



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

LABEL, POLYESTER FILM, PRESSURE SENSITIVE,
(UNDER SURFACE PRINTING), INTERIOR

WSK-M3G196-A

1. SCOPE

The material defined by this specification is a pressure sensitive, paper backed polyester film, with under surface printing suitable for interior applications.

2. APPLICATION

This specification was originally released for labels used in the glove box compartment for information purposes of the air bag system.

3. REQUIREMENTS

3.1 STATISTICAL PROCESS

Supplies 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 materials conditioned in a controlled atmosphere at 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.

3.3 APPEARANCE

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

Date	Release No.	Release/Revision
1991-03-01	C01089482000	Released K. Wolters J. Schult

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3.5 SETTING TIME FOR NORMAL HANDLING

The label shall set sufficiently to permit normal handling immediately after application.

3.6 FILM PROPERTIES

3.6.1 Thickness
(ASTM D 1000)

Tape plus Adhesive, min	0.12 mm
Release Liner, min	0.08 mm

3.7 PREPARATION OF TEST SPECIMENS FOR ADHESION PROPERTIES

Except where otherwise noted, tests shall be conducted on test panels of the substrate listed in para 5, by applying the film per the following procedure:

- . Test panels to be cleaned with a 50/50 solution of distilled water and isopropyl alcohol.
- . Peel off the backing liner from the film in a smooth continuous motion. Do not pull the film from the liner.
- . Position the film on the test panel.
- . Roll forward and backward the full length of the film with a roller described in ASTM D 1000.

Test panels with applied film shall be conditioned for 48 h at 23 +/- 2 C and 50 % relative humidity prior to exposure. Test shall be completed within 4 h after removal from the conditioning environment unless otherwise noted.

3.8 ADHESION
(ASTM D 1000, except determine adhesion
to substrates listed in para 5.1)

The adhesive shall produce a durable bond between the film and the substrates surface with the following minimum peel strength:

- | | |
|---|---------------|
| 3.8.1 As received | 526 N/m width |
| (Conditioned for 48 h at 23 +/- 2 C
at 50 % relative humidity) | |



3.8.2 Aged

526 N/m width

Test Method: Expose duplicate samples to each of the following conditions:

- . 72 h at 70 +/- 1 C
- . 48 h at 38 +/- 2 C and 95 - 100 % relative humidity
- . 5 cycles consisting of 4 h at 70 +/- 1 C, 4 h at 38 +/- 2 C and 95 - 100 % relative humidity, and 16 h at - 30 +/- 1 C.

3.9 PREPARATION OF TEST SPECIMENS FOR ENVIRONMENTAL AGING PROPERTIES

The labels shall be tested on actual glove box substrates (refer to para 5.1 for approved substrates), by applying the label for the following procedure.

- . Test panels to be cleaned with a 50/50 solution of distilled water and isopropyl alcohol.
- . Peel off the backing liner from the label in a smooth continuous motion. Do not pull the film from the liner.
- . Position the label on the test panel.
- . Using a plastic squeegee, smooth out the label using firm overlapping strokes, working from the center of the panel. Carefully work out all air bubbles.

Test panels with applied label shall be conditioned for 48 h at 23 +/- 2 C and 50 % relative humidity prior to exposure. Tests shall be completed within 4 h after removal from the conditioning environment, unless otherwise noted.

3.10 RESISTANCE PROPERTIES

After each of the resistance properties exposures, the film or 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.

Note if the above substrate materials delaminates, shrinks or deforms under the environmental aging properties, it is not a cause for rejection so long as the label does not delaminate and is readable.

3.10.1 Humidity Resistance

No curling of edges or visible loss of adhesion or blistering and no loss of readability or any other effect which would detract from its proper function of appearance.