

TEST REPORT

Report Ref.	LEI19014092A Original		
Date Received	24/01/2019	Date Issued	29/01/2019

Company Name & Address	Fashion Formula Ltd Drakeglen House, 35-36 Disraeli Rd London, NW10 7AX GBR
Contact Name	Alexander Wills

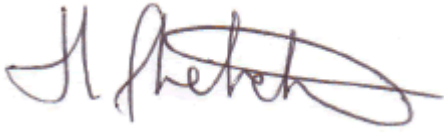
Order Number	Jan
Sample Description	Printed Fabric
Colour	Multi colour
Quality	Optic Organic Cotton
Supplier	Fashion Formula
Batch Number	1 Sample
Quoted Fibre Composition	100% Cotton
Retailer	General

Test	Method	Sample	Result
Colour Fastness to Rubbing - Dry	BS EN ISO 105 X12: 2016		See Results
Colour Fastness to Rubbing - Wet	BS EN ISO 105 X12: 2016		See Results
Colour Fastness to Water	BS EN ISO 105 E01: 2013	Yellow / Orange / Dark Red / Blue	See Results
Colour Fastness to Machine Washing	BS EN ISO 105 C06: 2010	All colours	See Results
Martindale Abrasion Resistance - 12 kPa	BS EN 14465: 2003 Annex A/BS EN ISO 12947-2: 1999		See Results
Colour Fastness to Water	BS EN ISO 105 E01: 2013	Red / Black / White	See Results

Tests marked (^) in this report have been performed by an approved 3rd party laboratory.
Tests marked (*) in this report are not included in our UKAS scope of accreditation.

Please Note: The en71-3 will follow on report number LEI19014154A once completed.

Please Note: The Formaldehyde will follow on report number LEI19014039A once completed.



Heather Fletcher
(Jobsheet Team Leader)

Colour Fastness to Rubbing - Dry BS EN ISO 105 X12: 2016
Conditioning Parameters: 20°C±2°C & 65% rH±4% rH

	Warp staining	Weft staining	Performance Level
	4-5	4-5	A - 4-5
			B - 4
			C - 3-4
Performance level	A	A	
Overall performance level	A		
BS 2543: 2004 Classification (Minimum levels for customer reference)			
Light Domestic	B = 4		
General Domestic	B = 4		
Heavy Domestic	B = 4		
General Contract	B = 4		
Severe Contract	B = 4		
Force	9N +/- 0.2N		
Rubbing Finger	Circular		
Conditioning Time	4 Hours		

Overall Test Result: See Results
Uncertainty: 1/2 grade

Colour Fastness to Rubbing - Wet BS EN ISO 105 X12: 2016
Conditioning Parameters: 20°C±2°C & 65% rH±4% rH

	Warp staining	Weft staining	Performance Level
	3-4	3-4	A = 3-4
			B = 3
			C = 2-3
Performance level	A	A	
Overall performance level	A		
BS 2543: 2004 Classification (Minimum levels for customer reference)			
Light Domestic	B = 3		
General Domestic	B = 3		
Heavy Domestic	B = 3		
General Contract	B = 3		
Severe Contract	B = 3		
Force	9N +/- 0.2N		
Rubbing Finger	Circular		
Conditioning Time	4 Hours		
Percentage Soak	95% - 100%		

Overall Test Result: See Results
Uncertainty: 1/2 grade

Colour Fastness to Water BS EN ISO 105 E01: 2013

Sample: Yellow / Orange / Dark Red / Blue

	Result	Change Performance Level	Stain Performance Level
Colour Change	4-5		A = 4 Change/3-4 Stain
			B = 3-4 Change/3 Stain
Colour Staining			
Acetate	4 - 5		
Cotton	5		
Nylon	4 - 5		
Polyester	5		
Acrylic	5		
Wool	4 - 5		
Performance level Change	A		
Performance level Stain	A		
Overall performance level	A		
BS 2543: 2004 Classification (Minimum levels for customer reference)			
	Change	Stain	
Light Domestic	A = 4	A = 3-4	
General Domestic	A = 4	A = 3-4	
Heavy Domestic	A = 4	A = 3-4	
General Contract	A = 4	A = 3-4	
Severe Contract	A = 4	A = 3-4	

