

<b>Received:</b> 09/16/2019	<b>Completed:</b> 10/12/2019	<b>Letter:</b> U3	<b>TM</b>	<b>P.O.#:</b>	<b>Test Report #:</b> 3-34529-3-
<b>Client's Identification</b>	Style: Morph. Content: 85% New Zealand Wool / 15% Polyamide. Weight: 450 g/lm. Color: 6101 Violet Beige. Product End Use: Upholstery.				
<b>Tested For:</b> Bente Ellingsoe, Quality Department Gabriel A/S Hjulmagervej 55 DK-9000 Aalborg, Denmark	<b>Key Test:</b> ASTM D 4966/ACT 100K		610		
	<b>Tel:</b> 011-45-9630-3100		<b>Ext:</b>		
	<b>Fax:</b> 011-45-9811-6125				

CODE: 100,000 RQ /jd

TEST PERFORMED: ASTM D 4966 Martindale Abrasion Method Standard Test Method for Abrasion Resistance of Textile Fabrics (Upholstery Fabric Classification)

Abradant: Plain weave cross-bred worsted wool standard fabric, 5.8 oz/sq yd  
 Pressure: 1.74 psi ± 0.04 psi (12 kPa)

Foam disk is inserted if test item is less than 14.7 oz/yd<sup>2</sup>.

APPROXIMATE FABRIC WEIGHT (as measured by SGS Govmark): 9.66 oz/yd<sup>2</sup>

INTERPRETATIVE OPTIONS:

Option 1: Smooth or Textured Surface Fabrics --

Woven Fabric: The end point (wear) is reached when two or more threads have broken; loss of special effect yarn or pile exposing base fabric.

Knitted Fabric: The end point is reached when a hole appears.

Option 2: Slightly Napped, Brushed, Sueded Fabrics --  
 The end point (wear) is reached when there is a change in shade or appearance that is sufficient to cause a customer to complain.  
 The shade end point (wear) is reached when a color change is assigned a Grey Scale rating of 3 or less.

RATING SYSTEM FOR OPTION 1:

- 5 - None or negligible change in appearance
- 4 - Slight change in appearance
- 3 - Moderate change in appearance
- 2 - Objectionable change in appearance (broken yarns, floating yarns, loss of pile, core yarn exposed, a hole, etc.)
- 1 - Severe change in appearance (complete fabric break, base fabric exposed, or running and pulling of knit)

RATING SYSTEM FOR OPTION 2: (AATCC Grey scale for Color Change)

- Grade 5 - No color change
- Grade 4 - Slight color change
- Grade 3 - Noticeable color change
- Grade 2 - Considerable color change
- Grade 1 - Excessive color change

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RESULTS: Visual evaluation (see page 1 for Rating System)

No. of Rubs	Rating
5,000	5
10,000	5
20,000	4.5
30,000	4.5
40,000	4.5
50,000	4
60,000	4
70,000	4
80,000	4
90,000	4
100,000	3.5
	Slight to moderate thinning of surface texture

NOTE: For tests exceeding 50,000 rubs, the wool abradant is changed after every 50,000 rubs.

End Point Evaluation:

Specimen #	Number of Rubs End Point
1	100,000
2	100,000
3	100,000
AVG:	100,000

REMARKS: None.

ACCEPTANCE CRITERIA: As cited by ACT Voluntary Performance Guidelines (January 2005) For Upholstery Materials --

General Contract Upholstery: No objectionable change in appearance at 20,000 rubs  
 Heavy Duty Upholstery: No objectionable change in appearance at 40,000 rubs

CONCLUSION: Based on the above Results and Acceptance Criteria, the item tested is rated for:

General Contract Upholstery;  Heavy Duty Upholstery;  Unrated

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CERTIFICATION: I certify that the above results were obtained after testing specimens in accordance with the procedures and equipment specified above.



Phyllis Pettit

OCT 18 2019

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 AUTHORIZED SIGNATURE  
 SGS GOVMARK  
 /jab /pm

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