



|                                |  |            |                                |        |                |            |
|--------------------------------|--|------------|--------------------------------|--------|----------------|------------|
| Received:02/19/2018            | Completed:03/20/2018   | Letter: V3 | RG                             | P.O.#: | Test Report #: | 3-24608-3- |
| <b>Client's Identification</b> | Style: 2428 Harmony. Date of Mfg.: 15-02-2018. Composition: 85% Wools of New Zealand/ 15% Polyamide. Weight: 480 g/lm. Product End Use: Upholstery. Additional Information: col: 3102. |            |                                |        |                |            |
| <b>Tested For:</b>             | <b>Bente Ellingsoe, Quality Department</b>   |            | Key Test: ASTM D 4966/ACT 100K |        | 610            |            |
|                                | Gabriel A/S  |            | Tel: 011-45-9630-3100          |        | Ext:           |            |
|                                | Hjulmagervej 55  |            | Fax: 011-45-9811-6125          |        |                |            |
|                                | DK-9000 Aalborg, Denmark   |            |                                |        |                |            |

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 Govmark): 9.9 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       | 4.5    |
| 10,000      | 4.5    |
| 20,000      | 4      |
| 30,000      | 4      |
| 40,000      | 4      |
| 50,000      | 4      |
| 60,000      | 4      |
| 70,000      | 3.5    |
| 80,000      | 3.5    |
| 90,000      | 3      |
| 95,000      | 3      |
| 100,000     | 3      |

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<br>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

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

  
 AUTHORIZED SIGNATURE  
 GOVMARK  
 /gb /tm

Phyllis Pettit

MAR 22 2018

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