

TSG INTERNATIONAL AG  
BUELACHSTRASSE 5, 8057 ZUERICH SWITZERLAND

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

Sample Description : KNEEGUARD\_TAHOE\_A  
Style / Item No. : 7101211\_030  
P.O. / Ref. No. : 1580208  
Size : S; M; L; XL;  
Type : A  
Level : 1  
Buyer : TSG INTERNATIONAL AG  
Supplier : ENCHESS INTL. LTD  
Manufacturer : ENCHESS INTL. LTD  
Country of Destination : CHINA  
Test Performed : PPETS0002  
Analysis of Azo Dye,  
To Determine the pH Value,  
Color Fastness to Perspiration  
Sample Receiving Date : Oct 14, 2016  
Test Performing Date : Oct 14, 2016 to Oct 31, 2016  
Test Result(s) : For further details, please refer to the following page(s)

Signed for and on behalf of  
Guangzhou Branch,  
SGS-CSTC Ltd.



Lell Wu  
Approved Signatory



I. Test Conducted: Bicycle Protective Clothes

Test Results:

Test Property		Test Method	Test Principle / Requirements	Rating (Section or exec. Summary which failed items can be referenced)
1.1	AZO Dye (Applicable for Fabric, Polyester, Leather and Dye Material Only)	EN 14362-1 (general textiles) EN 14362-1 and EN 14362-2 (synthetics) ISO 17234 (leather)	Annex XVII, REACH ≤ 30 mg/kg each listed amine	Pass
1.2	Release of Nickel  Applicable to metal articles in direct and prolong skin contact	<b>Coated item</b> EN 12472: 2005 and EN 1811:1998 + A1:2008  <b>Non-coated item</b> EN 1811:1998 + A1:2008	Annex XVII, REACH ≤ 0.5 µg /cm <sup>2</sup> /week (Non-body piercing article)  < 0.2 µg /cm <sup>2</sup> /week (Body piercing article)	N/A
1.3	Chromium VI content (Applicable for leather)	EN 420	Should comply with the requirement in EN 420	N/A
1.4	PH value	Leather: ISO 4045 Other material: ISO 3071	the pH value of protective clothing material should be greater than 3,5 and less than 9,5	Pass
1.5	Color fastness to perspiration (for fabric)	ISO 105-E04	Shall be at least grade 3 to 4 of the Grey scale for the color change of the specimen.	Pass
2.1	Size designation	EN ISO 13688:2013 Clause 6	Protective clothing shall be marked with its size based on body dimensions measured in centimetres.	Pass
2.2	Marking	EN ISO 13688:2013 Clause 7	Shall with 1 General marking; 2 Specific marking	Pass
2.3	Information supplied by the manufacturer	EN ISO 13688:2013 Clause 8	Protective clothing shall be supplied to the customer with information written at least in the official language(s) of the state of destination. All information shall be unambiguous.	Pass



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3.1	Workmanship	Visual Inspection	Shall have no components missing, malformed or fractured; Shall have no hardware missing; Welds shall be smoothly ground and free of pits and splatter; Shall have no burrs or sharp edges on any component; Shall present proper and even adhesion; Components shall be even in color.	Pass
4.1	Basic health and ergonomic requirements	EN ISO 13688:2013 Clause 4	Shall comply with 1. General, 2. Innocuousness, 3. Design, 4. Comfort	Pass
4.2	Resistance to Impact (for limb joint impact protector)	Ref to EN 1621-1 Clause 6.3 (Mod.)	When testing with the test method of EN 1621-1 clause 6.3, including low temperature condition,  The average peak force recorded below the anvil shall be below 35kN, and no single value shall exceed 50kN.  Mod.=Impact energy: 25J ± 2J	Pass See annex 1
4.3	Resistance to Impact (for back and chest protector)	Ref to EN 1621-2 Clause 5.1 (Mod.)	When testing with the test method of EN 1621-2 clause 5.1, including low temperature condition,  The average peak force recorded below the anvil shall be below 18kN, and no single value shall exceed 24kN.  Mod.=Impact energy: 25J ± 2J	N/A

**\*\* No of Sample Required:**

No. Of Samples Required For Complete Testing:	4 pcs
No. Of Working Days For Complete Testing:	7-9



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Model: 7101211 030(S)

