



FUEL, DIESEL, B20 BIODIESEL BLEND (80% DIESEL/20% FAME)

WSS-M4C131-A

1. SCOPE

The material defined by this specification is a well-refined middle distillate petroleum product containing 20% biodiesel and normal commercial additives.

2. APPLICATION

This specification was released originally for material used as general purpose B20 diesel fuel for diesel engines in passenger cars and trucks that have been designed to use B20 blends.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

This material must be produced using current refinery practices for commercial diesel fuels and must meet all pertinent local requirements.

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A). Documentation, Performance Requirements, and QC subsections of the Qualification Procedure apply only to B20 blends supplied directly to Ford Motor Company.

3.2 CETANE RATING

3.2.1 Cetane Number, min (ISO 5165/ASTM D 613) 43

3.3 SULFUR, max (ISO 8754/ASTM D 4294/ASTM D 2622) 15 ppm or per local regulation

3.4 COMPOSITION

3.4.1 Ester Content (EN 14078) 18 – 22% mass

Biodiesel portion shall comply with the requirements of the latest ASTM D 6751 Standard Specification for Biodiesel Fuel Blend Stock (B100).

3.4.2 Methyl Ester Source(s) Report

Date	Action	Revisions
2006 06 12	Activated	



Documents

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3.4.3	Hydrocarbons	Balance
	Diesel fuel which complies with the requirements of the latest ASTM D 975 Standard Specification for Diesel Fuel Oils.	
3.4.4	Aromatic Content, max (ASTM D 1319)	30% mass or per local regulation
3.4.5	Polycyclic Aromatic Content, max (ASTM D 2426)	2% mass or per local regulation
3.4.6	Water Content, max (ASTM E 203)	200 ppm
3.4.7	Alcohol Content, max (ASTM D 4815 [modified])	0.1% mass

3.5 METAL CONTENT

3.5.1	Sodium + Potassium, max (ASTM D 5185, EN 14108)	1 ppm
3.5.2	Calcium + Magnesium, max (ASTM D 5185, EN 14108)	1 ppm

3.6	OXIDATION STABILITY, total insolubles, max (ISO 12205/ASTM D 2274)	2.5 mg/100 mL
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3.7	OXIDATION STABILITY, induction time, min (EN 14112 modified, 110 °C, 7 g. sample)	6 hours
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Vehicles stored with biodiesel for longer than 3 months should be drained and flushed with petroleum ("regular") diesel before use.

3.8 COLD TEMPERATURE

Due to cold flow limitations, a 20% biodiesel blend (B20) may not be appropriate for temperatures below 0 °F. In this case, a biodiesel blend containing a maximum of 5% biodiesel (B5) is recommended.

3.8.1	Cloud Point, max (ISO 3015/ASTM D 2500)	Report, with a target of 10 percentile minimum ambient temperature in geographical and seasonal timeframe of use, per ASTM D 975.
3.8.2	Cold Filter Plugging Point, max (EN 116, ASTM D 4539)	10 °C below 10 percentile minimum Ambient temperature in geographical and seasonal timeframe of use, per ASTM D 975.