

ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

OUTSIDE TOP MATERIAL - VINYL COATED

▽ ESB-M2F1-B

1. SCOPE

The material defined by this specification is an outside top material consisting of a dyed water repellent backing fabric, bonded with butyl compound to a vinyl coated face material.

2. APPLICATION

This specification was released originally for material used as a convertible top material.

3. REQUIREMENTS

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 APPEARANCE (FLTM BI 109-01)

The color, pattern, and finish shall match the approved Design Center master sample, or shall be as specified on the engineering drawing.

3.3 WIDTH

As specified on Purchase Order and/or Engineering Chart 534.

3.4 THICKNESS, max (ASTM D 374, Method "C")

0.038 in (1.0 mm)

3.5 WEIGHT (ASTM D 751, Method "B")

3.5.1 Total 22.0 - 25.5 oz/yd²
(0.746 - 0.864 kg/m²)

3.5.2 Vinyl Coating, min 8.0 oz/yd²
(0.271 kg/m²)

3.5.3 Bonded Butyl, min 5.0 oz/yd²
(0.170 kg/m²)

Date	Action	Revisions
2003 01 09	Revised	Para 3.0 inserted ; Para 3.1, 3.31, 4 deleted
1982 09 03		Metricated & Retyped RD588050-13
1971 06 21		Released AB1-302-2

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3.6 YARN COUNT, min (ASTM D 1910)

	<u>Face Fabric</u>	<u>Backing Fabric</u>
Warp	64 ends/in (25/10 mm)	68 ends/in (27/10 mm)
Filling	64 picks/in (25/10 mm)	38 picks/in (15/10 mm)

3.7 YARN SIZE AND COMPOSITION (ASTM D 1910)

	<u>Face Fabric</u>	<u>Backing Fabric</u>
Warp	24/1 (25 Tex) Cotton	24/1 (25 Tex) Cotton
Filling	24/1 (25 Tex) Cotton	14/1 (42 Tex) Cotton

3.8 TENSILE STRENGTH, min (ASTM D 1682, Grab Method)

Warp	140 lb (623 N)
Filling	105 lb (467 N)

3.9 ADHESION OF VINYL COATING TO BACKING FABRIC, min (ASTM D 413, Machine Method)

4 lb (17.8 N) on 2 in (50 mm) width

The coating of the test specimen shall be separated from the backing fabric by hand and without the use of solvents. The testing machine shall be operated at 12 in (305 mm)/min.

3.10 ADHESION OF RUBBER BONDED PLIES, min (ASTM D 413, Machine Method 12 in (305 mm)/min)

7 lbs (31 N) on 2 in (50 mm) width

3.11 CROCKING* (Inside Fabric Surface) (FLTM BN 107-01)

Dry	4 to 5
Wet	3 to 5

* The following exception is allowed for blue and black:

Dry	3 to 5
Wet	1 to 5

3.12 BLOCKING (FLTM BN 103-01)

The coated surface shall show no evidence of injurious exudation, unusual adhesion (tackiness), separation, color transfer, or flattening of embossing when placed face to face with itself.

3.13 H₂S STAINING
(FLTM AN 102-01)

The material shall correspond to a rating of 5 when compared to the AATCC Gray Scale for Evaluating Change in Color (10 Step). Production materials shall exhibit H₂S staining qualities equal to or better than the master sample (as approved for production by the Textile Engineering Section, BEPE Materials Engineering Department) on file in the Textile Engineering Section.

3.14 FADE
(SAE J 1885)

The vinyl coating shall not stain, exhibit color tone change or change in hue, in accordance with rating 5 of the AATCC Gray Scale for Evaluating Change in Color (10 Step) after 1600 and 3200 h in the fadeometer and/or 160,000 and 320,000 Langley's in Florida and Arizona direct weathering, 45 ° (0.8 rad) south. The backing material shall be exposed for 80 h and shall not change in accordance with rating 5. Production materials shall exhibit light fastness qualities equal to or better than the master sample (as approved for production by the Textile Engineering Section, BEPE Materials Engineering Department) on file in the Textile Engineering Section.

3.15 ABRASION
(FLTM BN 108-02, CS #10 wheels, 1000 g load, 1000 cycles)

The material's wear pattern and color shall be compatible in appearance with the adjacent unabraded areas.

The resistance to abrasion of production material shall be equal to or better than that exhibited by the master sample (as approved for production by the Textile Engineering Section, BEPE Materials Engineering Department) on file in the Textile Engineering Section.

3.16 SHRINKAGE*, max
(FLTM BN 5-2, except time in washing machine to be 1/2 h instead of 5 h)

Total (Warp & Fill)	2.0 %
Filling	0.5 %

3.17 STIFFNESS, max
(ASTM D 747, direct reading at 60 ° angle with 0.1 in-lb (0.01 N.m) load)

Warp	33
Filling	20

Test specimens shall be 2 x 1 in (50 x 25 mm) with 1 in (25 mm) of the 2 in (50 mm) dimension clamped in a jaw, 1/2 in (13 mm) span from clamp to bending plate, fabric side up.