Type: A

Region: K

Level: 1

**Annex 1: Force transmission test result**

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Ambient No.1	A	1	25.0	7.40	Level 1: Area A/B/C ≦ 50KN	Pass	10.90	Level 1 ≦ 35KN	Pass
	B	2	24.8	10.52		Pass			
	C	3	25.5	14.77		Pass			
Ambient No.2	A	4	25.9	8.93		Pass	12.64		Pass
	B	5	25.0	18.58		Pass			
	C	6	24.6	10.40		Pass			
Ambient No.3	A	7	25.3	20.08		Pass	13.81		Pass
	B	8	25.3	6.89		Pass			
	C	9	26.0	14.47		Pass			
Wet No.4	A	1	25.1	13.31		Pass	15.58		Pass
	B	2	24.5	11.18		Pass			
	C	3	24.4	22.27		Pass			
Wet No.5	A	4	24.7	11.42		Pass	12.17		Pass
	B	5	24.9	12.20		Pass			
	C	6	25.0	12.89		Pass			
Low No.6 (Optional)	A	7	26.5	16.93		Pass	12.73		Pass
	B	8	25.6	11.30		Pass			
	C	9	24.9	9.95		Pass			
Low No.7 (Optional)	A	1	25.7	7.97	Pass	8.02	Pass		
	B	2	25.8	7.55	Pass				
	C	3	25.5	8.54	Pass				



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Model: 7101211 030(M)

Type: A

Region: K

Level: 1

**Annex 1: Force transmission test result**

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Ambient No.1	A	1	24.8	6.71	<b>Level 1:</b> Area A/B/C ≤ 50KN	Pass	12.07	<b>Level 1</b> <b>1 ≤ 35KN</b>	Pass
	B	2	24.8	7.91		Pass			
	C	3	25.5	21.58		Pass			
Ambient No.2	A	4	25.4	6.71		Pass	9.49		Pass
	B	5	24.4	14.41		Pass			
	C	6	25.5	7.34		Pass			
Ambient No.3	A	7	25.8	14.14		Pass	10.41		Pass
	B	8	25.9	6.44		Pass			
	C	9	26.1	10.64		Pass			
Wet No.4	A	1	26.3	10.10		Pass	11.26		Pass
	B	2	25.2	11.18		Pass			
	C	3	25.5	12.50		Pass			
Wet No.5	A	4	25.1	11.69		Pass	11.90		Pass
	B	5	25.5	13.37		Pass			
	C	6	25.2	10.64		Pass			
Low No.6 (Optional)	A	7	25.3	7.58		Pass	6.87		Pass
	B	8	25.4	6.08		Pass			
	C	9	24.9	6.95		Pass			
Low No.7 (Optional)	A	1	25.0	6.86		Pass	11.20		Pass
	B	2	25.4	7.43		Pass			
	C	3	24.8	19.30		Pass			



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Model: 7101211 030(L)

Type: A

Region: K

Level: 1

**Annex 1: Force transmission test result**

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Ambient No.1	A	1	25.4	10.70	<b>Level 1: Area A/B/C ≤ 50KN</b>	Pass	14.43	<b>Level 1 1 ≤ 35KN</b>	Pass
	B	2	25.2	14.74		Pass			
	C	3	25.4	17.86		Pass			
Ambient No.2	A	4	24.6	16.48		Pass	18.90		Pass
	B	5	25.8	25.83		Pass			
	C	6	25.5	14.38		Pass			
Ambient No.3	A	7	24.9	24.99		Pass	19.85		Pass
	B	8	25.2	14.29		Pass			
	C	9	24.8	20.26		Pass			
Wet No.4	A	1	25.6	12.98		Pass	13.40		Pass
	B	2	25.0	13.22		Pass			
	C	3	25.7	13.99		Pass			
Wet No.5	A	4	26.9	18.76		Pass	16.97		Pass
	B	5	24.6	18.04		Pass			
	C	6	24.9	14.11		Pass			
Low No.6 (Optional)	A	7	25.1	13.93		Pass	11.94		Pass
	B	8	25.2	11.66		Pass			
	C	9	25.2	10.22		Pass			
Low No.7 (Optional)	A	1	24.7	8.84		Pass	10.96		Pass
	B	2	24.7	9.38		Pass			
	C	3	25.0	14.65		Pass			



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Model: 7101211 030(XL)

