

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## Section 1: Identification

**Product Identifier:**

**Biodiesel, B100**

**SDS Number:**

**826514**

**Synonyms/Other Means of Identification:**

B99

**Intended Use:**

Fuel

**Uses Advised Against:**

All others

**Manufacturer:**

Phillips 66 Company  
P.O. Box 4428  
Houston, Texas 77210

**SDS Information:**

Phone: 800-762-0942  
Email: SDS@P66.com  
URL: www.Phillips66.com

**Emergency Health and Safety Number:**

Chemtrec: 800-424-9300 (24 Hours)

**Customer Service:**

800-527-5476

*Technical Information:* 800-527-5476

## Section 2: Hazards Identification

**Classified Hazards**

H304 -- Aspiration Hazard -- Category 1

**Other Hazards**

None Known

### Label Elements

**DANGER**

May be fatal if swallowed and enters airways.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician; Do NOT induce vomiting; Dispose of contents/container to approved disposal facility



## Section 3: Composition / Information on Ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Soybean oil, Me ester	67784-80-9	0-100
Fatty acids, vegetable-oil, Me esters	68990-52-3	0-100
Rape oil, Me ester	73891-99-3	0-100
Methanol	67-56-1	<0.2

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## Section 4: First Aid Measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

**Ingestion (Swallowing):** Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

#### Most important symptoms and effects

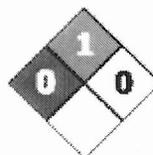
**Acute:** None known or anticipated

**Delayed:** None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.

### Section 5: Fire-Fighting Measures

#### NFPA 704 Hazard Class

Health: 0    Flammability: 1    Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

#### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

### Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## Section 7: Handling and Storage

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

For use as a motor fuel only. Do not use as a solvent due to its flammable and potentially toxic properties. Siphoning by mouth can result in lung aspiration which can be harmful or fatal.

The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g. carbon monoxide, oxides of sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels.

Diesel engine exhaust contains hazardous combustion products and has been identified as a cancer hazard. Exposure should be minimized to reduce potential risk.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## Section 8: Exposure Controls / Personal Protection

Chemical Name	ACGIH	OSHA	Other
Methanol	STEL: 250 ppm TWA: 200 ppm Skin	TWA: 200 ppm TWA: 260 mg/m <sup>3</sup>	---

**Note:** State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## Section 9: Physical and Chemical Properties

Data represent typical values and are not intended to be specifications. N/A = Not Applicable; N/D = Not Determined

**Appearance:** Pale yellow to amber

**Physical Form:** Liquid

**Odor:** Slight

**Odor Threshold:** No data

**pH:** Not applicable

**Vapor Density (air=1):** >1

**Upper Explosive Limits (vol % in air):** No data

**Lower Explosive Limits (vol % in air):** No data

**Evaporation Rate (nBuAc=1):** No data

**Particle Size:** N/A

**Percent Volatile:** No data

**Flammability (solid, gas):** N/A

**Flash Point:** > 200 °F / > 93 °C

**Test Method:** Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010

**Initial Boiling Point/Range:** > 392 °F / 200 °C

**Vapor Pressure:** <2 mm Hg

**Partition Coefficient (n-octanol/water) (Kow):** No data

**Melting/Freezing Point:** No data

**Auto-ignition Temperature:** No data

**Decomposition Temperature:** No data

**Specific Gravity (water=1):** 0.88 @ 60°F (15.6°C)

**Bulk Density:** N/D

**Viscosity:** 1.9-6.0mm<sup>2</sup>/s @ 40°C

**Solubility in Water:** Negligible

## Section 10: Stability and Reactivity

**Reactivity:** Stable under normal ambient and anticipated conditions of use.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## Section 11: Toxicological Information

### Information on Toxicological Effects of Substance/Mixture

<u>Acute Toxicity</u>	<u>Hazard</u>	<u>Additional Information</u>	<u>LC50/LD50 Data</u>
Inhalation	No information available		No data
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** May be fatal if swallowed and enters airways.

**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Causes mild eye irritation.

**Symptoms of Overexposure:** No known effects of overexposure.

**Skin Sensitization:** Not expected to be a skin sensitizer.

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

## Section 12: Ecological Information

**GHS Classification:**  
No classified hazards

**Toxicity:** Experimental studies with zebra fish, daphnia, and fresh water algae show that acute aquatic toxicity values are greater than 1000 mg/L and indicate that FAME is not expected to be harmful to aquatic organisms. FAME is not classified as a hazard to aquatic organisms under globally harmonized system (GHS) criteria.

**Persistence and Degradability:** The hydrocarbons in this material are readily biodegradable.

**Bioaccumulative Potential:** The Log Kow value measured for FAME is 6.2 and is expected to have the potential for bioaccumulation in aquatic organisms. In practice, metabolic processes may reduce bioconcentration and metabolites may partially bioaccumulate in the lipid bilayer of fish tissues.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, this material will float and spread over the surface at a rate dependent upon viscosity. The main fate process is expected to be biodegradation in water, soil, and sediment.

**Other Adverse Effects:** None anticipated.

## Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

Container contents should be completely used and containers should be emptied prior to discard.

## Section 14: Transport Information

U.S. Department of Transportation (DOT)

Shipping Description: *Not regulated*

International Maritime Dangerous Goods (IMDG)  
Shipping Description: *Not regulated*

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)  
UN/ID #: *Not regulated*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #:	---	---	---
Max. Net Qty. Per Package:	---	---	---

### Section 15: Regulatory Information

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):  
This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health: No  
Chronic Health: No  
Fire Hazard: No  
Pressure Hazard: No  
Reactive Hazard: No

CERCLA/SARA - Section 313 and 40 CFR 372:  
This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds):  
This material does not contain any chemicals with CERCLA Reportable Quantities.

**California Proposition 65:**  
Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Chemical Name	Type of Toxicity
Methanol	Developmental Toxicant

Diesel engine exhaust is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

International Hazard Classification

**Canada:**  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

**WHMIS Hazard Class:**  
None

**National Chemical Inventories**  
All components are either listed on the US TSCA Inventory, or are not regulated under TSCA  
All components are either on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

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**Section 16: Other Information**

Date of Issue:	Previous Issue Date:	SDS Number:	Status:
15-Jan-2013	None	826514	FINAL

**Revised Sections or Basis for Revision:**  
New SDS

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

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