

US: FUELS: BIODIESEL SPECIFICATIONS

History

The first national biodiesel specification in the US was the American Society for Testing & Materials (ASTM) standard D6751, Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels. Adopted in 2002, the D6751 standard covers biodiesel (B100) used as a blending component with petroleum diesel fuels.

Biofuel blending in gasoline and diesel in the U.S. is mandated under the Renewable Fuels Standard, which was created through the 2007 Energy Independence and Security Act. This regulation requires an increasing percentage of road transport fuel to be biofuel through the year 2022.

Technical Standards

ASTM Standards

Blends of B5 or less are incorporated into the diesel fuel standard, ASTM D975.

Up to 5% biodiesel can be blended into No. 1 or No. 2 diesel fuel so long as:

- the biodiesel component meets the requirements of ASTM D6751; and,
- the final blend meets the requirements of D975.

Labeling of the finished blend is not required, so it may not be possible for the purchaser to know whether or not the fuel contains biodiesel unless an analysis is carried out. Requirements for blends from B6 to B20 are covered by the ASTM D7467 specification.

Other Requirements

EPA - In 2007, the Environmental Protection Agency (EPA) issued a guidance document which clarified its regulatory requirements for biodiesel producers and blenders/users. While the Clean Air Act does not give EPA the authority to directly require biodiesel producers to adhere to ASTM D6751, it does provide EPA with the authority to regulate fuels and fuel additives in order to obtain information about their emissions and health effects and where appropriate, to reduce the risk to public health from exposure to their emissions. EPA exercises this authority by requiring producers and importers of fuels or additives to register their product with EPA.

IRS - The Internal Revenue Service (IRS) issued Notice 2009-34 stating that effective October 1, 2009, biodiesel will be ineligible for certain tax credits unless it meets the requirements of the version of ASTM D6751 published October 13, 2008 (i.e., ASTM D6751-08). This is the version of D6751 that introduced the Cold Soak Filtration Test limits for B100.

US Military Specifications

Before the adoption of ASTM D7467, the US military developed its own specifications for B20 biodiesel blends. B20 meeting the requirements of this specification was approved for use in Army engines and vehicles other than combat and tactical vehicles. The basic specification is defined in the "Commercial Item Description: Diesel Fuel, Biodiesel Blend (B20)" (CID-A-A-59693A, 15 Jan 2004) according to which B20 shall consist of 20 ± 1 % (by vol.) of biodiesel conforming to ASTM D6751 and a balance of No 2-D or 1-D diesel fuel conforming to ASTM D975 or to the military specification A-A-52557. The standard further specifies a number of properties and test methods for the B20 blend.

Additional technical requirements may be included in solicitations for the purchase of B20 biodiesel blend which are issued periodically by the Defense Energy Support Center (DESC). The military specifications are expected to be superseded by the ASTM standard for B20, when finalized. Notably, the military solicitations typically require that, in the event that a Federal, State, or local environmental requirement is more stringent than the military specification, the contractor shall deliver B20 fuel that complies with the more stringent requirement.

The DESC solicitations also require that the B100 product used for blending be EPA registered (in accordance with 40 CFR Part 79, Registration of Fuels and Fuel Additives).

While the CID-A-A-59693A standard does not include a fuel stability specification, it advises against using biodiesel blends that have been stored for longer than six months from the date of manufacture, or which have an acid number of 0.3 mg KOH/g or higher.

Source:

http://transportpolicy.net/index.php?title=US:_Fuels:_Biodiesel_specifications