Type: A

Region: K

Level: 1

**Annex 1: Force transmission test result**

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Ambient No.1	A	1	24.8	11.24	<b>Level 1: Area A/B/C ≅ 50KN</b>	Pass	20.89	<b>Level 1 1 ≅ 35KN</b>	Pass
	B	2	24.8	14.77		Pass			
	C	3	24.8	36.65		Pass			
Ambient No.2	A	4	24.7	16.69		Pass	18.35		Pass
	B	5	25.1	23.88		Pass			
	C	6	24.2	14.47		Pass			
Ambient No.3	A	7	25.2	20.89		Pass	17.71		Pass
	B	8	25.0	12.17		Pass			
	C	9	24.7	20.08		Pass			
Wet No.4	A	1	25.3	10.79		Pass	13.53		Pass
	B	2	25.0	16.24		Pass			
	C	3	25.3	13.57		Pass			
Wet No.5	A	4	25.4	12.86		Pass	13.18		Pass
	B	5	25.4	13.63		Pass			
	C	6	24.5	13.04		Pass			
Low No.6 (Optional)	A	7	26.5	12.74		Pass	9.69		Pass
	B	8	25.1	8.27		Pass			
	C	9	25.6	8.06		Pass			
Low No.7 (Optional)	A	1	24.9	9.50		Pass	11.83		Pass
	B	2	25.4	9.53		Pass			
	C	3	25.2	16.45		Pass			



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**II. Analysis of AZO Dye and to Determine the PH Value in the submitted sample.**

SGS Ref No.: CAN16-216462

Test Requested	Result
To determine the pH Value in the submitted sample(s).	See Results
Determination of Azodyes in the submitted sample(s) with reference to the Entry 43 of Regulation (EC) No. 552/2009 amending Annex XVII of REACH Regulation (EC) No. 1907/2006 (previously restricted under Directive 2002/61/EC).	PASS

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN16-216462.001	Black elastic fabric(330g)
SN2	CAN16-216462.002	Black mesh fabric
SN3	CAN16-216462.003	Black elastic fabric(280g)
SN4	CAN16-216462.004	Black elastic mesh fabric
SN5	CAN16-216462.005	Black fabric(lining)
SN6	CAN16-216462.006	Black fabric
SN7	CAN16-216462.007	Black velvet
SN8	CAN16-216462.008	Black elastic band(thin)
SN9	CAN16-216462.009	Black elastic band(thick)
SN10	CAN16-216462.010	Black fabric webbing

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**pH value**

Test Method : With reference to ISO 3071:2005, extracted by KCl solution, analysis was performed by pH meter.

Test Item(s)	001	002	003
pH value	6.2	6.5	6.4



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Test Item(s)	004	005	006
pH value	6.5	7.8	7.4
Test Item(s)	007	008	009
pH value	6.9	6.6	6.3
Test Item(s)	010		
pH value	6.3		

### Azo Dyes

Test Method : With reference to EN 14362-1 :2012 - Analysis was conducted with GC-MS/HPLC-DAD.

Test Item(s)	CAS NO.	Limit	Unit	MDL	001	002	003
4-Aminobiphenyl	92-67-1	30	mg/kg	5	ND	ND	ND
Benzidine	92-87-5	30	mg/kg	5	ND	ND	ND
4-chloro-o-toluidine	95-69-2	30	mg/kg	5	ND	ND	ND
2-naphthylamine	91-59-8	30	mg/kg	5	ND	ND	ND
o-aminoazotoluene	97-56-3	30	mg/kg	5	ND	ND	ND
5-nitro-o-toluidine /	99-55-8	30	mg/kg	5	ND	ND	ND
2-Amino-4-nitrotoluene							
4-chloroaniline	106-47-8	30	mg/kg	5	ND	ND	ND
4-methoxy-m-phenylenediamine	615-05-4	30	mg/kg	5	ND	ND	ND
/ 2,4-Diaminoanisole							
4,4'-diaminodiphenylmethane	101-77-9	30	mg/kg	5	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	30	mg/kg	5	ND	ND	ND
3,3'-dimethoxybenzidine	119-90-4	30	mg/kg	5	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	30	mg/kg	5	ND	ND	ND
3,3'-Dimethyl-4,4'-diaminodiphe	838-88-0	30	mg/kg	5	ND	ND	ND
nylmethane /							
4,4'-methylenedi-o-toluidine							
p-cresidine	120-71-8	30	mg/kg	5	ND	ND	ND
4,4'-methylene-bis-	101-14-4	30	mg/kg	5	ND	ND	ND
(2-chloroaniline)							
4,4'-oxydianiline	101-80-4	30	mg/kg	5	ND	ND	ND
4,4'-thiodianiline	139-65-1	30	mg/kg	5	ND	ND	ND
o-toluidine	95-53-4	30	mg/kg	5	ND	ND	ND
4-methyl-m-phenylenediamine /	95-80-7	30	mg/kg	5	ND	ND	ND
2,4-Toluyldiamine							
2,4,5-trimethylaniline	137-17-7	30	mg/kg	5	ND	ND	ND
4-aminoazobenzene	60-09-3	30	mg/kg	5	ND	ND	ND
O-Anisidine	90-04-0	30	mg/kg	5	ND	ND	ND
<b>Comment</b>					<b>PASS</b>	<b>PASS</b>	<b>PASS</b>



