



**FABRIC, GEMSTONE II PATTERN, NON-WOVEN,
TWO-TONE ROTARY SCREEN PRINTING, 25% MINIMUM RECYCLED PCR**

WRS-M5H43-A1

**FABRIC, GEMSTONE II PATTERN, NON-WOVEN,
ONE-TONE ROTARY SCREEN PRINTING, 100% VIRGIN**

WSS-M5H43-A10

1. SCOPE

The material defined by this specification is a GEMSTONE II pattern, needled non-woven polyester fabric with acrylic binder and/or one/two-tone rotary screen printing. Material conforming to WRS-M5H43-A1 contains a minimum of 25% PIR/PCR (postindustrial/post-consumer) recycled yarn. Material conforming to WSS-M5H43-A10 is made from 100% virgin yarn.

2. APPLICATION

This specification was released originally for material used as cover material for headliners.

3. REQUIREMENTS

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2 WSS-M5H43-A10. This specification is based on virgin materials.

3.3 WSR-M5H43-A1. This specification must contain 25% minimum recycled content as defined by WRS-M99P42-A2/latest. The remaining portion of the material can come from virgin sources.

3.4 APPEARANCE

The color, pattern, and finish shall match the approved Corporate Design master sample.

3.5 FABRIC PERFORMANCE

In addition to the requirements listed herein, the fabric shall meet all requirements of WSS-M8P27-A1/latest as applicable.

3.6 VEHICLE INTERIOR ENVIRONMENTAL PERFORMANCE

Materials used in interior applications must meet the requirements outlined in WSS-M99P2222-D1/latest, *Performance, Vehicle Interior Environmental Quality Material/Component Requirements*. Data must be included in material submission package.

3.7 CONDITIONING AND TEST CONDITIONS

All test values are based on material conditioned for not less than 24 h prior to testing in a controlled environment of 23 +/- 2 °C and 50 +/- 5% relative humidity. Testing of the material should occur in the conditioning environment or soon after removal.

Date	Action	Revisions	Rev. 1
2016 02 04	Revised	See Summary of Revisions	M. Souza, SA
2015 07 27	Released		L. Wang, AP



3.8 ADDITIONAL REQUIREMENTS WHEN APPLICABLE

Materials manufactured to this Specification may also meet the following applicable specifications:

- Headlining Formed Performance: WSS-M15P27- G/latest
- Sun visor Assembly Performance: WSS-M98P3-B/latest.
- 0% Transmittance Moonroof/Sunroof : WSS-M5H34-B

3.9 COMPOSITION (ASTM D276-12)

Fabric		100% Polyester
Binder		Acrylic
3.9.1 Fiber Description and Construction (ASTM D 1244)	A1 100% 3 denier polyester 25% minimum PCR	A10 100% 3 denier polyester 100% virgin yarn
3.9.2 Weight, range (FLTM BN 106-01)	A1 220 +/- 20 g/m ²	A10 237 +/- 17 g/m ²
3.9.3 Method of Dyeing		Solution Dyed
3.9.4 Thickness, range (SAE J882)		1.4 – 2.5 mm

3.10 STRENGTH REQUIREMENTS

3.10.1 Original Breaking Strength (ASTM D 5034, Grab Method, 300mm/ minute jaw speed, average of 5 samples, each direction)		
MD and AMD		300 N min
3.10.2 Retained Breaking Strength after Resistance to Interior Weathering (FLTM BO 116-01, 225 kJ/m ² , ASTM D 5034 Grab Method, 300 mm/min speed Average of 5 samples in each direction)		
MD and AMD		250 N min

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification. Contact gmfs@ford.com for questions concerning Engineering Material Specifications.

- 4.1** Purchase departments will ensure that the material defined in this specification and shipped to any one assembly plant will be produced by one supplier only. In the event of a Global Program or Regional duplication, each regional location of the supplier for this specification must provide a Construction package and be approved to meet this specification.

