ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
FABRIC, PAPILLON PATTERN, KNITTED, UNLAMINATED	WSD-M1H538-A
FABRIC, PAPILLON PATTERN, KNITTED, 3 mm	WSD-M1H538-B1
FABRIC, PAPILLON PATTERN, KNITTED, 6 mm	WSD-M1H538-B2
FABRIC, PAPILLON PATTERN, KNITTED, 15 mm	WSD-M1H538-B5
FABRIC, PAPILLON PATTERN, KNITTED, 3 mm	WSD-M1H538-C1
FABRIC, PAPILLON PATTERN, KNITTED, 6 mm	WSD-M1H538-C2
FABRIC, PAPILLON PATTERN, KNITTED, 15 mm	WSD-M1H538-C5
FABRIC, PAPILLON PATTERN, KNITTED, 6 mm	WSD-M1H538-D2
FABRIC, PAPILLON PATTERN, KNITTED, 3 mm PU	WSD-M1H538-F1
FABRIC, PAPILLON PATTERN, KNITTED, 6 mm PU	WSD-M1H538-F2
FABRIC, PAPILLON PATTERN. KNITTED, HFW	WSD-M1H538-G
FABRIC, PAPILLON PATTERN, KNITTED, HFW	WSD-M1H538-H
FABRIC, PAPILLON PATTERN, KNITTED, HFW	WSD-M1H538-J
FABRIC, PAPILLON PATTERN, KNITTED, HFW	WSD-M1H538-K

1. SCOPE

The material defined by this specification is a 6 bar 44 gauge DBR knitted, simulated velour, polyester bodycloth.

2. APPLICATION

This specification was released originally for material used as an interior trim polyester fabric for the CDW27 program. The face fabric is flame laminated to polyester or polyether urethane foam and a knitted fabric or polyurethane film backing for seating applications. The face fabric is flame laminated to polyether foam alone for inner door and quarter trim panel applications. The face fabric is supplied unlaminated for seat piping applications. It can be backed with HFW weldable backcoating.

PAPILLON PATTERN

WSD-M1H538-A	Unlaminated
WSD-M1H538-B1	3.0 mm, flame laminated to polyether foam and knitted fabric
WSD-M1H538-B2	6.0 mm, flame laminated to polyether foam and knitted fabric
WSD-M1H538-B5	15.0 mm, flame laminated to polyether foam and knitted fabric
WSD-M1H538-C1	3.0 mm, flame laminated to polyester foam and knitted fabric (EAO use only)
WSD-M1H538-C2	6.0 mm, flame laminated to polyester foam and knitted fabric (EAO use only)
WSD-M1H538-C5	15.0 mm, flame laminated to polyester foam and knitted fabric (EAO use only)

Date	Action	Changes
1996 04 22	Revised	Revised para 3, 3.10, 3.13; updated N. Komatsu
1994 05 31	C10348592	Released B5,C1,C2,C5,F1,F2,G,H,J,K N. Komatsu
1992 04 16	C10206047	Released N. Komatsu

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WSD-M1H538-D2	6.0 mm, flame laminated to polyether foam
WSD-M1H538-F1	3.0 mm flame laminated to polyester foam and polyurethane film (EAO use only)
WSD-M1H538-F2	6.0 mm flame laminated to polyester foam and polyurethane film (EAO use only)
WSD-M1H538-G	HF weldable vinyl film adhesive bonded or an engineering approved alternative
WSD-M1H538-H	HF weldable acrylic backcoating applied by the doctor-knife spreading technique, or an engineering approved alternative
WSD-M1H538-J	HF weldable vinyl backcoating applied by the doctor-knife spreading technique, or an engineering approved alternative
WSD-M1H538-K	HF weldable PU backcoating applied by the doctor-knife spreading technique, or an engineering approved alternative

3. REQUIREMENTS

In addition to the requirements listed herein, the fabric or laminate shall meet all requirements of WSB-M8P1-I.

3.1 QUALITY SYSTEM REQUIREMENTS

Material suppliers and part producers must conform to Quality System Requirements, QS-9000. Material specification requirements are to be used for initial qualification of materials. A Control Plan for ongoing production verification is required. This plan must be reviewed and approved by the relevant Ford Materials activity and/or Ford Supplier Technical Assistance (STA) prior to production parts submission. Appropriate statistical tools must be used to analyze process/product data and assure consistent processing of the materials.

Part producers using this material in their products, must use Ford approved materials and must conform to a process control plan which has been approved by STA and/or the relevant Materials Activity.

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.

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3.4 FABRIC CONSTRUCTION

3.4.1 Fabric Count, +/- 5 % tolerance
(ASTM D 3887)

Wales	90 wales/10 cm
Courses	110 courses/10 cm

3.4.2 Fabric Weight, range (FLTM BN 106-01) 280 - 320 g/m2

3.4.3 Pile Height, min (Microscope technique) 1.7 mm

3.5 COMPOSITION
(ASTM D 629)

Fabric 100 % polyester

3.6 YARN CONSTRUCTION
(ASTM D 1244)

No. 1 Bar	100 dtex f20, (polyester, spun dyed grey, texturised)
No. 2 Bar	100 dtex f40, (polyester, semi-dull)
No. 3 Bar	270 dtex f64-72, (polyester, bright)
No. 4 Bar	270 dtex f64-72, (polyester, bright)
No. 5 Bar	100 dtex f40, (polyester, semi-dull)
No. 6 Bar	100 dtex f20, (polyester, spun dyed grey, texturised)

3.7	METHOD OF DYEING	Yarn dyed and space dyed or as approved by Materials Engineering
3.8	FINISHING OPERATIONS	As approved by Materials Engineering
3.9	REQUIREMENTS FOR POLYETHER FOAM	As specified in WSD-M2D243-A4
3.10	REQUIREMENTS FOR POLYESTER FOAM	As specified in SKM-4D9502-A
3.11	REQUIREMENTS FOR THE BACKING FABRIC (B1, B2, B5)	As specified in WSD-M9H111-B
3.12	REQUIREMENTS FOR THE BACKING FABRIC (C1, C2, C5)	As specified in WSD-M9H136-A
3.13	REQUIREMENTS FOR THE POLYURETHANE BACKING FILM (F1, F2)	As specified in WSD-M99H134-B1

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