Overall Test Result: See Results

Uncertainty: 1/2 grade

Colour Fastness to Machine Washing BS EN ISO 105 C06: 2010

Conditioning Parameters: 20°C±2°C & 65% rH±4% rH

Sample: All colours

	Result	Change Performance Level	Stain Performance Level
A2S@40°C			
Colour Change	4-5		
Colour Staining			
Acetate	4 - 5		
Cotton	5		
Nylon	4 - 5		
Polyester	5		
Acrylic	5		
Wool	4 - 5		
Performance level Change	A		
Performance level Stain	A		
Overall performance level	A		
BS 2543: 2004 Classification (Minimum levels for customer reference)			
	Change	Stain	
Light Domestic	N/A	N/A	
General Domestic	N/A	N/A	
Heavy Domestic	N/A	N/A	
General Contract	N/A	N/A	
Severe Contract	N/A	N/A	
Number of Steel Balls			
Detergent Used			
Souring Treatment in Acetic Acid Reagent Performed			

Overall Test Result: See Results

Uncertainty: 1/2 grade

Martindale Abrasion Resistance - 12 kPa BS EN 14465: 2003 Annex A/BS EN ISO 12947-2: 1999
Conditioning Parameters: 20°C±2°C & 65% rH±4% rH

	Results	Requirements		
Shade Change @ 3000 revs	3 - 4			
	Abrasion resistance*	Performance level		
Specimen 1	>35,000 Revs	A = 35,000		
Specimen 2	>35,000 Revs	B = 12,000 - 30,000		
Specimen 3	>35,000 Revs	C = 4,000 - 10,000		
Overall result**	>35,000 Revs			
Overall performance level	A			
Appearance change	Cros stained			
Test information				
Test load: 12 kPa				
Fabric Type	Flat woven			
Breakdown criteria	Three thread breakdown			
Inspection interval	Every 5000			
Foam used	Yes			
*The abrasion resistance result is the last inspection point at which no breakdown was observed,				
**The overall result is the lowest individual test result of all the test specimens tested.				
BS 2543: 2004 Classification (Minimum levels for customer reference)				
	Flat woven	Figured weave	Woven/Flocked/Non-Woven Pile Fabrics	Knitted
Light Domestic	15,000	12,000	15,000	15,000
General Domestic	20,000	15,000	20,000	20,000
Heavy Domestic	25,000	20,000	25,000	25,000
General Contract	30,000	30,000	25,000	25,000
Severe Contract	40,000	40,000	30,000	30,000

Overall Test Result: See Results
Uncertainty: ±17%

Colour Fastness to Water BS EN ISO 105 E01: 2013
Sample: Red / Black / White

	Result	Change Performance Level	Stain Performance Level
Colour Change	4-5		A = 4 Change/3-4 Stain
			B = 3-4 Change/3 Stain
Colour Staining			
Acetate	4 - 5		
Cotton	5		
Nylon	4 - 5		
Polyester	5		
Acrylic	5		
Wool	4 - 5		
Performance level Change	A		
Performance level Stain	A		
Overall performance level	A		
BS 2543: 2004 Classification (Minimum levels for customer reference)			
	Change	Stain	
Light Domestic	A = 4	A = 3-4	
General Domestic	A = 4	A = 3-4	
Heavy Domestic	A = 4	A = 3-4	
General Contract	A = 4	A = 3-4	
Severe Contract	A = 4	A = 3-4	

Overall Test Result: See Results
Uncertainty: 1/2 grade

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The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k = 2$, providing a level of confidence of approximately 95 %. Any Pass/Fail statements do not take into account the Measurement of Uncertainty. The Uncertainty budgets are stated for each Test method, these are for reference, and should be considered when results are close to Specification Limits / Requirements.