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Test Item(s)	CAS NO.	Limit	Unit	MDL	004	005	006
4-Aminobiphenyl	92-67-1	30	mg/kg	5	ND	ND	ND
Benzidine	92-87-5	30	mg/kg	5	ND	ND	ND
4-chloro-o-toluidine	95-69-2	30	mg/kg	5	ND	ND	ND
2-naphthylamine	91-59-8	30	mg/kg	5	ND	ND	ND
o-aminoazotoluene	97-56-3	30	mg/kg	5	ND	ND	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	30	mg/kg	5	ND	ND	ND
4-chloroaniline	106-47-8	30	mg/kg	5	ND	ND	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	30	mg/kg	5	ND	ND	ND
4,4'-diaminodiphenylmethane	101-77-9	30	mg/kg	5	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	30	mg/kg	5	ND	ND	ND
3,3'-dimethoxybenzidine	119-90-4	30	mg/kg	5	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	30	mg/kg	5	ND	ND	ND
3,3'-Dimethyl-4,4'-diaminodiphe nylmethane / 4,4'-methylenedi-o-toluidine	838-88-0	30	mg/kg	5	ND	ND	ND
p-cresidine	120-71-8	30	mg/kg	5	ND	ND	ND
4,4'-methylene-bis- (2-chloroaniline)	101-14-4	30	mg/kg	5	ND	ND	ND
4,4'-oxydianiline	101-80-4	30	mg/kg	5	ND	ND	ND
4,4'-thiodianiline	139-65-1	30	mg/kg	5	ND	ND	ND
o-toluidine	95-53-4	30	mg/kg	5	ND	ND	ND
4-methyl-m-phenylenediamine / 2,4-Toluyldiamine	95-80-7	30	mg/kg	5	ND	ND	ND
2,4,5-trimethylaniline	137-17-7	30	mg/kg	5	ND	ND	ND
4-aminoazobenzene	60-09-3	30	mg/kg	5	ND	ND	ND
O-Anisidine	90-04-0	30	mg/kg	5	ND	ND	ND
<b>Comment</b>					<b>PASS</b>	<b>PASS</b>	<b>PASS</b>

Test Item(s)	CAS NO.	Limit	Unit	MDL	007	008	009
4-Aminobiphenyl	92-67-1	30	mg/kg	5	ND	ND	ND
Benzidine	92-87-5	30	mg/kg	5	ND	ND	ND
4-chloro-o-toluidine	95-69-2	30	mg/kg	5	ND	ND	ND
2-naphthylamine	91-59-8	30	mg/kg	5	ND	ND	ND
o-aminoazotoluene	97-56-3	30	mg/kg	5	ND	ND	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	30	mg/kg	5	ND	ND	ND
4-chloroaniline	106-47-8	30	mg/kg	5	ND	ND	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	30	mg/kg	5	ND	ND	ND
4,4'-diaminodiphenylmethane	101-77-9	30	mg/kg	5	ND	ND	ND
3,3'-dichlorobenzidine	91-94-1	30	mg/kg	5	ND	ND	ND



