



REGISTERED

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TEST REPORT NO. SH001 134921.1

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Test material: 1 PES , 3 PES PA non woven interlinings, 2 PES woven interlinings

SUBJECT OF ANALYSIS

According to your order dated 06.11.2017 analysis should be carried out on the samples received on 09.11.2017. This order and the tests carried out are related to the application for renewal of your certificate SHAO 050898 according to the STANDARD 100 by OEKO-TEX®, product class II (articles with direct contact to skin), Appendix 4.

RESULTS OF ANALYSIS

The results of the analysis we have carried out are summarized in the following tables.

SUMMARY

According to the results of the analyses the tested parameters meet all requirements of STANDARD 100 by OEKO-TEX®, product class II, Appendix 4. Also the regulations on harmful substances under the European REACH legislation, including the textile-relevant candidates for SVHC (Substances of Very High Concern) as per 07.07.2017 are considered. Therefore your OEKO-TEX® certificate SHAO 050898 can be issued. The period of validity has been extended by another year. Please find the said certificate in the required languages Chinese and English enclosed with this test report.

In addition, we refer to the declaration of conformity, point 2, quality assurance, and ask you to ensure and verify that your products from different processing or dyeing batches (in case applicable) are randomly checked for compliance with the STANDARD 100 by OEKO-TEX®. Tests can be carried out at your facility or at TESTEX and have to be documented. On request documentation has to be shown to TESTEX.

Swiss Textile Testing Institute
TESTEX AG

Saverio Iozza
Laboratory Manager

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Enclosures mentioned

cc: TESTEX Shanghai

Die Ergebnisse beziehen sich nur auf die Prüfmuster. Die auszugsweise Vervielfältigung unserer Berichte ist nur mit schriftlicher Genehmigung der TESTEX AG gestattet.
The test results only relate to the test samples. Partial reproduction of our reports are only allowed with written approval of TESTEX AG



RE 134921.1



proven since 1846

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OVERVIEW

Please refer to overview table and table of result for failed samples.

p: tested and passed; X: tested and failed; d: done; ' ': not tested

	Sample No.									
	1	2	3	4	5	6				
Azo Dyes OEKO-TEX® Method 11.1 (direct)		p				p				
Azo Dyes OEKO-TEX® Method 11.1 (Extract)		p			p	p				
Chlorinated Benzenes & Toluenes OEKO-TEX® Method 12		p			p					
Chlorinated Phenols and OPP OEKO-TEX® Method 5					p	p				
Colour Fastness To Perspiration OEKO-TEX® Method 20-B (EN ISO 105-E04)					p	p				
Colour Fastness To Rubbing OEKO-TEX® Method 20-D (EN ISO 105-X12)					p					
Colour Fastness To Water OEKO-TEX® Method 20-C (EN ISO 105-E01)					p	p				
Disperse Dyes OEKO-TEX® Method 11.3/11.4		p			p	p				
Formaldehyde JIS L-1041 OEKO-TEX® Method 2					p	p				
Heavy Metals OEKO-TEX® Method 3.1 (Extract)	p	p			p	p				
Organic Tin Compounds OEKO-TEX® Method 7	p	p	p	p						
pH-Value OEKO-TEX® Method 1 (ISO 3071 - KCl)	p		p	p						
Surfactants, Wetting Agent Residues OEKO-TEX® Method 15	p	p	p	p						

