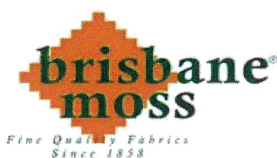


THE CHAPMAN GROUP OF COMPANIES



Tel: 01706 818587
sales@chapmangroup.co.uk
www.chapmangroup.co.uk



Tel: 01706 815121
sales@brisbanemoss.co.uk
www.brisbanemoss.co.uk

M Chapman & Sons Textiles Ltd
Bridgeroyd Works
Halifax Road
Eastwood
West Yorkshire
England
OL14 6DF

Technical Document		Article-	Ganton		Release Date-	07 November 2024
Description-	8 Wale Stretch Corduroy			Composition-	98% Cotton, 2% Elastane	
Applications-	Apparel					
Weight (g/m2)	375			UNI 5114		
Weight Linear (g/m)	562					
Warp Yarn per Inch	77			UNI EN 1049/2		
Weft Yarn per Inch	146					
Warp Yarn Count	16s			ISO 7211/5		
Weft Yarn Count	16s					
Minimum Usable Width	142cm			UNI EN 1773		
Customs Tariff Code (HS)	58012210					
County of Origin	India					
Yarn Origin	Varies per Batch					
Weaving Origin	India					
Dyeing/Finishing Origin	India					
Sample/Bulk Leadtime (Weeks)	Stock Supported					
Manufacturing Features-						
Piece Dye	Jig Dyeing Method		Reactive Dyestuffs			
Care Instructions-						UNI EN ISO 3758
						
Dimensional Stability-						
Domestic Washing	Warp	+/- 5%		ISO 6330:2021		
	Weft	+/- 5%				
Steam Ironing	Warp	+/- 3%		DIN 53894-2		
	Weft	+/- 3%				
Dry Cleaning	Warp	+/- 3%		UNI EN ISO 3175-2		
	Weft	+/- 3%				
Physical Features-						
Tensile Strength	Warp	60kg		UNI EN ISO 13934-1		
	Weft	30kg				
Tear Strength	Warp	1400g		UNI EN ISO 13927-2		
	Weft	1200g				
Seam Slippage (6mm)	Warp	18kg		UNI EN ISO 13935-1		
	Weft	> 20kg				
Abrasion Resistance (9kPa)	Face	Grade 4/5 @ 30,000 Rubs		UNI EN ISO 12947-2		
Pilling (2000 Revolutions)	Face	Grade 4/5		UNI EN ISO 12945-2		
Martindale	Face	Grade 4/5		20,000rpm		
Maximum Weft Skew		3%				
Stretch and Recovery at 30N Load	Extension	3%		UNI EN 14704-1		
	Residual	20%				



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West Yorkshire
England
OL14 6DF

el: 01706 818587
sales@chapmangroup.co.uk
www.chapmangroup.co.uk

Tel: 01706 815121
sales@brisbanemoss.co.uk
www.brisbanemoss.co.uk

Colour Fastness-

		Grade	Change in Colour	Dark Colours				
				Cross Staining				
				Acetate	Cotton	Polyamide	Polyester	Acrylic
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
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	4	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
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
Okeo-Tex Standard 100 Certified	11-52140 Shirley



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The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : 8 Wale Stretch Corduroy
Customer : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**
Product type : Apparel Ganton 98% Cotton, 2% Elastane
PO Number : 121024-1
Colour : Beige/3252
Contact person : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant
* * * * *
Sample Receiving Date : 17th October 2024
Testing Period : 17th October 2024 – 6th November 2024
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)

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Signed for and on behalf of
TÜV Rheinland UK LTD

Christopher
Clarke
Chris Clarke
Laboratory Supervisor

Digitally signed by
Christopher Clarke
Date: 2024.11.06 14:36:35 Z



*Test result is drawn according to the kind and extent of tests performed.
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Test Report	No. 28515286	Date: 6 th November 2024	Page 2 of 4
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Results:

Colour Fastness to Washing 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	

Colour Fastness to Water 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	

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

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

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

Colour Fastness to Dry Cleaning BS EN ISO 105-D01: 2010	
	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	



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Date: 6th November 2024

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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

-End of Test Report-

Test Report	No. 28515283	Date: 7th November 2024	Page 1 of 9
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The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : 8 Wale Heavyweight Corduroy
Customer : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**
Product type : Apparel Fabric Ganton 98% Cotton, 2% Elastane
PO Number : 151024-2
Colour : Black/3213
Contact person : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant
 * * * * *
 Sample Receiving Date : 17th October 2024
 Testing Period : 17th October 2024 – 7th November 2024
 Test Result(s) : For further details, please refer to the following page(s).

Conclusion:

Test Property			
Colour Fastness to Washing	Data	Tear Strength	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	Determination of Elasticity	Data
Tensile Strength	Data		

*Sub Contracted tests withing TUV Group Laboratories (Turkey)

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Signed for and on behalf of
TÜV Rheinland UK LTD



Christopher Clarke
 Digitally signed by Christopher Clarke
 Date: 2024.11.07 15:27:10 Z

Chris Clarke
Laboratory Supervisor

Test result is drawn according to the kind and extent of tests performed.