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## Test Report

No.: GZHL1610044776CE

Date: Dec 20, 2016

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3,3'-dimethoxybenzidine	119-90-4	30	mg/kg	5	ND	ND	ND
3,3'-dimethylbenzidine	119-93-7	30	mg/kg	5	ND	ND	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane / 4,4'-methylenedi-o-toluidine	838-88-0	30	mg/kg	5	ND	ND	ND
p-cresidine	120-71-8	30	mg/kg	5	ND	ND	ND
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	30	mg/kg	5	ND	ND	ND
4,4'-oxydianiline	101-80-4	30	mg/kg	5	ND	ND	ND
4,4'-thiodianiline	139-65-1	30	mg/kg	5	ND	ND	ND
o-toluidine	95-53-4	30	mg/kg	5	ND	ND	ND
4-methyl-m-phenylenediamine / 2,4-Toluyldiamine	95-80-7	30	mg/kg	5	ND	ND	ND
2,4,5-trimethylaniline	137-17-7	30	mg/kg	5	ND	ND	ND
4-aminoazobenzene	60-09-3	30	mg/kg	5	ND	ND	ND
O-Anisidine	90-04-0	30	mg/kg	5	ND	ND	ND
<b>Comment</b>					<b>PASS</b>	<b>PASS</b>	<b>PASS</b>

Test Item(s)	CAS NO.	Limit	Unit	MDL	010
4-Aminobiphenyl	92-67-1	30	mg/kg	5	ND
Benzidine	92-87-5	30	mg/kg	5	ND
4-chloro-o-toluidine	95-69-2	30	mg/kg	5	ND
2-naphthylamine	91-59-8	30	mg/kg	5	ND
o-aminoazotoluene	97-56-3	30	mg/kg	5	ND
5-nitro-o-toluidine / 2-Amino-4-nitrotoluene	99-55-8	30	mg/kg	5	ND
4-chloroaniline	106-47-8	30	mg/kg	5	ND
4-methoxy-m-phenylenediamine / 2,4-Diaminoanisole	615-05-4	30	mg/kg	5	ND
4,4'-diaminodiphenylmethane	101-77-9	30	mg/kg	5	ND
3,3'-dichlorobenzidine	91-94-1	30	mg/kg	5	ND
3,3'-dimethoxybenzidine	119-90-4	30	mg/kg	5	ND
3,3'-dimethylbenzidine	119-93-7	30	mg/kg	5	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane / 4,4'-methylenedi-o-toluidine	838-88-0	30	mg/kg	5	ND
p-cresidine	120-71-8	30	mg/kg	5	ND
4,4'-methylene-bis-(2-chloroaniline)	101-14-4	30	mg/kg	5	ND
4,4'-oxydianiline	101-80-4	30	mg/kg	5	ND
4,4'-thiodianiline	139-65-1	30	mg/kg	5	ND
o-toluidine	95-53-4	30	mg/kg	5	ND
4-methyl-m-phenylenediamine / 2,4-Toluyldiamine	95-80-7	30	mg/kg	5	ND



## Test Report

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2,4,5-trimethylaniline	137-17-7	30	mg/kg	5	ND
4-aminoazobenzene	60-09-3	30	mg/kg	5	ND
O-Anisidine	90-04-0	30	mg/kg	5	ND

**Comment**

**PASS**

Notes :

- (1) Test specimen was taken randomly from the sample submitted by client/applicant.
- (2) Whenever 4-aminodiphenyl (CAS number 92-67-1), 2-naphylamine (CAS number 91-59-8) and 4-methoxy-m-phenylene-diamine (CAS number 615-05-4) is found, the use of banned azo colorants cannot be reliably ascertained without additional information, e.g. the chemical structure of the colorants used.
- (3) In case polyurethane materials are used, e.g. PU foams and coatings and in prints, it cannot be ruled out that certain amines, e.g. 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) and 2,4-toluylene-diamine (TDA, CAS number 95-80-7) are released from the PU component and not from a banned azo colorant.
- (4) In case of pigment prints care has to be taken that 4,4'-methylene-dianiline (MDA, CAS number 101-77-9) is not released from a source of banned azo colorants but from e.g. a chemical fixing agent.  
Requirement :  $\leq 30$  mg/kg for each aromatic amine according to Requirement of Entry 43 of Regulation (EC) No. 552/2009 amending Annex XVII of REACH Regulation (EC) No. 1907/2006 (previously restricted under Directive 2002/61/EC).

Sample photo:



Product Photo



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Product Photo

**III. Colour Fastness to Perspiration.**

1. SGS Ref. No.: GZSL161129714TX

(E)nylon fabric (G)velvet (H)polyester elastic band (I)elastic band with buckle (J)PP band

**Test Result:**

Requirement

**Colour Fastness To Perspiration**

(ISO 105-E04:2013 ; test specimen in vertical position.)