No. 1: 100%PES non-woven interlining white

No. 2: PES/PA non-woven interlining grey

No. 3: PES/PA non-woven interlining white

No. 4: 100%PES Woven interlining white

No. 5: 100%PES Woven interlining black

No. 6: PES/PA non-woven interlining black

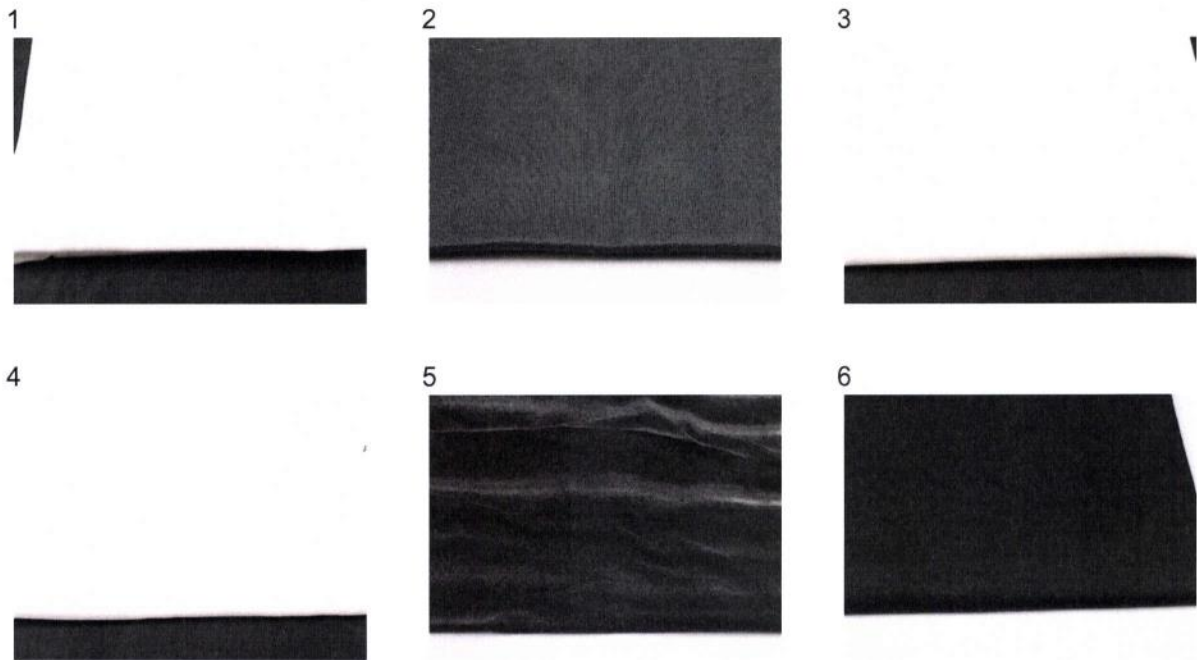


TABLE OF RESULTS

		#1 100%PES non-woven interlining white	#3 PES/PA non-woven interlining white	#4 100%PES Woven interlining white
pH-Value OEKO-TEX® Method 1 (ISO 3071 - KCl) [OTC II Product Class II - Testing Items Appendix 4]	STANDARD 100 Product Class II Appendix 4			
No. of tests		2	2	2
• Aqueous extract [pH]	>=4.0 <=7.5	6.1	6.0	4.2
		#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black	
Formaldehyde JIS L-1041 OEKO-TEX® Method 2 [OTC II Product Class II - Testing Items Appendix 4]	STANDARD 100 Product Class II Appendix 4			
No. of tests		1	1	
• Free formaldehyde [mg/kg]	<75	<16	<16	

			#1 100%PES non-woven interlining white	#2 PES/PA non-woven interlining grey	#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black
Heavy Metals OEKO-TEX® Method 3.1 (Extract) [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4				
No. of tests			1	1	1	1
• Antimony	[mg/kg]	<30	3.3	1.7	0.83	1.2
• Arsenic	[mg/kg]	<1.0	0.03	0.03	<0.02	<0.02
• Lead	[mg/kg]	<1.0	<0.02	<0.02	<0.02	<0.02
• Cadmium	[mg/kg]	<0.10	<0.02	<0.02	<0.02	<0.02
• Chromium total	[mg/kg]	<2.0	<0.02	<0.02	<0.02	<0.02
• Cobalt	[mg/kg]	<4.0	0.03	0.01	0.02	<0.01
• Copper	[mg/kg]	<50	<0.20	0.63	<0.20	0.22
• Nickel	[mg/kg]	<4.0	<0.10	<0.10	<0.10	<0.10
• Mercury	[mg/kg]	<0.02	<0.01	<0.01	<0.01	<0.01
• Selenium	[mg/kg]		0.16	<0.10	0.36	<0.10
• Zinc	[mg/kg]		27	18	14	27
• Manganese	[mg/kg]		0.60	0.73	0.90	0.22



