SPECIFICATION FOR BIODIESEL (B100) – ASTM D6751-09

November 2008

Biodiesel is defined as the mono alkyl esters of long chain fatty acids derived from vegetable oils or 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	Units
Calcium and Magnesium	EN 14538	5 max, combined	ppm
Flash Point (closed cup)	**D93**	**93 min.**	**Degrees C**
1. Methanol Content	EN141110	.2 maximum	% volume
2. Flash Point	D93	130 minimum	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 (S 15 Grade)	**D5453**	**.0015 max.**	**ppm**
Sulfur (S 500 Grade)	**D5453**	**.05 max**	**ppm**
Copper Strip Corrosion	D130	No. 3 max.	
Cetane	D613	47 min.	
Cloud Point	**D2500**	**Report**	**Degrees C**
Carbon Residue 100% sample	D4530*	0.050 max.	% mass
Cold Soak	**D664**	**0.50 max.**	**mg KOH/gm**
Free Glycerin	**D6584**	**0.020 max.**	**% mass**
Total Glycerin	**D6584**	**0.240 max.**	**% mass**
Phosphorus Content	D4951	0.001 max.	% mass
Distillation Temp, Atmospheric Equivalent Temperature, T90	D1160	360 max.	Degrees C
Sodium/Potassium	EN 14538	5 max, combined	ppm
Oxidation Stability	**EN 14112**	**3 min.**	**hours**
Cold Soak Filtration	**Annex to D6751**	**360 maximum**	**seconds**
For use in temperatures below -12C	**Annex to D6751**	**200 maximum**	**seconds**

BOLD = BQ-9000 Critical Specification Testing Once Production Process Under Control

* The carbon residue shall be run on the 100% sample.

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 should be evaluated on a case-by-case basis until further experience is available.