TEST REPORT

Test information

Applicant	:	YIWU TIANZI BAGS AND CASES CO.,LTD.
Address	:	N0.55 SUHAU STR., SUXI INDUSTRIAL AREA,YIWU,ZHEJIANG.
Sample Description	:	20gPP+10gPE isolation gown.
Country of origin	:	China.
Receiving Date	:	May 05, 2020.
Test period	:	May 05, 2020.～May 08, 2020.
Test Requested	:	Tests requested in accordance to client requirement.

TEST ITEMS	CONCLUSION
GB 18401-2010 National general safety technical code for textile products - Formaldehyde Content	PASS
GB 18401-2010 National general safety technical code for textile products - pH Value	PASS
GB 18401-2010 National general safety technical code for textile products – Determination of Odour	PASS
GB 18401-2010 National general safety technical code for textile products - Color Fastness to Crocking	PASS
GB 18401-2010 National general safety technical code for textile products – Color Fastness to Perspiration	PASS
GB 18401-2010 National general safety technical code for textile products – Color Fastness to Water	PASS
GB 18401-2010 National general safety technical code for textile products - AZO Colorants	PASS
Section 4.2.1 Water Resistance: Impact Penetration Test - Client's requirement level 1	PASS

Signed for and on behalf of
RTS TEST CO., LTD.(Zhejiang)

CHANGBIAO YU
Approved signatory

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Sample image:

RTS200505P0216TX-A1

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Test result:

A. Formaldehyde content test: (Unit: mg/kg)

Test Method: GB/T 2912.1-2009, determined colorimetrically by UV-VIS spectroscopy.

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test Item	MDL	Test result A1	Requirement	Conclusion
Formaldehyde	20	N.D.	75	PASS

Note:

1) MDL=Method Detection Limit.

2) N.D. = not detected, less than MDL.

3) "▲"=This data is obtained from composite testing on more than one materials, it is possible that result obtained from individual testing on any one of the materials is substantially higher. Please be cautious when using this data for compliance evaluation.

B. pH Value:

Test Method: GB/T 7573-2009

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test Item	Test result A1	Requirement	Conclusion
pH Value	7.4	4.0～8.5	PASS

Note:

1)"▲" = This data is obtained from composite testing on more than one materials or shapes or shapes, it is possible that result obtained from individual testing on any one of the materials or shapes is substantially higher. Please be cautious when using this data for compliance evaluation.

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C. Odour:

Test Method: GB 18401-2010 section 6-7

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test Item	Test result A1
Odour	Odorless

Remark: No odour from mould, high boiling fraction of petrol, fish, aromatic hydrocarbons or perfume.

D. Color Fastness to Crocking: (Unit: Grade)

Test Method: GB/T 3920-2008

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test item(s)		Test result A1	Requirement
Length	Dry	4	≥3
Conclusion:		PASS	--

Note:

Explanation of colorfastness results:

Grade 5 negligible or no change or staining

Grade 4 slightly changed or stained

Grade 3 noticeably changed or stained

Grade 2 considerably changed or stained

Grade 1 much changed or heavily stained

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E. Color Fastness to Perspiration: (Unit: Grade)

Test Method: GB/T 3922-2013

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test item		Test result A1	Requirement	Conclusion
Acid	Color Change	4-5	≥3	PASS
	Color Staining	--	--	--
	Acetate	4-5	≥3	PASS
	Cotton	4-5	≥3	PASS
	Nylon	4-5	≥3	PASS
	Polyester	4-5	≥3	PASS
	Acrylic	4-5	≥3	PASS
	Wool	4-5	≥3	PASS
Alkali	Color Change	4-5	≥3	PASS
	Color Staining	--	--	--
	Acetate	4-5	≥3	PASS
	Cotton	4-5	≥3	PASS
	Nylon	4-5	≥3	PASS
	Polyester	4-5	≥3	PASS
	Acrylic	4-5	≥3	PASS
	Wool	4-5	≥3	PASS

Note:

Explanation of colorfastness results:

Grade 5 negligible or no change or staining

Grade 4 slightly changed or stained

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Grade 2 considerably changed or stained

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F. Color Fastness to water: (Unit: Grade)

Test Method: GB/T 5713-2013

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

Test item	Test result A1	Requirement	Conclusion
Color Change	4-5	≥3	PASS
Color Staining	--	-	--
Acetate	4-5	≥3	PASS
Cotton	4-5	≥3	PASS
Nylon	4-5	≥3	PASS
Polyester	4-5	≥3	PASS
Acrylic	4-5	≥3	PASS
Wool	4-5	≥3	PASS

Note:

Explanation of colorfastness results:

Grade 5 negligible or no change or staining

Grade 4 slightly changed or stained

Grade 3 noticeably changed or stained

Grade 2 considerably changed or stained

Grade 1 much changed or heavily stained

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G. AZO Colorants: (Unit: mg/kg)

Test Method: GB/T17592-2011, Analysis was preformed by GC-MS.

