



**BRISBANE  
MOSS**

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Technical Document		Article-	T1	Release Date-	01 February 2025
Description-	12 wale Needlecord		Composition-	100% Cotton	
Applications-	Apparel				
Weight (g/m <sup>2</sup> )	315		UNI 5114		
Weight Linear (g/m)	473				
Warp Yarn per Inch	34		UNI EN 1049/2		
Weft Yarn per Inch	194				
Warp Yarn Count	2/20s		ISO 7211/5		
Weft Yarn Count	20s				
Minimum Usable Width	146cm		UNI EN 1773		
Customs Tariff Code (HS)	58012200				
County of Origin	Italy				
Yarn Origin	USA/Turkey				
Weaving Origin	Austria				
Dyeing/Finishing Origin	Italy				
Sample/Bulk Leadtime (Weeks)	Stock Supported				
<u>Manufacturing Features-</u>					
Piece Dye	Jig Dyeing Method		Reactive Dyestuffs		
Care Instructions-					UNI EN ISO 3758
<u>Dimensional Stability-</u>					
Domestic Washing	Warp	+/- 3%	ISO 6330:2021		
	Weft	+/- 4.5%			
Steam Ironing	Warp	+/- 3%	DIN 53894-2		
	Weft	+/- 3%			
Dry Cleaning	Warp	+/- 3%	UNI EN ISO 3175-2		
	Weft	+/- 3%			
<u>Physical Features-</u>					
Tensile Strength	Warp	27kg	UNI EN ISO 13934-1		
	Weft	22kg			
Tear Strength	Warp	1050g	UNI EN ISO 13927-2		
	Weft	2000g			
Seam Slippage (6mm)	Warp	> 20kg	UNI EN ISO 13935-1		
	Weft	10kg			
Abrasion Resistance (9kPa)	Face	Grade 4/5 @ 30,000 Rubs	UNI EN ISO 12947-2		
Pilling (2000 Revolutions)	Face	Grade 4/5 @ 30,000 Rubs	UNI EN ISO 12945-2		
Martindale	Face	Grade 4	20,000rpm		
Maximum Weft Skew	3%				
Stretch and Recovery at 30N Load	Extension	N/A	UNI EN 14704-1		
	Residual	N/A			

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Colour Fastness-		Grade	Change in Colour	Dark Colours					
				Cross Staining					
				Acetate	Cotton	Polyamide	Polyester	Acrylic	Wool
Dry Cleaning	UNI EN ISO 105-D01		3	3	3	3	3	3	
Dry Ironing	UNI EN ISO 105-X11		3	3	3	3	3	3	
Wet Ironing	UNI EN ISO 105-X11		3	3	3	3	3	3	
Acid Pers	UNI EN ISO 105-E04		3	3	3	3	3	3	
Alkaline Pers	UNI EN ISO 105-E04		3	3	3	3	3	3	
Water	UNI EN ISO 105-E01		3	3	3	3	3	3	
Washing	UNI EN ISO 105-C06		3	3	3	3	3	3	
Dry Rubbing	UNI EN ISO 105-X12			3/4					
Wet Rubbing	UNI EN ISO 105-X12			2/3					
Light	UNI EN ISO 105-B02	>4							

		Grade	Change in Colour	Light Colours					
				Cross Staining					
				Acetate	Cotton	Polyamide	Polyester	Acrylic	Wool
Dry Cleaning	UNI EN ISO 105-D01		4	4	4	4	4	4	
Dry Ironing	UNI EN ISO 105-X11		4	4	4	4	4	4	
Wet Ironing	UNI EN ISO 105-X11		4	4	3	4	4	4	
Acid Pers	UNI EN ISO 105-E04		4	4	4	4	4	4	
Alkaline Pers	UNI EN ISO 105-E04		4	4	4	4	4	4	
Water	UNI EN ISO 105-E01		4	4	4	4	4	4	
Washing	UNI EN ISO 105-C06		4	4	4	4	4	4	
Dry Rubbing	UNI EN ISO 105-X12			4					
Wet Rubbing	UNI EN ISO 105-X12			3					
Light	UNI EN ISO 105-B02	>4							

Chemical and Ecotoxicological-		
pH-value Water Extract	4.0 - 7.5	UNI EN ISO 3071
Flammability	Class 1	16 CFR 1610
Formaldehyde	< 16 mg/kg	UNI EN ISO 14184/1
Cancer-causing Aromatic Amines	< 20 ppm	DIN EN ISO 14362/1
REACH Compliant	Yes	Reg.(UE) 1907/2006

Standard(s)-		
Compliant with the National Standard of the People's Republic of China		GB18401-2010
Better Cotton Available		1030682-1

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<b>Test Report</b>	<b>No. 28515557</b>	<b>Date: 11<sup>th</sup> February 2025</b>	<b>Page 1 of 9</b>
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**Sample Description** : 12 Wale Needlecord  
**Customer** : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**  
**Product type** : Apparel T1 100% Cotton 315 gsm  
**PO Number** : 13195-8RB  
**Colour** : Drab / 301  
**Contact person** : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant  
 \* \* \* \* \*  
 Sample Receiving Date : 22<sup>nd</sup> January 2025  
 Testing Period : 22<sup>nd</sup> January 2025 – 11<sup>th</sup> February 2025  
 Test Result(s) : For further details, please refer to the following page(s).