				#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black
Chlorinated Phenols and OPP OEKO-TEX® Method 5 [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4			
No. of tests			2	1	
• OPP (Orthophenylphenol)	[mg/kg]	<100	<0.05	<0.05	
• Pentachlorophenol (PCP)	[mg/kg]	<0.50	<0.01	<0.01	
• 2,3,5,6-TeCP	[mg/kg]		<0.01	<0.01	
• 2,3,4,6-TeCP	[mg/kg]		<0.01	<0.01	
• 2,3,4,5-TeCP	[mg/kg]		<0.01	<0.01	
• Tetrachlorophenols (TeCP, Sum)	[mg/kg]	<0.50	<0.01	<0.01	
• 2,3,4-TrCP	[mg/kg]		<0.05	<0.05	
• 2,3,5-TrCP	[mg/kg]		<0.05	<0.05	
• 2,3,6-TrCP	[mg/kg]		<0.05	<0.05	
• 2,4,5-TrCP	[mg/kg]		<0.05	<0.05	
• 2,4,6-TrCP	[mg/kg]		<0.05	<0.05	
• 3,4,5-TrCP	[mg/kg]		<0.05	<0.05	
• Trichlorophenols (TrCP, Sum)	[mg/kg]	<2.0	<0.05	<0.05	
• 2,4/2,5-DCP	[mg/kg]		<0.05	<0.05	
• 2,6-DCP	[mg/kg]		<0.05	<0.05	
• 2,3-DCP	[mg/kg]		<0.05	<0.05	
• 3,4-DCP	[mg/kg]		<0.05	<0.05	
• 3,5-DCP	[mg/kg]		<0.05	<0.05	
• Dichlorophenols (DCP, Sum)	[mg/kg]	<3.0	<0.05	<0.05	
• 2-MCP	[mg/kg]		<0.05	<0.05	
• 3-MCP	[mg/kg]		<0.05	<0.05	
• 4-MCP	[mg/kg]		<0.05	<0.05	
• Monochlorophenols (MCP, Sum)	[mg/kg]	<3.0	<0.05	<0.05	



			#1 100%PES non-woven interlining white	#2 PES/PA non-woven interlining grey	#3 PES/PA non-woven interlining white	#4 100%PES Woven interlining white
Organic Tin Compounds OEKO-TEX® Method 7 [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4				
No. of tests			1	1	1	1
• Trimethyltin (TMT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Dimethyltin (DMT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Monomethyltin (MMT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Tetraethyltin (TeET)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Dipropyltin (DPT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Monobutyltin (MBT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Tripropyltin (TPT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Dibutyltin (DBT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Monophenyltin (MPhT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Tributyltin (TBT)	[mg/kg]	<1.0	<0.05	<0.05	<0.05	<0.05
• Mono-octyltin (MOT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Tetra-butyltin (TeBT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Diphenyltin (DPhT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Dioctyltin (DOT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Tricyclohexyltin (TCT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05
• Triphenyltin (TPhT)	[mg/kg]	<1.0	<0.05	<0.05	<0.05	<0.05
• Trioctyltin (TOT)	[mg/kg]	<2.0	<0.05	<0.05	<0.05	<0.05



		#2 PES/PA non-woven interlining grey	#6 PES/PA non-woven interlining black
Azo Dyes OEKO-TEX® Method 11.1 (direct) [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4	
No. of tests		1	1
• Aniline	[mg/kg]	<5	<5
• o-Toluidine	[mg/kg]	<20	<20
• 2,4-Xylidine	[mg/kg]	<20	<20
• 2,6-Xylidine	[mg/kg]	<20	<20
• o-Anisidine	[mg/kg]	<20	<20
• p-Chloraniline	[mg/kg]	<20	<20
• p-Cresidine	[mg/kg]	<20	<20
• 2,4,5-Trimethylaniline	[mg/kg]	<20	<20
• 4-Chloro-o-toluidine	[mg/kg]	<20	<20
• 2,4-Toluylenediamine	[mg/kg]	<20	<20
• 2,4-Diaminoanisole	[mg/kg]	<20	<20
• 2-Naphthylamine	[mg/kg]	<20	<20
• 2-Amino-4-nitrotoluene	[mg/kg]	<20	<20
• 4-Aminodiphenyl	[mg/kg]	<20	<20
• 4,4'-Oxydianiline	[mg/kg]	<20	<20
• Benzidine	[mg/kg]	<20	<20
• 4,4'-	[mg/kg]	<20	<20
Diaminodiphenylmethane			
• o-Aminoazotoluene	[mg/kg]	<20	<20
• 3,3'-Dimethyl-4,4'-	[mg/kg]	<20	<20
diaminodiphenylmethane			
• 3,3'-Dimethylbenzidine	[mg/kg]	<20	<20
• 4,4'-Thiodianiline	[mg/kg]	<20	<20
• 3,3'-Dichlorobenzidine	[mg/kg]	<20	<20
• 4,4'-Methylene-bis-(2-	[mg/kg]	<20	<20
chloraniline)			
• 3,3'-Dimethoxybenzidine	[mg/kg]	<20	<20
• 1,4-Phenylenediamine	[mg/kg]	<5	<5
• N-Methylaniline	[mg/kg]	<5	<5



