

TYPE 2 - Vegetable &
ANIMAL FATS

SPECIFICATION FOR BIODIESEL (B100) ASTM 6751-02

Biodiesel is defined as mono-alkyl esters of long chain fatty acids derived from vegetable oils and animal fats, for use in compression-ignition (diesel) engines. This specification is for pure (100%) biodiesel prior to use or blending with diesel fuel.

Property	ASTM Method	Limits	Bio G-3000	Units
Flash Point	D93	130.0	>130	Degrees C
Water & Sediment	D2709	0.050 max.	0.01	% vol.
Kinematic Viscosity, 40C	D445	1.9-6.0	4.22	mm ² /sec.
Sulfated Ash	D874	0.020 max	<0.01	% mass
Sulfur	D5453	0.0015 max.	<0.0015	% mass
Copper Strip Corrosion	D130	No. 3 max.	1B	
Cetane	D613	47 min.	53	
Cloud Point	D2500	Report to Customer	+4	Degrees C
Carbon Residue 100% sample	D4530**	0.050 max.	0.03	% mass
Acid Number	D664	0.80 max.	0.50	mg KOH/g
Free Glycerin	D6584	0.020 max.	0.01	% mass
Total Glycerin	D6584	0.240 max.	0.08	% mass
Distillation	1160	360 max.	352	Degrees C
Phosphorus	4951	0.001 max.	<0.0005	% mass

- * To meet special operating conditions, modifications of individual limiting requirements may be agreed upon between purchaser, seller and manufacturer.
- ** The carbon residue shall be run on the 100% biodiesel sample.
- *** Austrian (Christina Plank) update of USDA test method. See NBB for documentation.
- # A considerable amount of experience exists in the US with a 20% blend of biodiesel with 80% diesel fuel (B20). Although biodiesel (B100) can be used, blends of over 20% biodiesel with diesel fuel (B20) should be evaluated on a case by case basis until further experience is available.

THIS SPECIFICATION HAS THE SAME TEST METHODS AND LIMITS AS THE NEWLY APPROVED ASTM D6751-02



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Material Safety Data Sheet

Manufacturer's Name:

Griffin Industries, Inc.
4221 Alexandria Pike
Cold Spring, KY 41076

Section I - Product Identification

Common Name: BioDiesel
Chemical Name: Fatty Acid Methyl Esters
Formula: C14-C24 Methyl esters
Chemical Family: CAS No: 67784-80-9

Section II - Ingredients and Hazardous Classification

Typical Composition:
Alkyl C14-C24 Methyl Esters

OSHA PEL
none

ACGIH TLV
none

Percent:
99

This Product Contains no Hazardous materials

SARA Title III Section 313 : Not Listed

Section III - Physical/Chemical Characteristics

Boiling Point: >400° F

Vapor Pressure (mm Hg): <5 mm Hg @ 72°F

Evaporation Rate: less than .005 versus (Butyl Acetate = 1)

Solubility in Water: insoluble

Appearance and Odor: Light to dark yellow Clear Liquid/ Light musty odor

Specific Gravity (H₂O = 1) 0.87 @ 25°C

Melting Point: -1° C

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): 321° F PMCC

Flammable Limits: N/A

HMIS Rating

HEALTH: 0

FIRE: 1

REACTIVITY: 0

Extinguishing Media: Use water spray, dry chemical, foam or carbon dioxide

Special Fire Fighting Procedures: Treat as Oil fire

Unusual Fire and Explosion Hazards: Rags soaked with any solvent present a fire hazard and should be stored in an approved UL listed covered container

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Reactivity: Stable
Conditions to Avoid: None Known
Incompatibility (Materials to Avoid): Strong Oxidizing agents
Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide
Hazardous Polymerization: Will Not Occur

Section VI - Health Hazard Data

Inhalation: No known problems
Skin Contact: Not classified as a skin irritant or corrosive material
Eye Contact: Not classified as eye irritants
Ingestion: LD50 >2000 mg/kg (rat)
Carcinogenicity:
OSHA Regulated: No **NTP:** No **IARC Monographs:** No

Emergency and First Aid Procedures:

Ingestion: Rinse mouth with water, contact physician.
Eyes: Rinse with water 15 min, contact physician
Skin: Rinse with water and soap

Section VII - Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled:
Avoid uncontrolled releases. Contain spilled material. Transfer to secure containers. Use absorbent media if necessary
Disposal: Dispose of according to Federal, state and/or local regulations
Precautions To Be Taken in Handling and Storing: Avoid open flames
Other Precautions - None

Section VIII - Control Measures

Respiratory Protection - None required
Ventilation - Mechanical
Protective Gloves - Rubber
Eye Protection - Safety Glasses/splash goggles
Other Protective Clothing or Equipment - None required
Work/Hygienic Practices - Use general hygienic work procedures

Transportation

DOT Code: N/A
DOT Shipping Name: fatty acid esters
Other Regulatory: Listed in TSCA inventory

Date prepared: 6/15/98
Person Responsible
For Preparation: T. Dobbs 859-472-7353

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