**Conclusion:**

Test Property			
Colour Fastness to Washing	Data	Tear Strength - Trouser	Data
Colour Fastness to Dry Cleaning	Data	Seam Slippage	Data
Colour Fastness to Perspiration	Data	Pilling Resistance	Data
Colour Fastness to Water	Data	Abrasion Resistance	Data
Colour Fastness to Light*	Data	Yarn Count*	Data
Colour Fastness to Hot Pressing*	Data	Formaldehyde*	Pass
Colour Fastness to Rubbing	Data	pH Value	Data
Dimensional Stability to Washing	Data	Bow & Skew**	Data
Dimensional Stability to Dry Cleaning**	Data	Azo Dyes*	Pass
Dimensional Stability to Free Steam (wira)*	Data	Tear Strength - Elmandorf	Data
Tensile Strength	Data		

\*Sub Contracted tests withing TUV Group Laboratories (Turkey)  
 \*\*Not UKAS Accredited

Signed for and on behalf of  
 TÜV Rheinland UK LTD

**Christopher Clarke**  
 Digitally signed by Christopher Clarke  
 Date: 2025.02.11 11:27:53 Z

**Chris Clarke**  
 Laboratory Supervisor



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<b>Test Report</b>	No. 28515557	Date: 11 <sup>th</sup> February 2025	Page 2 of 9
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*Test result is drawn according to the kind and extent of tests performed.  
Without permission of the test centre this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products. This test report represents the test parameters as requested by the customer based on submitted samples only.*

**Results:**

<b>Colour Fastness to Washing</b>	
Washing Condition: A2S, 30°C (Deviation) With ECE(B) + Sodium Perborate, 10 Steel Balls.	
Sample	Result
Colour Change	4-5
Self-Staining	-
Colour Staining	Result
Acetate	4-5
Cotton	4-5
Polyamide	4-5
Polyester	4-5
Acrylic	4-5
Wool	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

<b>Colour Fastness to Water</b>	
BS EN ISO 105 E01: 2013	
Sample	Result
Colour Change	4-5
Self-Staining	-
Colour Staining	Result
Acetate	4-5
Cotton	4-5
Polyamide	4-5
Polyester	4-5
Acrylic	4-5
Wool	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

<b>Colour Fastness to Rubbing</b>			
BS EN ISO 105 X12: 2016			
Sample	Result		
	Warp		Weft
	Dry: 4-5		Dry: 4-5
	Wet: 3	% Soak: 100	Wet: 3-4 % Soak: 100
<b>Atmospheric Conditions:</b> 65% RH, 20°C			
<b>Conditioning time of sample and rubbing cloth:</b> 4 Hours			

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<b>Colour Fastness to Light</b> BS EN ISO 105 B02 Method 3: 2013	
<b>Sample</b>	
	>4

<b>Colour Fastness to Hot Pressing</b> BS EN ISO 105 X11 @ 150°C: 1994	
<b>Sample</b>	
Sample	<p>Immediately After Testing colour Change            Dry: 4-5            Damp: 4-5            Wet: 4-5</p> <p>After Conditioning Colour Change            Dry: 4-5            Damp: 4-5            Wet: 4-5</p> <p>Colour Staining            Damp: 4            Wet: 3-4</p>

<b>Colour Fastness to Dry Cleaning</b> BS EN ISO 105-D01: 2010	
	<b>Result</b>
<b>Colour Change</b>	4-5
<b>Self-Staining</b>	-
<b>Colour Staining</b>	<b>Result</b>
<b>Acetate</b>	4-5
<b>Cotton</b>	4-5
<b>Polyamide</b>	4-5
<b>Polyester</b>	4-5
<b>Acrylic</b>	4-5
<b>Wool</b>	4-5
Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good	

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Colour Fastness To Perspiration BS EN ISO 105-E04: 2013		
Sample	Result	
	Acid	Alkaline
Colour Change	4-5	4-5
Self-Staining		
Colour Staining	Result	Result
Acetate	4-5	4-5
Cotton	4-5	4-5
Polyamide	4-5	4-5
Polyester	4-5	4-5
Acrylic	4-5	4-5
Wool	4-5	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

Abrasion Resistance (BS EN ISO 12947-2:2016/AC:2006); Martindale Wear & Abrasion Tester; 9 kPa Pressure) The criterion for judging end point was Two Threads Broken			
Result			
	Specimen 1	Specimen 2	Specimen 3
No Two Thread Breakdown	30,000	30,000	30,000
Colour Change At 3000 (rubs)	4-5	4-5	4-5

Remarks: Grey Scale Rating is based on the step scale of 1 to 5, where 1 is bad and 5 is good  
Observation Technique:40 fold magnification

Pilling Resistance (BS EN ISO 12945-2:2020; Martindale Abrasion & Pilling Tester; Tested against self) No cleansing required	
	Average Result
After 2000 Rubs Rating	P: 4-5 F: 4-5 M: 4-5

P=Pilling  
F-Fuzzing  
M=Matting



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<b>Tensile Strength</b> (BS EN ISO 13934-1:2013)	
<b>Direction</b>	<b>Result</b>
Warp	26.7 kg
Weft	22.5 kg

