

The parameters for B100 fuel are specified through the biodiesel standard, ASTM D6751. This standard identifies the parameters that pure biodiesel (B100) must meet before being used as a pure fuel or being blended with petrodiesel.

Section: BIOFUELS
Specification for Biodiesel (B100)

Property	ASTM Method	Limits	Units
Calcium and Magnesium, combined	EN 14538	5 max.	ppm
Flash Point	D93	93.0	Degrees C
Alcohol Control (one of the following must be met)			
1. Methanol Content	EN 14110	0.2 max	% mass
2. Flash Point	D93	130 min	Degrees C
Water & Sediment	D2709	0.050 max	% vol
Kinematic Viscosity, 40°C	D445	1.9 - 6.0	mm ² /sec
Sulfated Ash	D874	0.020 max	% mass
Sulfur S15 Grade	D5453	0.0015 max	% mass (ppm)
Sulfur S500 Grade	D5453	0.05 max	% mass (ppm)
Copper Strip Corrosion	D130	No. 3 max	
Cetane Number	D613	47 min	
Cloud Point	D2500	Report to customer	Degrees C
Carbon Residue 100% sample ^a	D4530	0.050 max	% mass
Acid Number	D664	0.50 max	mg KOH/gm
Free Glycerin	D6584	0.020 max	% mass
Total Glycerin	D6584	0.240 max	% mass
Phosphorus Content	D 4951	0.001 max	% mass
Distillation, T90 AET	D 1160	360 max	Degrees C
Sodium/Potassium, combined	EN 14538	5 max	ppm
Oxidation Stability	EN 14112	3 min	hours
Cold Soak Filterability	Annex to D6751	360 max	seconds
For use in temperatures below -12 C	Annex to D6751	200 max	seconds

Source:

National Renewable Energy Laboratory, Biodiesel Handling and Use Guide, Fourth Edition, NREL/TP-540-43672, January 2009.
<http://www.nrel.gov/vehiclesandfuels/pdfs/43672.pdf>

Note:

T90=Temperature 90% recovered; AET=Atmospheric equivalent temperature.

^aThe carbon residue shall be run on the 100% sample.