)	NA

SARA: The following EPA hazard categories apply to this product:

Acute Health Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Biodiesel (Soybean derived)	None

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Biodiesel (Soybean derived)	
Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To-Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Canada DSL/NDL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Biodiesel (Soybean derived)	D2B	1%



NOTE: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Date: 03/16/2016

Revision Note:

Revised Sections

The following sections (§) have been updated:

2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
9. PHYSICAL AND CHEMICAL PROPERTIES
11. TOXICOLOGICAL INFORMATION
12. ECOLOGICAL INFORMATION

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.