<b>Dimensional Change After Washing</b> BS EN ISO 6330: 2012 3N @ 30°C Flat Dry	
<b>Direction</b>	<b>%Change</b>
Warp	-3.2 %
Weft	-4.1 %

<b>Dimensional Change After Commercial Dry Cleaning</b> (Commercial dry clean cycle)	
<b>Direction</b>	<b>%Change</b>
Warp	-1.3 %
Weft	-1.2 %

<b>Dimensional Change to Free Steam (wira)</b> BS 4323: 1979	
<b>Direction</b>	<b>%Change</b>
Warp	-1.0 %
Weft	-1.5 %



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<b>Bow &amp; Skewness</b> ISO 13015: 2013	
<b>Direction</b>	
Bow	0.0 %
Skew	2.2 %

<b>Yarn Count</b> ISO 7211-5 Method A	
<b>Sample</b>	<b>Result</b>
	Warp: Nm: 15.7, Ne: 8.3 Weft: Nm: 31.6, Ne: 18.6  Nm: Metric Count Ne: Cotton Count

<b>Formaldehyde Content</b> ISO 14184-1: 2011	
<b>Sample</b>	<b>Result</b>
	Not Detected <16 mg/kg

<b>pH Value</b> ISO 3071: 2005 (withdrawn)	
<b>Sample</b>	<b>Result</b>
	pH 7.32
pH value of Grade 3 water: 7.1	
Temperature of the Grade 3 water: 17.7	

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<b>Seam Slippage</b> BS EN ISO 13936-1: 2004 6mm SO	
Sample	Result
Warp	Average of 4: A 6mm seam opening was not found Seam breakdown > 20.0 kg Result of 1: A 6mm seam opening was not found before a seam breakdown of: 12.4 kg
Weft	10.3 kg
Remarks:	

<b>Tearing Strength</b> BS EN ISO 13937-2: 2000	
Sample	Result
Warp	1132.9 g
Weft	2147.5 g

<b>Tearing Strength</b> (BS EN ISO 13937-1:2000; Elmendorf Tear)	
Sample	Result
Warp	No tear occurred >6526 g
Weft	2616 g

**4. Banned azo dyes**

Test Method: Method 1 - EN ISO 14362-1:2017 (Textiles) (Buffer extraction)  
 Method 2 - EN ISO 14362-1:2017 (Textiles) (Xylene extraction)  
 Method 3 - ISO 17234-1:2020 (Leather)  
 Method 4 - EN ISO 14362-3:2017 (Textile, 4-aminoazobenzene confirmation)  
 Method 5 - ISO 17234-2:2011 (Leather, 4-aminoazobenzene confirmation)

**Test Results:**

		Material No.				M001
		Test No.				T001-1
		Method No.				Method 1
		A22 Confirmation Method No.				--
ID	Test Parameter	CAS NO	Unit	RL	Regulatory Requirement	Result
A1	4-Aminobiphenyl	92-67-1	mg/kg	5	30	n.d.
A2	Benzidine	92-87-5	mg/kg	5	30	n.d.
A3	4-Chloro-o-toluidine	95-69-2	mg/kg	5	30	n.d.
A4	2-Naphthylamine	91-59-8	mg/kg	5	30	n.d.
A5*	o-Aminoazotoluene	97-56-3	mg/kg	5	30	n.d.
A6*	5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	mg/kg	5	30	n.d.
A7	4-Chloroaniline	106-47-8	mg/kg	5	30	n.d.
A8	4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	mg/kg	5	30	n.d.
A9	4,4'-Diaminodiphenylmethane	101-77-9	mg/kg	5	30	n.d.
A10	3,3'-Dichlorobenzidine	91-94-1	mg/kg	5	30	n.d.
A11	3,3'-Dimethoxybenzidine	119-90-4	mg/kg	5	30	n.d.
A12	3,3'-Dimethylbenzidine	119-93-7	mg/kg	5	30	n.d.
A13	4,4'-methylenedi-o-toluidine / 3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	mg/kg	5	30	n.d.
A14	p-Cresidine	120-71-8	mg/kg	5	30	n.d.
A15	4,4'-Methylene-bis-(2-chloroaniline)	101-14-4	mg/kg	5	30	n.d.
A16	4,4'-Oxydianiline	101-80-4	mg/kg	5	30	n.d.
A17	4,4'-Thiodianiline	139-65-1	mg/kg	5	30	n.d.
A18	o-Toluidine	95-53-4	mg/kg	5	30	n.d.
A19	4-methyl-m-phenylenediamine / 2,4-Toluyldiamine	95-80-7	mg/kg	5	30	n.d.
A20	2,4,5-Trimethylaniline	137-17-7	mg/kg	5	30	n.d.
A21	O-Anisidine	90-04-0	mg/kg	5	30	n.d.
A22**	4-Aminoazobenzene	60-09-3	mg/kg	5	30	n.d.
A23^	2,4-xylidine	95-68-1	mg/kg	5	30	n.d.
A24^	2,6-xylidine	87-62-7	mg/kg	5	30	n.d.
*2	2-Naphthyl-ammoniumacetate	553-00-4	mg/kg	5	30	n.d.
A26	4-chloro-o-toluidinium chloride	3165-93-3	mg/kg	5	30	n.d.
A25	4-chloro-o-toluidinium chloride	3165-93-3	mg/kg	5	30	n.d.
A27	4-Methoxy-m-phenylene diammonium sulphate	39156-41-7	mg/kg	5	30	n.d.
A28	2,4,5-trimethylaniline hydrochloride	21436-97-5	mg/kg	5	30	n.d.