		#2 PES/PA non-woven interlining grey	#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black
Azo Dyes OEKO-TEX® Method 11.1 (Extract) [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4		
No. of tests		1	1	1
• Aniline	[mg/kg]	<5	<5	<5
• o-Toluidine	[mg/kg]	<20	<20	<20
• 2,4-Xylidine	[mg/kg]	<20	<20	<20
• 2,6-Xylidine	[mg/kg]	<20	<20	<20
• o-Anisidine	[mg/kg]	<20	<20	<20
• p-Chloraniline	[mg/kg]	<20	<20	<20
• p-Cresidine	[mg/kg]	<20	<20	<20
• 2,4,5-Trimethylaniline	[mg/kg]	<20	<20	<20
• 4-Chloro-o-toluidine	[mg/kg]	<20	<20	<20
• 2,4-Toluylenediamine	[mg/kg]	<20	<20	<20
• 2,4-Diaminoanisole	[mg/kg]	<20	<20	<20
• 2-Naphthylamine	[mg/kg]	<20	<20	<20
• 2-Amino-4-nitrotoluene	[mg/kg]	<20	<20	<20
• 4-Aminodiphenyl	[mg/kg]	<20	<20	<20
• 4,4'-Oxydianiline	[mg/kg]	<20	<20	<20
• Benzidine	[mg/kg]	<20	<20	<20
• 4,4'-	[mg/kg]	<20	<20	<20
Diaminodiphenylmethane				
• o-Aminoazotoluene	[mg/kg]	<20	<20	<20
• 3,3'-Dimethyl-4,4'-	[mg/kg]	<20	<20	<20
diaminodiphenylmethane				
• 3,3'-Dimethylbenzidine	[mg/kg]	<20	<20	<20
• 4,4'-Thiodianiline	[mg/kg]	<20	<20	<20
• 3,3'-Dichlorobenzidine	[mg/kg]	<20	<20	<20
• 4,4'-Methylene-bis-(2-	[mg/kg]	<20	<20	<20
chloraniline)				
• 3,3'-Dimethoxybenzidine	[mg/kg]	<20	<20	<20
• 1,4-Phenylenediamine	[mg/kg]	<5	18	18
• N-Methylaniline	[mg/kg]	<5	<5	<5

		#2	#5	#6	
		PES/PA	100%PES	PES/PA	
		non-woven	Woven	non-woven	
		interlining	interlining	interlining	
		grey	black	black	
Disperse Dyes					
OEKO-TEX® Method 11.3/11.4 [OTC II					
Product Class II - Testing Items Appendix					
4]					
		STANDARD			
		100 Product			
		Class II			
		Appendix 4			
No. of tests			1	1	1
• C.I. Disperse Blue 1*	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 3	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 7	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 26	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 35	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 102	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 106	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Blue 124	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Orange 1	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Orange 3	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Orange 11*	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Orange 37/76	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Orange 149	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Red 1	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Red 11	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Red 17	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 1	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 3*	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 9	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 23°	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 39S	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 49	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Brown 1	[mg/kg]	<50	<20	<20	<20
• C.I. Disperse Yellow 39	[mg/kg]	<50	<20	<20	<20