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

No.	Forbidden	CAS No.	MDL	Limit	Test result A1
1	4-aminobiphenyl	92-67-1	5	20	N.D.
2	benzidine	92-87-5	5	20	N.D.
3	4-chloro-o-toluidine	95-69-2	5	20	N.D.
4	2-naphthylamine	91-59-8	5	20	N.D.
5	o-aminoazotoluene	97-56-3	5	20	N.D.
6	p-chloroaniline	106-47-8	5	20	N.D.
7	2,4-diaminoanisole	615-05-4	5	20	N.D.
8	4,4′-diaminobiphenymethane	101-77-9	5	20	N.D.
9	3,3′-dichlorobenzidine	91-94-1	5	20	N.D.
10	3,3′-dimethoxybenzidine	119-90-4	5	20	N.D.
11	3,3′-dimethylbenzidine	119-93-7	5	20	N.D.
12	3,3′-dimethyl-4,4′-diaminobiphenylmethane	838-88-0	5	20	N.D.
13	p-cresidine	120-71-8	5	20	N.D.
14	4,4′-methylene-bis-(2-chlorolaniline)	101-14-4	5	20	N.D.
15	4,4′-oxydianiline	101-80-4	5	20	N.D.
16	4,4′-thiodianiline	139-65-1	5	20	N.D.
17	o-toluidine	95-53-4	5	20	N.D.
18	2,4-toluylenediamine	95-80-7	5	20	N.D.
19	2,4,5-trimethyianiline	137-17-7	5	20	N.D.
20	o-anisidine	90-04-0	5	20	N.D.
21	4-aminoazobenzene	60-09-3	5	20	N.D.
22	5-nitro-o-toluidine	99-55-8	5	20	N.D.
23	2,4-Dimethylaniline	95-68-1	5	20	N.D.
24	2,6-Dimethylaniline	87-62-7	5	20	N.D.
Conclusion				--	PASS

Note:

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H. *Section 4.2.1 Water Resistance: Impact Penetration Test:

Test Method: AATCC 42-2017

Test Number	Item/ component description(s)
A1	20gPP+10gPE isolation gown

As received					
Weight of blotter gained (g)	1#	2#	3#	4#	5#
Area A (Critical zone-front)	0.1	0.0	0.0	0.0	0.0
Area B (Critical zone-sleeve)	0.0	0.0	0.1	0.1	0.0
Area C (Critical zone-back)	0.0	0.0	0.0	0.0	0.1
Seam	0.1	0.1	0.1	0.0	0.1

Remark:

1) Level 1: all critical zone components shall have a blotter weight gain of no more than 4.5grams (g).
2) Level 2: all critical zone components shall have a blotter weight gain of no more than 1.0 grams (g).
3) Level 3: all critical zone components shall have a blotter weight gain of no more than 1.0 grams(g)

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Barrier performance of each component and final classification commended.

--	Impact Penetration Test AATCC 42 Hydrostatic	Level	Final classification
Area A (Critical zone-front)	0.1g	Level 1	Level 1
Area B (Critical zone-sleeve)	0.1g	Level 1	
Area C (Critical zone-back)	0.1g	Level 1	
Seam	0.1g	Level 1	

Remark:

1) The entire isolation gown(areas A,B and C), including seams but excluding cuffs, hems, and bindings, is required to have a barrier performance of at least Level 1;
2) Level 1: Impact Penetration Test-AATCC 42: ≤ 4.5g;
3) Level 2: Impact Penetration Test-AATCC 42: ≤1.0g; Hydrostatic Pressure Test-AATCC 127:≥20cmH_2O;
4) Level 3: Impact Penetration Test-AATCC 42: ≤1.0g: Hydrostatic Pressure Test-AATCC 127:≥50cmH_2O;
5) Level 4: Resistance to Bacteriophage Phi-x174-ASTM F 1671: Pass.

Note: Client's requirement: Impact Penetration Test-AATCC 42: ≤ 4.5g.

---------- End of Report ----------

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