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**Remark:**

- \* The CAS-number 97-56-3 (A5) and 99-55-8 (A6) are further reduced to CAS-number 95-53-4 (A18) and 95-80-7 (A19).
- \*\* Azo colorants that are able to form 4-aminoazobenzene (A22) CAS-number 60-09-3, generate under the condition of this method Aniline (CAS-number 62-53-3) and 1,4-phenylenediamine (CAS-number 106-50-3.)
- \*\*\* Azo colorants that are able to form 4-aminoazobenzene (A22), is confirmed by EN ISO 14362-3:2017 / ISO 17234-2:2011.
- \*\*\*\* Azo colorants are detected & quantified by GC/MS and confirmed by HPLC/DAD or HPLC/MSMS.

-End of Test Report-

<b>Test Report</b>	<b>No. 28515556</b>	<b>Date: 11<sup>th</sup> February 2025</b>	<b>Page 1 of 4</b>
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The following sample(s) was/were submitted and identified on behalf of the client as:

**Sample Description** : 12 Wale Needlecord  
**Customer** : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**  
**Product type** : Apparel T1 100% Cotton 315 gsm<sup>2</sup>  
**PO Number** : 12672-2C  
**Colour** : Fawn / 200  
**Contact person** : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant  
 \* \* \* \* \*  
 Sample Receiving Date : 22<sup>nd</sup> January 2025  
 Testing Period : 22<sup>nd</sup> January 2025 – 11<sup>th</sup> February 2025  
 Test Result(s) : For further details, please refer to the following page(s).

**Conclusion:**

Test Property	
Colour Fastness to Washing	Data
Colour Fastness to Dry Cleaning	Data
Colour Fastness to Perspiration	Data
Colour Fastness to Water	Data
Colour Fastness to Light*	Data
Colour Fastness to Hot Pressing*	Data
Colour Fastness to Rubbing	Data

\*Sub Contracted tests withing TUV Group Laboratories (Turkey)  
 \*\*Not UKAS Accredited

Signed for and on behalf of  
 TÜV Rheinland UK LTD

**Christopher  
 Clarke**

Digitally signed by  
 Christopher Clarke  
 Date: 2025.02.11 11:54:40  
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**Chris Clarke  
 Laboratory Supervisor**



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<b>Test Report</b>	No. 28515556	Date: 11 <sup>th</sup> February 2025	Page 2 of 4
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**Results:**

<b>Colour Fastness to Washing</b> Washing Condition: A2S, 30°C (Deviation) With ECE(B) + Sodium Perborate, 10 Steel Balls.	
Sample	Result
Colour Change	4-5
Self-Staining	-
Colour Staining	
Acetate	4-5
Cotton	4-5
Polyamide	4-5
Polyester	4-5
Acrylic	4-5
Wool	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

<b>Colour Fastness to Water</b> BS EN ISO 105 E01: 2013	
Sample	Result
Colour Change	4-5
Self-Staining	-
Colour Staining	
Acetate	4-5
Cotton	4-5
Polyamide	4-5
Polyester	4-5
Acrylic	4-5
Wool	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

<b>Colour Fastness to Rubbing</b> BS EN ISO 105 X12: 2016			
Sample	Result		
	Warp		Weft
	Dry: 4-5	Wet: 4	Dry: 4-5
			Wet: 4

Atmospheric Conditions: 65% RH, 20°C  
Conditioning time of sample and rubbing cloth: 4 Hours

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<b>Colour Fastness to Light</b> BS EN ISO 105 B02 Method 3: 2013	
<b>Sample</b>	
	>4

<b>Colour Fastness to Hot Pressing</b> BS EN ISO 105 X11 @ 150°C: 1994	
<b>Sample</b>	
Sample	<p>Immediately After Testing Colour Change            Dry: 4-5            Damp: 4-5            Wet: 4-5</p> <p>After Conditioning Colour Change            Dry: 4-5            Damp: 4-5            Wet: 4-5</p> <p>Colour Change            Damp: 4-5            Wet: 3</p>

<b>Colour Fastness to Dry Cleaning</b> BS EN ISO 105-D01: 2010	
	<b>Result</b>
<b>Colour Change</b>	4-5
<b>Self-Staining</b>	-
<b>Colour Staining</b>	
<b>Acetate</b>	4-5
<b>Cotton</b>	4-5
<b>Polyamide</b>	4-5
<b>Polyester</b>	4-5
<b>Acrylic</b>	4-5
<b>Wool</b>	4-5
Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good	



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<b>Colour Fastness To Perspiration</b> BS EN ISO 105-E04: 2013		
<b>Sample</b>	<b>Result</b>	
	<b>Acid</b>	<b>Alkaline</b>
<b>Colour Change</b>	4-5	4-5
<b>Self-Staining</b>	-	-
<b>Colour Staining</b>	<b>Result</b>	<b>Result</b>
<b>Acetate</b>	4-5	4-5
<b>Cotton</b>	4-5	4-5
<b>Polyamide</b>	4-5	4-5
<b>Polyester</b>	4-5	4-5
<b>Acrylic</b>	4-5	4-5
<b>Wool</b>	4-5	4-5