		#2 PES/PA non-woven interlining grey	#5 100%PES Woven interlining black
Chlorinated Benzenes & Toluenes OEKO-TEX® Method 12 [OTC II Product Class II - Testing Items Appendix 4]		STANDARD 100 Product Class II Appendix 4	
No. of tests		1	1
• Chlorobenzene	[mg/kg]	<0.05	<0.05
• 2-Chlorotoluene	[mg/kg]	<0.01	<0.01
• 3-Chlorotoluene	[mg/kg]	<0.01	<0.01
• 4-Chlorotoluene	[mg/kg]	<0.01	<0.01
• 1,3-Dichlorobenzene	[mg/kg]	<0.01	<0.01
• Benzylchloride	[mg/kg]	<0.01	<0.01
• 1,4-Dichlorobenzene	[mg/kg]	<0.01	<0.01
• 1,2-Dichlorobenzene	[mg/kg]	<0.01	<0.01
• 2,4-Dichlorotoluene	[mg/kg]	<0.01	<0.01
• 2,5-/ 2,6-Dichlorotoluene	[mg/kg]	<0.01	<0.01
• 1,3,5-Trichlorobenzene	[mg/kg]	<0.01	<0.01
• α,α-Dichlorotoluene	[mg/kg]	<0.01	<0.01
• 2,3-/ 3,4-Dichlorotoluene	[mg/kg]	<0.01	<0.01
• 1,2,4-Trichlorobenzene	[mg/kg]	<0.01	<0.01
• 1,2,3-Trichlorobenzene	[mg/kg]	<0.01	<0.01
• α,α,α-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• 2,4,5-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• 2,3,6-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• 1,2,3,5-Tetrachlorobenzene	[mg/kg]	<0.01	<0.01
• 1,2,4,5-Tetrachlorobenzene	[mg/kg]	<0.01	<0.01
• α,2,6-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• α,2,4-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• 1,2,3,4-Tetrachlorobenzene	[mg/kg]	<0.01	<0.01
• α,3,4-Trichlorotoluene	[mg/kg]	<0.01	<0.01
• α,α,α,2-Tetrachlorotoluene	[mg/kg]	<0.01	<0.01
• Pentachlorobenzene	[mg/kg]	<0.01	<0.01
• 2,3,4,5,6-Pentachlorotoluene	[mg/kg]	<0.01	<0.01
• Hexachlorobenzene	[mg/kg]	<0.01	<0.01
• Sum	[mg/kg]	<1.0	<0.05



		#1 100%PES non-woven interlining white	#2 PES/PA non-woven interlining grey	#3 PES/PA non-woven interlining white	#4 100%PES Woven interlining white
Surfactants, Wetting Agent Residues OEKO-TEX® Method 15 [OTC II Product Class II - Testing Items Appendix 4]					
STANDARD 100 Product Class II Appendix 4					
No. of tests		1	1	1	1
• Octylphenol (OP) [mg/kg]		<0.1	<0.1	<0.1	<0.1
• Nonylphenol (NP) [mg/kg]		<0.1	<0.1	<0.1	<0.1
• Sum OP & NP [mg/kg]	<10	<0.1	<0.1	<0.1	<0.1
• Octylphenoethoxylate (OPEO) [mg/kg]		<1.0	<1.0	<1.0	<1.0
• Nonylphenoethoxylate (NPEO) [mg/kg]		<1.0	<1.0	<1.0	<1.0
• Sum OP, NP, OPEO & NPEO [mg/kg]	<100	<0.1	<0.1	<0.1	<0.1

		#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black
Colour Fastness To Water OEKO-TEX® Method 20-C (EN ISO 105-E01) [OTC II Product Class II - Testing Items Appendix 4]			
STANDARD 100 Product Class II Appendix 4			
No. of tests		1	1
• Change in colour [grade]		4-5	4-5
• Staining [grade]	>=3	4-5	4-5

		#5 100%PES Woven interlining black	#6 PES/PA non-woven interlining black
Colour Fastness To Perspiration OEKO-TEX® Method 20-B (EN ISO 105-E04) [OTC II Product Class II - Testing Items Appendix 4]			
STANDARD 100 Product Class II Appendix 4			
No. of tests		1	1
• Fastness to acid solution			
• Change in colour (acid) [grade]		4-5	4-5
• Staining (acid) [grade]	>=3-4	4-5	4-5
• Fastness to alkaline solution			
• Change in colour (alkaline) [grade]		4-5	4-5
• Staining (alkaline) [grade]	>=3-4	4-5	4-5



#5
100%PES
Woven
interlining
black

Colour Fastness To Rubbing OEKO-TEX® Method 20-D (EN ISO 105- X12) [OTC II Product Class II - Testing Items Appendix 4]	STANDARD 100 Product Class II Appendix 4	
No. of tests		1
• Staining in dry condition [grade]	>=4	4-5

Zurich, 04.12.2017