Acid

	(E)	(G)	(H)	(I)	(J)	
Change in shade	4-5	4-5	4-5	4-5	4-5	/
Staining on multi-fiber stripe						/
Acetate	4-5	4-5	4-5	4-5	4-5	
Cotton	4-5	4-5	4-5	4-5	4-5	
Nylon	4	4-5	4-5	4-5	4-5	
Polyester	4-5	4-5	4-5	4-5	4-5	
Acrylic	4-5	4-5	4-5	4-5	4-5	
Wool	4-5	4-5	4-5	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



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### Colour Fastness To Perspiration

(ISO 105-E04:2013 ; test specimen in vertical position.)

#### Alkaline

	(E)	(G)	(H)	(I)	(J)	
Change in shade	4-5	4-5	4-5	4-5	4-5	/
Staining on multi-fiber stripe						/
Acetate	4-5	4-5	4-5	4-5	4-5	
Cotton	4-5	4-5	4-5	4-5	4-5	
Nylon	4	4-5	4-5	4-5	4-5	
Polyester	4-5	4-5	4-5	4-5	4-5	
Acrylic	4-5	4-5	4-5	4-5	4-5	
Wool	4-5	4-5	4-5	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

### Colour Fastness To Water

(ISO 105-E01:2013 ; test specimen in vertical position.)

	(E)	(G)	(H)	(I)	(J)	
Change in shade	4-5	4-5	4-5	4-5	4-5	/
Staining on multi-fiber stripe						/
Acetate	4-5	4-5	4-5	4-5	4-5	
Cotton	4-5	4-5	4-5	4-5	4-5	
Nylon	4-5	4-5	4-5	4-5	4-5	
Polyester	4-5	4-5	4-5	4-5	4-5	
Acrylic	4-5	4-5	4-5	4-5	4-5	
Wool	4-5	4-5	4-5	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

Sample photo:



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2. SGS Ref. No.: GZSL1612144755TX

Four samples of knee\_sleeve\_2nd\_skin\_2.0\_A items marked as (A)330g Polyester fabric (B)mesh fabric (C)280g Polyester fabric (D)Nylon elastic mesh fabric (E)Imitation OK fabric

**Test Result:**

Requirement

**Colour Fastness To Water**

(ISO 105-E01:2013; test specimen in vertical position.)

	<u>(A)</u>	<u>(B)</u>	<u>(C)</u>	<u>(D)</u>	<u>(E)</u>
Change in shade	4-5	4-5	4-5	4-5	4-5
Staining on multi-fiber stripe					
Acetate	4-5	4-5	4-5	4-5	4-5
Cotton	4-5	4-5	4-5	4-5	4-5
Nylon	4-5	4-5	4-5	4-5	4-5
Polyester	4-5	4-5	4-5	4-5	4-5
Acrylic	4-5	4-5	4-5	4-5	4-5
Wool	4-5	4-5	4-5	4-5	4-5

**Colour Fastness To Perspiration**

(ISO 105-E04:2013; test specimen in vertical position.)

**Acid**

	<u>(A)</u>	<u>(B)</u>	<u>(C)</u>	<u>(D)</u>	<u>(E)</u>
Change in shade	4-5	4-5	4-5	4-5	4-5
Staining on multi-fiber stripe					
Acetate	4-5	4-5	4-5	4-5	4-5
Cotton	4-5	4-5	4-5	4-5	4-5
Nylon	4-5	4-5	4-5	4-5	4-5
Polyester	4-5	4-5	4-5	4-5	4-5
Acrylic	4-5	4-5	4-5	4-5	4-5
Wool	4-5	4-5	4-5	4-5	4-5

**Alkaline**

	<u>(A)</u>	<u>(B)</u>	<u>(C)</u>	<u>(D)</u>	<u>(E)</u>
Change in shade	4-5	4-5	4-5	4-5	4-5
Staining on multi-fiber stripe					
Acetate	4-5	4-5	4-5	4-5	4
Cotton	4-5	4-5	4-5	4-5	4
Nylon	4-5	4-5	4-5	4-5	4
Polyester	4-5	4-5	4-5	4-5	4
Acrylic	4-5	4-5	4-5	4-5	4
Wool	4-5	4-5	4-5	4-5	4