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good

-End of Test Report-

<b>Test Report</b>	No. 28515608	Date: 14 <sup>th</sup> February 2025	Page 1 of 8
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The following sample(s) was/were submitted and identified on behalf of the client as:

**Sample Description** : 12 Wale Needlecord  
**Customer** : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**  
**Product type** : Apparel T1 100% Cotton 315 g/m<sup>2</sup>  
**PO Number** : 13549-3A  
**Colour** : Brown / 100  
**Contact person** : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant  
 \* \* \* \* \*  
 Sample Receiving Date : 3<sup>rd</sup> February 2025  
 Testing Period : 3<sup>rd</sup> February 2025 – 14<sup>th</sup> February 2025  
 Test Result(s) : For further details, please refer to the following page(s).

**Conclusion:**

Test Property – REACH Annex XVII	
Aromatic Amine Salts*	Pass
Dimethyl Fumarate*	Pass
Migration of Heavy Metals*	Pass
Flame Retardants*	Pass
AP + APEO (Alkylphenols, Alkylphenol Ethoxylates)*	Pass
Quinoline*	Pass
Polycyclic Aromatic Hydrocarbons (PAHs)*	Pass
Pentachlorophenol (PCP) Content*	Pass
Per – and Polyfluoroalkyl Substances (PFAS)*	Pass
Organotin Compounds Content*	Pass

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Signed for and on behalf of  
TÜV Rheinland UK LTD

Christopher  
Clarke

Digitally signed by  
Christopher Clarke  
Date: 2025.02.14 08:22:16 Z

**Chris Clarke**  
**Laboratory Supervisor**

*Test result is drawn according to the kind and extent of tests performed.  
Without permission of the test centre this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products. This test report represents the test parameters as requested by the customer based on submitted samples only.*



<b>Test Report</b>	No. 28515608	Date: 14 <sup>th</sup> February 2025	Page 2 of 8
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Material No.	Material	Color	Location
M001	Textile	Brown	Woven base

**Results:**

**1. Aromatic Amine Salts**

**Test Method:** DIN EN ISO 14362-1:2017  
DIN EN ISO 14362-3:2017  
Analyzed by GC-MSD

**Test Result:**

Test Parameter	CAS NO	Unit	RL	Test No.	T001
				Material No.	M001
				Regulatory Requirement	Result
4-chloro-o-toluidinium chloride	3165-93-3	mg/kg	5	30	n.d.
4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	39156-41-7	mg/kg	5	30	n.d.
2,4,5-trimethylaniline hydrochloride	21436-97-5	mg/kg	5	30	n.d.
2-Naphthyl-ammoniumacetate	553-00-4	mg/kg	5	30	n.d.
Conclusion				-	

**Abbreviation:** n.d. = Not Detected (< Reporting Limit)  
RL = Reporting Limit  
mg/kg = milligram per kilogram

**2. Dimethyl fumarate (CAS No. 624-49-7)**

**Test Method:** Organic solvent extraction, GCMS analysis

**Test Result:**

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M001	Dimethyl fumarate	mg/kg	0.025	0.1	n.d.

**Abbreviation:** < = less than  
RL = Reporting Limit  
mg/kg = milligram per kilogram

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### 3. Migration of Heavy Metals

Test Method: All materials except leather: DIN EN 16711-2:2016  
Leather: DIN EN ISO 17072-1:2019

#### Test Result:

Test No.				T001
Material No.				M001
Test Parameter	Unit	RL	Customer Requirement	Result
Arsenic (As)	mg/kg	0.1	< 1 mg/kg each	n.d.
Cadmium (Cd)	mg/kg	0.05	< 1 mg/kg each	n.d.
Chromium (Cr)	mg/kg	0.5	< 1 mg/kg each	n.d.
Lead (Pb)	mg/kg	0.2	< 1 mg/kg each	n.d.
Conclusion				Pass

**Abbreviation:** < = less than  
RL = Reporting Limit  
mg/kg = milligram per kilogram

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#### 4.Flame Retardants

Test Method: 1. Organic solvent extraction, GCMS/LCMSMS  
2. Acid digestion, analyzed by ICP-MS

					Test No.	T001
					Material No.	M001
Test Parameter	CAS No.	Unit	RL	Formulation Limit	Test Result	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	mg/kg	100	< 1000 mg/kg	n.d.	
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	mg/kg	100	< 1000 mg/kg	n.d.	
Tris(2,3,-dibromopropyl)-phosphate (TRIS)	126-72-7	mg/kg	100	not used	n.d.	
Decabromodiphenyl ether (DecaBDE)	1163-19-5	mg/kg	100	< 1000 mg/kg	n.d.	
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	mg/kg	100	< 500 mg/kg	n.d.	
Tris(1-aziridinyl)phosphineoxide (TEPA)	545-55-1	mg/kg	100	not used	n.d.	
Polybromobiphenyls (PBB)	59536-65-1	mg/kg	100	not used	n.d.	
Hexabromocyclododecane(HBCDD)	3194-55-6	mg/kg	100	< 100 mg/kg	n.d.	
Heptabromodiphenyl ether (HeptaBDE)	68928-80-3	mg/kg	100	< 500 mg/kg	n.d.	
Hexabromodiphenyl ether (HexaBDE)	36483-60-0	mg/kg	100	< 500 mg/kg	n.d.	
Tetrabromodiphenyl ether (TetraBDE)	40088-47-9	mg/kg	100	< 500 mg/kg	n.d.	

