



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA COMMERCIAL ITEM DESCRIPTION (PCID)

PCID NO. 1107
 Eff. Revised 06/05/19

Biodiesel Fuel, B100
 (Supersedes 03/28/13)

This Pennsylvania Commercial Item Description covers Biodiesel fuel for use as an additive for blending with industry standard #2 Heating Oil or Diesel fuels to provide a more environmentally preferable fuel product to be used in fuel oil burners or diesel combustion engines. The percentage blended shall be as specified in the request for proposals or invitation for bids.

1. Requirements

- 1.1 Properties – a fuel comprised of mono-alkyl esters of long chain fatty acids derived from virgin soybean, rapeseed, corn, or canola oils. This specification is for pure (100%) biodiesel prior to blending, designated B100.
- 1.2 Characteristics – The minimum chemical and physical characteristics shall be as specified in Table I:
- 1.3 Reference – ASTM specification D 6751-19 or current version Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels.

Table I:

Characteristic	Test Method	ASTM D-6751 / EN14214 Specification
Viscosity at 40° C (mm ² /s)	D 445	1.9 – 6.0
Flash Point °C (Closed Cup)	D 93	93 min.
Sulfated Ash % mass	D 874	.020 max
Water and Sediment % by Volume	D 2709	.050 max
Distillation Temperature °C	D 1160	360 max
Carbon Residue % mass	D 4530	.050 max
Sulfur % mass (ppm) *	D 5453	.0015 max (15)
Cetane Number	D 613	47 min
Cloud Point °C	D 2500	Report **
Copper Strip Corrosion	D 130	No. 3 max
Acid Number mg KOH/gm	D 664	.50 max
Free Glycerin % mass	D 6584	.020
Total Glycerin % mass	D 6584	.24
Phosphorus Content % mass	D 4951	.001 max
Sodium and Potassium, combined (ppm)	EN 14538	5 max
Oxidation Stability hours	EN 15751	3 min
Alcohol Control: One of the following must be met:		
1. Methanol Content % Volume	EN 14110	.2 max
-----	-----	-----
2. Flash Point °C	D 93	130 min
Ester Content % mass	EN 14103	96.5 min.
CFPP °F	D 6371 / EN 116	32 max.

* Sulfur content shall comply with Federal, State, and Local regulations.

**The cloud point of biodiesel is generally higher than petroleum based diesel fuel and should be taken into consideration when blending.

1.4 The product covered by this specification must meet the Department of Environmental Protection, Bureau of Air Quality standards, Pennsylvania Code, Title 25.

1.5 The biodiesel fuel shall be visually free of undissolved water, sediment, and suspended matter.

1.6 Compliance and Testing - Bidders must provide typical test data for all or some characteristics shown on Table I upon request by the Department of General Services, Commonwealth of Pennsylvania. Special requests for fuel testing maybe made by the Department of General Services, Commonwealth of Pennsylvania with the department paying for these tests.

2. Material Masters – Not applicable.

3. Bulk Deliveries - Deliveries shall be made in accordance with good commercial practice.

4. Documents

American Society for Testing and Materials (ASTM)
100 Bar Harbor Drive
West Conshohocken, Pennsylvania 19428-2959

Quality Assurance Specialist: Gerald Grecek 

Quality Assurance Supervisor: Brian Vulgaris 