



## SPECIFICATION FOR BIODIESEL (B100) – ASTM D6751-12

#Biodiesel (B100) and the petroleum diesel must meet their respective ASTM specifications before blending.

| Property                      | ASTM Method              | No. 1-B           | No. 2-B           | Units                 |
|-------------------------------|--------------------------|-------------------|-------------------|-----------------------|
| Calcium & Magnesium, combined | EN 14538                 | 5 max             | 5 max             | ppm (µg/g)            |
| Flash Point (closed cup)      | D93                      | 93 min            | 93 min            | °C                    |
| <b>Monoglycerides</b>         | <b>D6584</b>             | <b>0.4 max</b>    | <b>N/A</b>        | <b>mass %</b>         |
| <b>1. Methanol Content***</b> | <b>EN 14110</b>          | <b>0.2 max</b>    | <b>0.2 max</b>    | <b>mass %</b>         |
| <b>2. Flash Point***</b>      | <b>D93</b>               | <b>130 min</b>    | <b>130 min</b>    | <b>°C</b>             |
| <b>Water &amp; Sediment</b>   | <b>D2709</b>             | <b>0.05 max</b>   | <b>0.05 max</b>   | <b>% vol.</b>         |
| Kinematic Viscosity, 40 C     | D445                     | 1.9 – 6.0         | 1.9 – 6.0         | mm <sup>2</sup> /sec. |
| Sulfated Ash                  | D874                     | 0.02 max          | 0.02 max          | % mass                |
| <b>Sulfur</b>                 | <b>D5453</b>             |                   |                   |                       |
| <b>S 15 Grade</b>             |                          | <b>0.0015 max</b> | <b>0.0015 max</b> | <b>% mass (ppm)</b>   |
| <b>S 500 Grade</b>            |                          | <b>0.05 max</b>   | <b>0.05 max</b>   | <b>% mass (ppm)</b>   |
| Copper Strip Corrosion        | D130                     | No. 3 max         | No. 3 max         | N/A                   |
| Cetane                        | D613                     | 47 min            | 47 min            | N/A                   |
| <b>Cloud Point</b>            | <b>D2500</b>             | <b>Report</b>     | <b>Report</b>     | <b>°C</b>             |
| Carbon Residue 100% sample*   | D4530                    | 0.05 max          | 0.05 max          | % mass                |
| <b>Acid Number</b>            | <b>D664</b>              | <b>0.5 max</b>    | <b>0.5 max</b>    | <b>mg KOH/g</b>       |
| <b>Free Glycerin</b>          | <b>D6584</b>             | <b>0.020 max</b>  | <b>0.020 max</b>  | <b>% mass</b>         |
| <b>Total Glycerin</b>         | <b>D6584</b>             | <b>0.240 max</b>  | <b>0.240 max</b>  | <b>% mass</b>         |
| Phosphorus Content            | D4951                    | 0.001 max         | 0.001 max         | % mass                |
| Distillation                  | D1160                    | 360 max           | 360 max           | °C                    |
| Sodium/Potassium, combined    | EN 14538                 | 5 max             | 5 max             | ppm (µg/g)            |
| <b>Oxidation Stability</b>    | <b>EN 15751</b>          | <b>3 min</b>      | <b>3 min</b>      | <b>hours</b>          |
| <b>Cold Soak Filtration**</b> | <b>D7501</b>             | <b>200 max</b>    | <b>360 max</b>    | <b>seconds</b>        |
| <b>Workmanship****</b>        | Visual /<br><b>D4176</b> | Clear & Free      | Clear & Free      | visual                |

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

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

\*\* 200 seconds maximum for use in temperatures at or below -12°C

\*\*\* Either parameter is to be met

\*\*\*\* The BQ-9000 requirement is to have a Haze rating of 2 max by D4176

# 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.