**Abbreviation:** < = less than  
RL = Reporting Limit  
ppm = part per million

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**5.AP + APEO (Alkylphenols, Alkylphenol Ethoxylates)**

Test Method: ISO 18254-1:2016  
 NP and OP: Organic solvent extraction, GCMS  
 NPEO and OPEO: Organic solvent extraction, LC-MS

**Test Result:**

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M001	Nonylphenols (NP)	mg/kg	5	-	n.d.
		Octylphenols (OP)	mg/kg	5	-	n.d.
		Nonylphenoethoxylates (NPEO)	mg/kg	20	< 100 mg/kg	n.d.
		Octylphenoethoxylates (OPEO)	mg/kg	20	< 100 mg/kg	n.d.

**Abbreviation:** n.d. = not detected (< Reporting Limit)  
 RL = Reporting Limit  
 mg/kg = milligram per kilogram  
 NA = Not Applicable

**6.Quinoline**

Test Method: Ref. to DIN 54231:2022

**Test Result:**

Test No.	Material No.	Test Parameter	CAS No.	Unit	RL	Regulatory Requirement	Test Result	Conclusion
T001	M001	Quinoline	91-22-5	mg/kg	10	50	n.d.	Pass

**Abbreviation:** < = less than  
 RL = Reporting Limit  
 mg/kg = milligram per kilograms

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### 7. Polycyclic aromatic hydrocarbons (PAHs)

Test Method: AfPS GS 2019:01

**Test Result:**

Test No. T001					T001
Material No. M001					M001
Test Parameter	CAS NO	Unit	RL	Regulatory Requirement	Result
Benzo[a]anthracene	56-55-3	mg/kg	0.2	< 1 mg/kg	n.d.
Benzo[a]pyrene(BaP)	50-32-8	mg/kg	0.2	< 1 mg/kg	n.d.
Benzo[b]fluoranthene	205-99-2	mg/kg	0.2	< 1 mg/kg	n.d.
Benzo[k]fluoranthene	207-08-9	mg/kg	0.2	< 1 mg/kg	n.d.
Benzo[j]fluoranthene	205-82-3	mg/kg	0.2	< 1 mg/kg	n.d.
Benzo[e]pyrene	192-97-2	mg/kg	0.2	< 1 mg/kg	n.d.
Chrysene	218-01-9	mg/kg	0.2	< 1 mg/kg	n.d.
Dibenzo[a,h]anthracene	53-70-3	mg/kg	0.2	< 1 mg/kg	n.d.
Naphthalene	91-20-3	mg/kg	0.2	< 1 mg/kg	n.d.
Anthracene	120-12-7	mg/kg	0.2	Sum 10	n.d.
Benzo[g,h,i]perylene	191-24-2	mg/kg	0.2		n.d.
Fluoranthene	206-44-0	mg/kg	0.2		n.d.
Indeno[1,2,3-cd]pyrene	193-39-5	mg/kg	0.2		n.d.
Phenanthrene	85-01-8	mg/kg	0.2		n.d.
Pyrene	129-00-0	mg/kg	0.2		n.d.

**Abbreviation:** < = less than  
 RL = Reporting Limit  
 NA = Not Applicable  
 mg/kg = milligram per kilogram

### 8. Pentachlorophenol (PCP) Content

Test Method: Ref. to 64 LFGB B82.02-8:2001

**Test result**

Test No.	Material No.	Test Parameter	Unit	RL	Regulatory Requirement	Test Result
T001	M001	Pentachlorophenol (PCP)	mg/kg	0.1	≤ 5 mg/kg	n.d.

**Abbreviation:** < = less than  
 RL = Reporting Limit  
 mg/kg = milligram per kilogram

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**9. Per- and polyfluoroalkyl substances (PFAS)**

Test Method: Reference EN 17681-1:2022/EN 17681-2:2022, determination by CI-GCMS, GC-MSMS and LC-MSMS.

**Test Result:**

					Test No.	T001
					Material No.	M001
Test Parameter	CAS NO	Unit	RL	Customer's requirement	Result	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	µg/m <sup>2</sup>	1	< 1 µg/m <sup>2</sup>	n.d.	
Perfluorooctane sulfonamide (PFOSA)	754-91-6	µg/m <sup>2</sup>	1	< 1 µg/m <sup>2</sup>	n.d.	
Perfluorooctanoic acid (PFOA)	335-67-1	µg/m <sup>2</sup>	1	< 1 µg/m <sup>2</sup>	n.d.	
Sodium perfluorooctanoate (PFOA-Na)	335-95-5	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Potassium perfluorooctanoate (PFOA-K)	2395-00-8	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Silver perfluorooctanoate (PFOA-Ag)	335-93-3	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)	865-86-1	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Perfluorocylethanol 8:2 (8:2 FTOH)	678-39-7	mg/kg	1	< 1 µg/m <sup>2</sup>	n.d.	
Conclusion					Pass	

