



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

LABEL, POLYESTER, PRESSURE SENSITIVE, ENGINE CODE

WSE-M3G194-A

1. SCOPE

The material defined by this specification is a polyester film with a pressure sensitive adhesive protected by a suitable release liner.

2. APPLICATION

This specification was released originally for material for labels which state the engine build calibration and engine build date.

3. REQUIREMENTS

3.1 STATISTICAL PROCESS

Suppliers must conform to the requirements of Ford Quality System Standard Q-101. A mutually acceptable Control Plan as described therein is required for material/source approval. Appropriate statistical tools must be used to analyze process/product data so that variation in the final product is continuously reduced.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

Ford Motor Company, at its option, may conduct infrared and/or thermal analysis of material/parts supplied to this specification. The IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING AND TEST CONDITIONS

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

3.4 THICKNESS - Without Release Paper (ASTM D 1000)

25 - 89 micrometre or as
specified on engineering drawing

3.5 APPEARANCE

The labels shall be free of streaks, blisters, wrinkles, ragged edges, smeared printing and any other surface imperfections which will make them unsuitable for the intended usage. The design and color shall be as specified on the engineering drawing.

Date	Release No.	Release/Revision
910213	W501-E 10000474-091	Released E. J. Wuda 2.8.91

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3.6 PREPARATION OF LABELS ON PAINTED PANELS

3.6.1 Preparation of Painted Panels (FLTM BI 103-02)

Paint clean phosphated treated steel panels with current production engine air dry enamel to a dry film thickness of 13 - 25 micrometre. Air dry the painted panels for 24 h at 23 +/- 2 C.

3.6.2 Preparation of Panel Assembly (ASTM D 1000)

Place the label on the painted panels (as prepared in para 3.6.1) with a 2 kg rubber roller to remove all wrinkles and trapped air bubbles.

3.7 ADHESION - 90 degree Peel, min 438 N/m width (ASTM D 1000)

3.8 ENVIRONMENTAL TESTING OF PANEL ASSEMBLY

Test shall be completed in 1 - 4 h after removal from the conditioning environment.

After each of the environmental exposures, the label must not show evidence of delamination, loss of printing, loss of adhesion or any other effect which would detract from its proper function or appearance.

3.8.1 ASTM Fuel "B" for 1 h at 23 +/- 0.2 C

Adhesion - 90 degree Peel, min 438 N/m width

3.8.2 ASTM Oil #3 for 2 h at 102 +/- 0.3 C

Adhesion - 90 degree Peel, min 438 N/m width

3.8.3 50-50 solution of ethylene glycol and water plus 1 % of soluble oil. Pour 1000 mL of boiling solution on a panel 85 degrees to normal plane.

Adhesion - 90 degree Peel, min 438 N/m width

3.8.4 Direct a stream jet 690 kPa pressure with a 6.5 mm diameter orifice and at a distance of approximately 200 mm from the decal's edge for one minute at a right angle to the surface and then for one minute at 10 degree angle to its edge.

3.8.5 Direct a stream of air 414 - 552 kPa pressure with a 2.4 mm diameter orifice and at a distance of approximately 75 mm from the decal's edge for 3 minutes at a right angle to the surface and then for 3 minutes at a 10 degree angle to its edge.