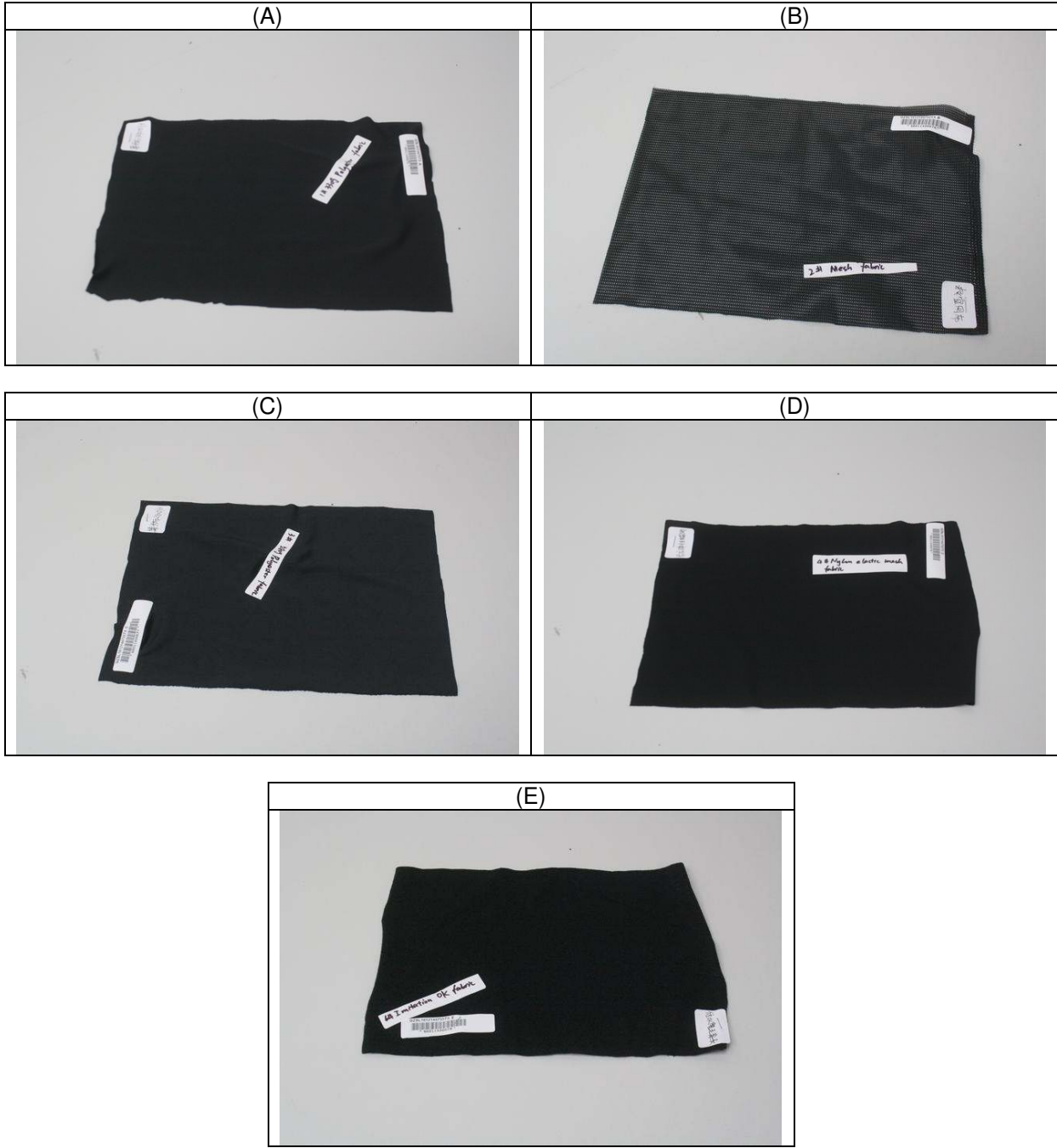
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**Remark:**



1. Pass means the test sample met the requirement of the test item.
2. N/A means not applicable.  
N/T means not tested as per client's request.
3. A material list for each part of the product and a statement to announce the material complying with requirements of the standard are received from the manufacturer
4. Only Part I is tested in this report, Part II & III are extracted from the test report number GZHL1610044770CE.

**Sample photos:**



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<p>Impact Sites(S)</p>	
<p>Impact Sites(M)</p>	



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