



FUEL, DIESEL, LUBRICITY ENHANCED INITIAL FILL, 51 CETANE INJECTOR ANTI-CORROSION

WSS-M4C126-A2

1. SCOPE

The material defined by this specification is a well-refined middle distillate petroleum product containing normal commercial additives and an increased level of lubricity modifier. Fatty Acid Methyl Ester (FAME) shall not be used as a blend component.

2. APPLICATION

This specification was released originally for material used as initial fill fuel for diesel engines in passenger cars and trucks. For plants located in People's Republic of China, see additional requirement Para 3.21

3. REQUIREMENTS

This material must be produced using current refinery practices for commercial diesel fuels and in addition to the requirements of this specification, must also meet all pertinent local requirements including climatic grades.

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2 CETANE RATING

3.2.1 Cetane Number (ISO 5165/ASTM D 613) 51.0 min

3.2.2 Cetane Index (ISO 4264/ASTM D 4737) 48.0 min

3.3 SULFUR (ISO 20846/ISO 20847/ISO 20884/ASTM D 4294/ASTM D 2622) 10 mg/kg max

3.4 ASH (ISO 6245/ASTM D 482) 0.01% mass max

3.5 COMPOSITION

3.5.1 Water content (ISO 12937/ASTM D 1744) 200 mg/kg max

3.5.2 Total contamination (EN 12662) 24 mg/kg max

Date	Action	Revisions	Rev 00
2018 06 18	Released		



Documents

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3.5.3	Hydrocarbon types (ISO 3837/ASTM D 1319)	Report
3.5.4	Polycyclic Aromatic Hydrocarbons (IP 391:1995/EN12916)	8% mass
3.5.5	Ester Content (IR, EN 14078).	0.5% v/v
3.6	DISTILLATION (ISO 3405/ASTM D 86)	Temperature, °C
	Initial boiling point	Report
	10% vol recovery at	Report
	50% vol recovery at	300 max
	65% vol recovery at	250 min
	85% vol recovery at	350 max
	95% vol recovery at	360 max
	Final boiling point	Report
3.7	DENSITY (ISO 3675/ASTM D 1298, 15 °C)	0.820 - 0.845 kg/L
3.8	KINEMATIC VISCOSITY (ISO 3104/ASTM D 445, 40 °C)	2.0 - 3.5 mm ² /S
3.9	OXIDATION STABILITY, total insolubles (ISO 12205/ASTM D 2274)	2.5 mg/100 mL max
3.10	CALORIFIC VALUE, gross (ASTM D 240)	Report
3.11	CORROSION	
3.11.1	Copper Tarnish (ISO 2160/ASTM D 130, 3 h at 100 +/- 1 °C)	1 b max
3.11.2	Rust Prevention (ISO DP 7120/ASTM D 665, Procedure B, 30 minutes)	Moderate rusting
3.11.3	Corrosion protection for fuel injector nozzle	See para 3.18.2
3.12	FLASHPOINT (ISO 2719/ASTM D 93)	55 °C min
3.13	LUBRICITY at 60 °C (ISO 12156-1 (HFRR))	See para 3.19
3.14	CARBON RESIDUE (ISO 6615/ASTM D 189/ASTM D 524, 10% distillation residue)	0.20% max
3.15	WATER REACTION, fuel layer only (ISO 6250/ASTM D 1094)	1 max, slight haze