



ENGINEERING MATERIAL SPECIFICATION

GASOLINE, UNLEADED, INITIAL FILL, PREMIUM GRADE

WSE-M4C110-A

GASOLINE, UNLEADED, INITIAL FILL, INTERMEDIATE GRADE

WSE-M4C111-A

NOT TO BE USED FOR NEW DESIGN

1. SCOPE

The materials defined by these specifications are well-refined gasolines.

2. APPLICATION

These specifications were released originally for gasolines used for initial fill for assembly plants in NA.

3. REQUIREMENTS

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

These materials must meet the most recently approved requirements of ASTM D4814 Standard Specification for Automotive Spark-Ignition Engine Fuel and/or comply with the most recent local, state or regional fuel regulation of plants location, plus the following:

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 ANTIKNOCK INDEX, (RON + MON)/2 (ASTM D2699 / ASTM D2700)

Premium Grade	91.0 min
Intermediate Grade	89.0 min

3.6 SULPHUR CONTENT (ASTM D5453)

80 mg/kg, max

3.8 FERROUS CORROSION (ASTM D665, Procedure A at 4 hr.)

B+, min

3.9 OXIDATION STABILITY (ASTM D525)

900 minutes, min

3.11 AROMATIC CONTENT (see 3.18)

Report

3.12 INTAKE VALVE DEPOSITS (ASTM D5500) or (ASTM D6201)

100 mg/valve, max
50 mg/valve, max

Date	Action	Revisions
2010 08 23	Revised	See Summary of Revisions C. Richardson, NA
2010 01 06	WSE-M4C111-A N-STATUS	No known use. No replacement named D. DiGregorio, NA
1993 06 10	Released	NE01E10127076090



Documents
M. Riley
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**3.15 COLOR**

May include a dye in accordance with standard practice for purpose of vendor and user identification.

3.16 ADDITIVES

Fuels shall contain normal commercial additives at concentrations representative of good commercial practice in the receiving locale (unless otherwise specified). Metallic additives shall not be used. Use of oxygenate additives other than ethanol must be approved by Fuels and Lubricants Engineering. Supplier must identify additive formulation which includes additive type and concentration on specification supplement.

3.17 CERTIFICATION

Supplier shall certify that the gasoline is a formulation that has been tested and meets Ford Motor Company requirements as stated in these specifications. Technical evidence of these data and manufacturing limits must be summarized as specified on the specification supplement. This certification shall be given by the authorized supplier representative and submitted to Ford Fuels and Lubricants Engineering activity for approval. Ford Fuels and Lubricants Engineering may request additional data from supplier as needed to confirm conformance to specification.

3.18 ETHANOL CONTENT
(ASTM D4815)

3.18.2 Aromatic content of fuel is $\leq$ 10% volume 0 - 10% volume

3.18.3 Aromatic content of fuel is $>$ 10% volume 9 - 10% volume

5. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of these specifications.

5.1 FLAMMABILITY

This material represents a potential fire hazard. The Manufacturing Engineering Department shall notify both the Plant Security and the Safety Units of its presence in the Plant to assure that proper fire precautions are provided. The location in which it is used or stored shall be included in the notifications.

5.2 SAMPLING AND SUBMISSION OF SAMPLES
(ASTM D 4057/ASTM D 4177)

5.3 Quality Control records must be made available to Fuels and Lubricants Engineering upon request

6. SUMMARY OF REVISIONS**2010 08 23**

Separated from WSS-M4C112-A

Revised: Title, 1, 2, 3, 3.8, 3.9, 3.11, 3.16, 3.18, 3.17, 3.00, page 3;

Deleted: 3.3, 3.4, 3.5, 3.7, 3.18.1

Added: 3.18.2, 3.18.3