**Abbreviation:** < = Less than  
 RL = Reporting Limit  
 mg/kg = milligram per kilogram  
 µg/m<sup>2</sup> = microgram per square metre



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**10.Organotin compounds content**

Test Method: Organic solvent extraction, GCMS  
Ref. to ISO/TS 16179:2012

Test No.				T001
Material No.				M001
Test Parameter	Unit	RL	Regulatory Requirement	Result
TBT(Tributyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
TPT(Triphenyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
TOT(Trioctyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
TCyT(Tricyclohexyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
TPrT(Tripropyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
Sum of Tin of tri-substituted organotins	%	NA	< 0.1 %	n.d.
DBT(Dibutyltin) by weight of tin	%	0.01	< 0.1 %	n.d.
DOT(Dioctyltin) by weight of tin	%	0.01	< 0.1 %	n.d.

**Abbreviation:** < = less than  
RL = Reporting Limit  
% = percentage  
NA = Not Applicable

-End of Test Report-



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**BV CPS TEST LABORATUVARLARI LTD. STI.  
BUREAU VERITAS CONSUMER PRODUCTS  
SERVICES**

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Test TS EN ISO/IEC 17025 AB-0505-T
AB-0505-T
72252760365
10-25

## TEST REPORT

**LAB LOCATION: TURKEY**

**SERVICE TYPE: Regular**

**LAB NUMBER: (7225)276-0365**

**THE DATE OF RECEIPT OF TEST ITEM: October 03, 2025**

**START DATE FOR TESTING: October 03, 2025**

**DATE END OF TEST: October 07, 2025**

**NUMBER OF WORKING DAYS: 3.0**

**CUSTOMER NAME / ADDRESS CONTACT NAME** : M CHAPMAN&SONS LTD  
(Address: Chapman Works, Manchester Road,Dunnochshaw,Bumley  
BB121 5PW)  
(Attn: Paige Newham-Foulds)

**BUYER** : /

**SUPPLIER REFERENCE** : Style Number: /  
PO Number: 13149

**SAMPLE DESCRIPTION** : Woven Corduroy Fabric Sample (T1-12 Wale Needlecord)  
(Claimed Fiber Content: 100% Cotton)  
(Claimed Fabric Weight: /)

**COLOUR** : Bottle

**SUBMITTED CARE INSTRUCTION:** :

**REASON FOR REVISION** : /



**Date Out**  
(07/10/2025)

**Alev Meltem**  
Senior Client Team Lead

**Hasan Altıngül**  
Deputy General Manager Operations  
(07/10/2025)

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Rev. No / Date: 37 / 10.09.2025

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Prepared by: Şahin Engin  
Controlled by: Aygül Duran  
Approved by: Meltem Mat

### SUMMARY OF TEST RESULTS

TEST PERFORMED	PASS	FAIL	DATA
Flammability Of Clothing Textiles*	X		
<b>* TURKAK Accredited- See Appendix A</b>			

REMARKS	
1	: P: Pass, F: Fail, DATA: No Evaluation, N/A: Not Applicable
2	: *The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. Unless otherwise is specified, the uncertainty of measurement has not been taken into account when assessing pass/fail of the sample against the requirements of the standard. In case consideration of measurement uncertainties when assessing pass/ fail limits, some results may be in borderline. Information on uncertainty is contained in appendix A on this report.
3	: The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.



