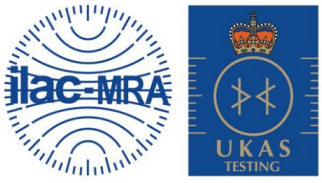
Confidential Report

Our Ref: E-022055



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Email: info@bttg.co.uk
Website: www.bttg.co.uk

Date: 14 September 2021

Our Ref: E-022055
Your Ref:

Client: Camira Transport Fabrics Ltd
The Watermill
Wheatley Park
Mirfield
West Yorkshire
WF14 8HE

Job Title: Testing on one sample

Client's Order No: 81A13155

Date of Receipt: 24th August 2021
Date of Test Start: 8th September 2021

Description of Sample(s): One black faux leather sample, identified as follows, was received for testing:

Rapido

Work Requested: We were asked to make the following tests:

Schildknecht Flexing ISO 7854: 1997 Method B
Coating Adhesion BS EN ISO 2411

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Sample was identified as follows:

Rapido

Laboratory Work

The tests were made in Standard Atmosphere (65 ± 4 % relative humidity at 20 ± 2°C) the sample having been freely and continuously exposed to that atmosphere for at least 24 hours prior to testing. Specimens have been taken from the sample as described in the specified standard.

Resistance to Damage by Flexing

Flex cracking resistance was tested following the procedure in Method B – Schildknecht method, of ISO 7854: 1997 (BS 3424: Part 9: 1996), "Rubber- or plastics-coated fabrics – Determination of resistance to damage by flexing". Three specimens, in each direction, were tested for a predetermined number of cycles.

Specimens were to be inspected at 400 000 cycles.

The flexing damage was assessed according to the following methods.

The overall appearance of the specimens was assessed for deterioration considering all visible factors such as wrinkling, cracking, flaking and discolouration. Specimens were graded, without magnification, using the 4 part numerical scale.

Each specimen was examined, under magnification, to determine depth, length and number of cracks. Depth of cracking was assessed using the descriptive scale. The length of the longest crack (mm) and the number of cracks has been reported.

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Coating Adhesion Strength

Coating adhesion strength was measured following the procedure detailed in BS EN ISO 2411: 2017, "Rubber- or plastics-coated fabrics – Determination of coating adhesion", Method 1. This test determines the load required to separate the coating from the substrate cloth.

Five length-way and five cross-way specimens were prepared as specified in the standard, each 50 mm wide.

The tests were made on a Testometric CRE machine fitted with flat faced jaws, having an initial separation of 75 mm and operating at a speed of 100 mm per minute. The ply separation was continued over a distance of 200 mm.

The mid point of the final 80% of the delaminating process is recorded for each specimen. The arithmetic mean and standard deviation of the mid points for the five specimens tested in each direction is calculated.

The results for all tests are given in the tables on the following pages.

Uncertainty of measurement has not been taken into account when presenting the test result. The relevant uncertainty value is included as an annex which forms an integral part of the report.

Reported by: ..... Miss D Southworth, Senior Laboratory Technician

Countersigned by: ..... Mr A Newton, Senior Customer Service Officer

Note: This report relates only to the samples submitted and as described in the report.
Enquiries concerning this report should be addressed to Customer Services.

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RESULTS

Sample: Rapido

ASSESSMENT OF SCHILDKNECHT FLEX DAMAGE AT 400 000 CYCLES						
Specimen Number	1 (Length)	2 (Length)	3 (Length)	4 (Width)	5 (Width)	6 (Width)
Deterioration in Appearance	2	2	2	2	2	2
Type of damage (if any)	Slight flaking of coating, moderate creasing	Slight flaking of coating, moderate creasing	Slight flaking of coating, moderate creasing	Slight flaking of coating, moderate creasing	Slight flaking of coating, moderate creasing	Slight flaking of coating, moderate creasing
Depth of Cracking	Nil	A	Nil	A	A	Nil
Number of Cracks of the Lowest Grade	None	1	None	1	4	None
Length of Longest Crack of the Lowest Grade (mm)	N/A	2mm	N/A	2mm	<1mm	N/A

N/A = not applicable

Deterioration In appearance		Depth of Cracking	
0	None	Nil	no cracking
1	Slight	A	surface or finish crack, not exposing the cellular or middle layer
2	Moderate	B	cracking into but not right through the middle layer, or, in the case of single-layer coatings, not exposing the base fabric
3	Severe	C	cracking through to the base fabric
		D	cracking right through the material

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RESULTS

Sample: Rapido

COATING ADHESION STRENGTH			
Ref.	MEAN (N/50mm)	S.D. (N/50mm)	Type of failure observed
Length Way	54	2.53	Specimen 1 - Partial Film Tear Specimens 2-5 - Coating to Fabric Peel
Cross Way	61	2.27	All specimens - Coating to Fabric Peel

Definitions:

1 - Delamination
Partial or whole separation of two, or more, of the component layers of a coated fabric. This can be either a fabric to polymer separation or separation within the actual polymer layer.

2 - Coating to Fabric Peel
Separation with no coating polymer residue remaining on the substrate cloth.

3 - Partial Film Tear
Delamination leaving patches of coating polymer still adhering to the substrate.

4 - Inseparable
Inability of the coating to peel because it breaks during preparation or test, indicating that the coating adhesion strength is greater than the coating polymer strength.

5 - Coating Or Film Delamination
The splitting of a multilayer coating leaving one or more layers of coating film residue on the substrate.

6 - Fabric Failure
The breaking of substrate during test, indicating that the coating adhesion strength is greater than the substrate strength.

7 - Fabric Delamination
The splitting or delamination of substrate leaving a partial layer or complete fabric laminate adhering to the coating.

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Annex

Summary of Uncertainty Budgets

Flexing Resistance	Not applicable (subjective assessment)
Coating Adhesion Strength	± 5.3%

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