



Shirley  
Technologies  
Limited

## Confidential Report

**Our Ref: 29/00908B/11/14**

Shirley Technologies Limited. Registered Office :  
Wira House, West Park Ring Road, Leeds, LS16 6QL.  
A company registered in England & Wales with company number 04669651.  
VAT Number GB 816764800.  
The supply of all goods and services is subject to our standard terms of business,  
copies of which are available on request.  
Our laboratories are accredited to EN ISO/IEC 17025



Shirley  
Technologies  
Limited

Shirley Technologies Limited  
Wira House  
West Park Ring Road  
Leeds, LS16 6QL  
United Kingdom  
  
Tel: +44 (0)113 274 3434  
Fax: +44 (0)113 274 8344  
Web: <http://www.shirleytech.com>  
Email: [info@shirleytech.co.uk](mailto:info@shirleytech.co.uk)

15 December 2014

Page 1 of 2

Our Ref: 29/00908B/11/14  
Your Ref:

Client: Gudbrandsdalens Uldvarefabrik as

Address: N-2626 Lillehammer  
Norway

Job Title: Martindale Pilling Test on One Sample

Client's Order Ref:

Date of Receipt: 24 November 2014

Description of Sample(s): One full width sample of woven fabric referenced by the Client:-  
**Quality 5097**

Work Requested: EN ISO 12945-2 pilling



Shirley  
Technologies  
Limited

Shirley Technologies Limited  
Wira House  
West Park Ring Road  
Leeds, LS16 6QL  
United Kingdom

Tel: +44 (0)113 274 3434  
Fax: +44 (0)113 274 8344  
Web: <http://www.shirleytech.com>  
Email: [info@shirleytech.co.uk](mailto:info@shirleytech.co.uk)

15 December 2014

Page 2 of 2

Our Ref: 29/00908B/11/14  
Your Ref:

Client: Gudbrandsdalens Uldvarefabrik as

Testing atmosphere: Unless otherwise specified the sample(s) has been conditioned and tested, where appropriate, in the standard atmosphere for conditioning and testing textiles (BS EN ISO 139:2005 + A1:2011) of 65±4% r.h. and 20±2°C.

**Determination of Fabric Propensity to Surface Fuzzing and Pilling—Modified Martindale Method (#)**

Specimens from the sample were tested on a modified Martindale Abrasion Machine, using wool abrasant fabric and a loading weight of 415 ± 2g. The specimens were tested for 500, 1,000, 2,000, 5,000 rubs, as stated in Annex A, Table A.1, following the Category 1 procedure for upholstery fabrics described in BS EN ISO 12945-2:2000, with additional assessments at 7,000 and 10,000 rubs, as requested by the Client. A tested specimen has been returned separately. The specimens were visually assessed at the required intervals and rated according to Table 1 of the Standard, summarised as follows:-

- 5 - no change
- 4 - slight surface fuzzing and/or partially formed pills
- 3 - moderate surface fuzzing and/or moderate pilling
- 2 - distinct surface fuzzing and/or distinct pilling
- 1 - dense surface fuzzing and/or severe pilling

<u>Number of rubs</u>	<u>Pilling grade</u>	<u>Description</u>
500	4	pilling/fuzzing
1,000	4	pilling/fuzzing
2,000	3-4	pilling/fuzzing
5,000	4	pilling/fuzzing
7,000	4	pilling/fuzzing
10,000	4	pilling/fuzzing

Reported by:

..... *L.I. Butler* .....

L I Butler (Mrs)  
Senior Technician - Textiles

Countersigned by:

..... *J. Bullers* .....

J M Bullers (Mrs)  
Operational Head – Textiles

(#) as agreed, the test was subcontracted to a UKAS accredited laboratory; this test is on their schedule of accreditation.

Shirley Technologies Limited. Registered Office :  
Wira House, West Park Ring Road, Leeds, LS16 6QL.  
A company registered in England & Wales with company number 04669651.  
VAT Number GB 816764800.

The supply of all goods and services is subject to our standard terms of business, copies of which are available on request.  
Our laboratories are accredited to EN ISO/IEC 17025