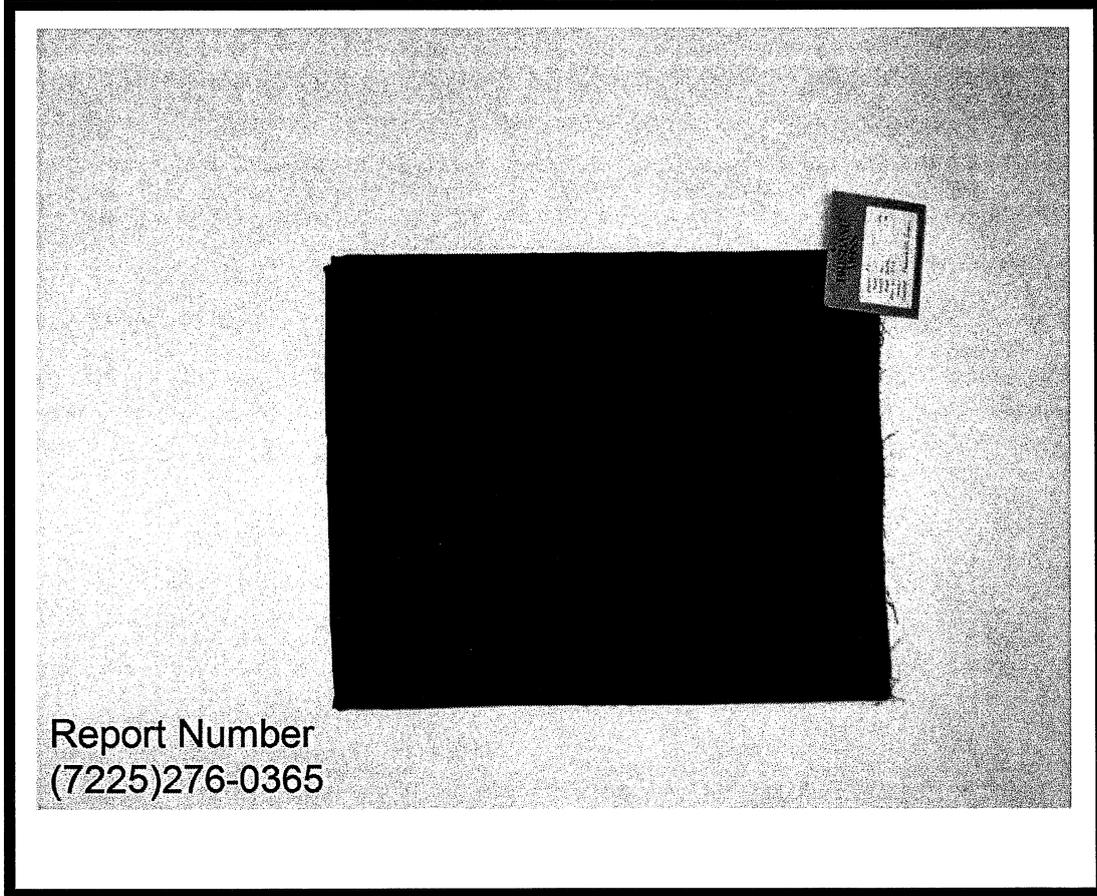
**BUREAU  
VERITAS**

AB-0505-T

72252760365

10-25

**ORIGINAL**  
(SAMPLE IMAGE)



<b>TEST RESULTS</b>	<b>REQUIREMENTS</b>
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**FLAMMABILITY OF CLOTHING TEXTILES (16 CFR 1610)**

**SAMPLE DESCRIPTION:**        WOVEN FABRIC

**FIBER CONTENT:**            100% COTTON

**FABRIC WEIGHT:**            /

**FABRIC SURFACE:**                    **RAISED FIBER SURFACE**

**DIRECTION TO BE TESTED:**                    **FACE / LENGTHWISE**  
(FROM PRELIMINARY TEST)

**AS RECEIVED**

**AFTER REFURBISHING**

TIME OF FLAME SPREAD (S)	BURN CODE	TIME OF FLAME SPREAD (S)	BURN CODE
1 /	1 SF POI	P1 /	P1 SF POI
2 /	2 SF POI	P2 /	P2 SF POI
3 /	3 SF POI	P3 /	P3 SF POI
4 /	4 SF POI	P4 /	P4 SF POI
5 /	5 SF POI	P5 /	P5 SF POI

AVG. \_\_\_/\_\_\_ SECONDS FOR# \_\_\_/\_\_\_ SPECIMENS        AVG. \_\_\_/\_\_\_ SECONDS FOR# \_\_\_/\_\_\_ SPECIMENS

- DNI        DID NOT IGNITE.
- IBE        IGNITED, BUT EXTINGUISHED.
- SF UC     SURFACE FLASH, UNDER THE STOP THREAD, BUT DOES NOT BREAK THE STOP THREAD.
- SF PW     SURFACE FLASH, PART WAY. NO TIME SHOWN BECAUSE THE SURFACE FLASH DID NOT REACH THE STOP THREAD.
- SF POI    SURFACE FLASH, AT THE POINT OF IMPINGEMENT ONLY. (EQUIVALENT TO "DID NOT IGNITE" FOR PLAIN SURFACES.)
- 0.0 SEC.    ACTUAL BURN TIME MEASURED AND RECORDED BY THE TIMING DEVICE.
- 0.0 SF ONLY    TIME IN SECONDS, SURFACE FLASH ONLY. NO DAMAGE TO THE BASE FABRIC.
- 0.0 SFBB    TIME IN SECONDS, SURFACE FLASH BASE BURN STARTING AT PLACES OTHER THAN THE POINT OF IMPINGEMENT AS A RESULT OF SURFACE FLASH.
- 0.0 SFBB POI    TIME IN SECONDS, SURFACE FLASH BASE BURN STARTING AT THE POINT OF IMPINGEMENT. THIS RESULT DOES NOT QUALIFY AS A BASE BURN UNDER THE CURRENT INTERPRETATION OF PART OF 16 CFR PART 1610.
- 0.0 SFBB POI\*    TIME IN SECONDS, SURFACE FLASH BASE BURN POSSIBLY STARTING AT THE POINT OF IMPINGEMENT. THE ASTERISK (\*) IS ACCOMPANIED BY THE FOLLOWING STATEMENT: "UNABLE TO MAKE ABSOLUTE DETERMINATION AS TO SOURCE OF BASE BURNS." THIS STATEMENT IS ADDED TO THE RESULT OF ANY SPECIMEN IF THERE IS A QUESTION AS TO ORIGIN OF THE BASE BURN.

**COMMENTS:**    PASS CLASS 1, NORMAL FLAMMABILITY OF COMMERCIAL STANDARD 16 CFR 1610, FORMERLY 191-53 OF UNITED STATES FLAMMABILITY FABRIC ACT.

\*\*Indicates does not meet the requirements

APPENDIX A –LIST OF MEASUREMENT UNCERTAINTIES		
TEST NAME	STANDARD NAME	MEASUREMENT UNCERTAINTY
FLAMMABILITY OF CLOTHING TEXTILES	16 CFR 1610	±7,9 %

**-END OF REPORT-**