TÜV Rheinland (UK). Ltd, Unit 3, Key Point Office Village, Alfreton, DE55 7FQ,
 United Kingdom Tel: +44 1773 300 362, Email: joanne.brown@uk.tuv.com, Internet: <http://www.tuv.com>

Test Report	No. 28515283	Date: 7th November 2024	Page 2 of 9
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Results:

Colour Fastness to Washing	
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
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	

Colour Fastness to Water	
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	

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

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

Colour Fastness to Hot Pressing BS EN ISO 105 X11 @ 150°C: 1994	
Sample	
Sample	Immediately After Testing Colour Change Dry: 4-5 Damp: 4-5 Wet: 4-5 After Conditioning Colour Change Dry: 4-5 Damp: 4-5 Wet: 4-5 Colour Staining Damp: 4 Wet: 2-3

Colour Fastness to Dry Cleaning BS EN ISO 105-D01: 2010	
	Result
Colour Change	4-5
Self-Staining	
Colour Staining	Result
Acetate	4-5
Cotton	4-5
Polyamide	4-5
Polyester	4-5
Acrylic	4
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	

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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	4
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 5000 (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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Tensile Strength (BS EN ISO 13934-1:2013)	
Direction	Result
Warp	68.9 kg
Weft	30.4 kg

Dimensional Change After Washing BS EN ISO 6330: 2012 3N @ 30°C Flat Dry	
Direction	%Change
Warp	-4.1
Weft	0.0

Dimensional Change After Commercial Dry Cleaning (Commercial dry clean cycle)	
Direction	%Change
Warp	-1.4
Weft	-1.5

Dimensional Change to Free Steam (wira) BS 4323: 1979	
Direction	%Change
Warp	-0.0 %
Weft	-1.1 %



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Bow & Skewness

ISO 13015: 2013

Direction	
Bow	0.0%
Skew	0.0%

Yarn Count

ISO 7211-5 Method A

Sample	Result
	Warp: Nm: 24.1, Ne: 14.2 Weft: Nm: 26.0, Ne: 15.3 Nm: Metric Count Ne: Cotton Count

Formaldehyde Content

ISO 14184-1: 2011

Sample	Result
	Not Detected <16 mg/kg

pH Value

ISO 3071: 2005 (withdrawn)

Sample	Result
	pH 7.04
pH value of Grade 3 water: 7.1	
Temperature of the Grade 3 water: 20.3	

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Seam Slippage BS EN ISO 13936-1: 2004 6mm SO	
Sample	Result
Warp	A 6mm seam opening was not found at a seam breakdown of: 18.2 kg
Weft	>20.4 kg
Remarks:	

Tearing Strength BS EN ISO 13937-2: 2000	
Sample	Result
Warp	1522.4 g
Weft	1292.0 g

Elasticity of fabrics (BS EN ISO 14704-1) Strip sample	
Sample	Result
Warp	Elongation at 30N: 3.3% Unrecovered Elongation After 1 Min: 0.0% Unrecovered Elongation After 30 Mins: 0.0%
Weft	Elongation at 30N: 20.2% Unrecovered Elongation After 1 Min: 0.0% Unrecovered Elongation After 30 Mins: 0.0%



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5. 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-Toluylenediamine	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-

Test Report	No. 28515596	Date: 14th 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 : 8 Wale Stretch Corduroy
Customer : **Brisbane Moss; Bridgeroyd Works, Todmorden, OL14 6DF**
Product type : Apparel Ganton 98% Cotton, 2% Elastane 375 g/m²
PO Number : 13462-13AA
Colour : DK Olive / 304
Contact person : Stephen Newham, Joshua Barker-Lockwood

Test Performed : Selected test(s) as requested by applicant
 * * * * *
 Sample Receiving Date : 3rd February 2025
 Testing Period : 3rd February 2025 – 14th 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

*Sub Contracted tests withing TUV Group Laboratories (Turkey)

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Signed for and on behalf of
TÜV Rheinland UK LTD

Christophe
r Clarke

Digitally signed by
Christopher Clarke
Date: 2025.02.14
10:27:03 Z

Chris Clarke
Laboratory Supervisor

Test result is drawn according to the kind and extent of tests performed.

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Test Report	No. 28515596	Date: 14th February 2025	Page 2 of 8
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Material No.	Material	Color	Location
M001	Textile	Green	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 No. T001					Material No. M001
Test Parameter	CAS NO	Unit	RL	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

Test Report

No. 28515596

Date: 14th February 2025

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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					T001
Material No. M001					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 ²	1	< 1 µg/m ²	n.d.
Perfluorooctane sulfonamide (PFOSA)	754-91-6	µg/m ²	1	< 1 µg/m ²	n.d.
Perfluorooctanoic acid (PFOA)	335-67-1	µg/m ²	1	< 1 µg/m ²	n.d.
Sodium perfluorooctanoate (PFOA-Na)	335-95-5	mg/kg	1	< 1 µg/m ²	n.d.
Potassium perfluorooctanoate (PFOA-K)	2395-00-8	mg/kg	1	< 1 µg/m ²	n.d.
Silver perfluorooctanoate (PFOA-Ag)	335-93-3	mg/kg	1	< 1 µg/m ²	n.d.
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	mg/kg	1	< 1 µg/m ²	n.d.
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	mg/kg	1	< 1 µg/m ²	n.d.
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	mg/kg	1	< 1 µg/m ²	n.d.
1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)	865-86-1	mg/kg	1	< 1 µg/m ²	n.d.
Perfluorocycloethanol 8:2 (8:2 FTOH)	678-39-7	mg/kg	1	< 1 µg/m ²	n.d.
Conclusion					Pass

Abbreviation: < = Less than
 RL = Reporting Limit
 mg/kg = milligram per kilogram
 µg/m² = 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-