



MERCHANDISE
TESTING
LABORATORIES
(UK) LTD.

Certificate of Test

We hereby declare that the item described below has been tested by the Merchandise Testing Laboratories (U.K.) Ltd. And complies with the requirements of

ANSI/ISEA 107:2004 for Chromaticity, Clause 7.1.1

Fastness to Crocking, Perspiration, Washing, Clause 7.2

Dimensional stability on Washing (3) IIIA (iii) @ 105°F, Clause 7.3

Tear Strength, Clause 7.4

Resistance to Water Penetration: Hydrostatic Head, Rain Test and Spray Test, Clause 7.5

Breathability, clause 7.6

*The full details of the tests and the results are given
in our reports*

TR994/06212

Dated: 22/06/05

Description of item tested:

PHB71G 300 Den Hi Vis Yellow Breathable Hydrophilic
148030404 1-1A

(Material: 100% polyester 300d Oxford with breathable PU coating.
for items: VEA411/VEA412, VEA431, VEA431-BLK, VEA432, VEA433, H803, H804)

Submitted by:



Reflective Apparel Factory
1649 Sands Place SE Suite J
Marietta, Georgia 30067

Certificate authorised by:



Title: J. Moore - Textile Technologist

Date: 22nd June 2005

Accredited to the ISO/IEC Guide 17025: through UKAS system Laboratory Number 4021

Test Report

TR994/06212

ANSI/ISEA 107-2004 Background Material Testing Report

Material Description: 300Den Hi Vis Yellow Breathable Hydrophilic	Test Lab(s): Merchandise Test Laboratories
Fabric : PHB71G Lot # :148030404 1-1A	Address: Oakhurst House, 57 Ashbourne Road, Derby, DE22 3FS
	Contact Person:
Colour: HV Yellow	Date Tested: Authorized 22 nd June 2005

Required Tests	Section	ANSI/ISEA 107 Requirement	Test Result	Pass/ Fail/ NA
Determination of color ASTME1164-02 (Single layer)	7.1.1	Test specimen must fulfill the colorimetric requirements of Table 2 for background material	As submitted: x = 0.3823 y = 0.5357 %Y = 1.14 After 40x Xenon: x = 0.3726 Y = 0.5207 %Y = 1.09	PASS PASS
Determination of Color ASTME1164-94 (Two layers of the same material)	7.1.1 9.2	Test specimen must fulfill the colorimetric requirements of Table 2 for background material	As submitted: x = N/A y = N/A %Y = N/A After 40x Xenon: x = N/A Y = N/A %Y = N/A	
Colorfastness Crooking AATCC 8-2001	7.2.1	Dry 3.0 Wet 3.0	4.5 4.5	PASS
Colorfastness Perspiration AATCC 15-2000	7.2.2	Color change 4.0 Staining 3.0	Acetate: 4.5 Cotton: 4.5 Nylon: 4.5 Polyester: 4.5 Acrylic: 4.5 Wool: 4.5	PASS

Authorised by

J Moore
Miss J. Moore C.Text A.T.I.
Technical Textile
Testing Manager

S J C Welden
Mrs. S.J.C. Welden B.Sc. (Hons)
Deputy Technical Textile
Testing Manager

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Required Tests (continued)				
Test/Method	Section	ANSI/ISEA 107 Requirement	Test Result	Pass/Fail/NA
Dimensional change Domestic AATCC 135-2000 (3) IIIA(iii) @ 105°F	7.3.1	Woven	1 st Cycle: Length = N/A Width = N/A	Tested on report 06211 PASS
		L +/- 4%	5 th Cycle: Length = -0.1 % Width = -0.2 %	
	Knitted	L +/- 7%	1 st Cycle: Length = N/A Width = N/A	N/A
		W +/- 5%	5 th Cycle: Length = N/A Width = N/A	
Bursting Strength (knitted) ASTM D3787-01	7.4.1	267 N (60lb) (27.2kg)	N/A	N/A
Tear Resistance(woven) ASTM D1424-96	7.4.2	13N (3lb) (1.3kg)	Average force machine ~30N Average force cross machine 30N	Tested on report 06211 PASS
Breathability ASTM E96-00 Procedure B	7.6	≥600g/m ² /24 hr microporous ≥3,600g/m ² /24 hr hygroscopic	N/A 4,486 g/m ² /24 hr	Tested on report 06211 PASS

Tested as care label dictates				
Test/Method	Section	ANSI/ISEA 107 Requirement	Test Result	Pass/Fail/NA
Colorfastness Domestic/Commercial Laundry AATCC 61-2001-2A 120°F	7.2.3 Table 4	Color change 4.0 Staining 3.0	Acetate: Cotton: Nylon: Polyester: Acrylic: Wool:	N/A
Colorfastness Domestic/Commercial Laundry AATCC 61-2001-2A 160°F	7.2.3 Table 4	Color change 4.0 Staining 3.0	Acetate: Cotton: Nylon: Polyester: Acrylic: Wool:	N/A
Colorfastness Domestic/Commercial Laundry AATCC 61-2001-2A 105°F	7.2.3 Table 4	Color change 4.0 Staining 3.0	Acetate: 4.5 Cotton: 4.5 Nylon: 4.5 Polyester: 4.5 Acrylic: 4.5 Wool: 4.5	PASS

Authorised by *J Moore*
 Miss J. Moore C.Text A.T.L
 Technical Textile
 Testing Manager

S J C Welden
 Mrs. S.J.C. Welden B.Sc. (Hons)
 Deputy Technical Textile
 Testing Manager

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Tested as care label dictates				
Test/Method	Section	ANSI/ISEA 107 Requirement	Test Result	Pass/Fail/NA
Colorfastness Water AATCC 107-2002	7.2.3 Table 1	Color change 3.0 Staining 3.0	Acetate: Cotton: Nylon: Polyester: Acrylic: Wool:	N/A
Colorfastness Hypochlorite Bleaching AATCC 61-2001-4A	7.2.3 Table 4	Fading 4.0		N/A
Colorfastness Hypochlorite Bleaching AATCC 61-2001-5A	7.2.3 Table 4	Fading 4.0		N/A
Colorfastness Hot Pressing AATCC 133-1999	7.2.3 Table 4	Color change 4.5 Staining 3.0		N/A
Colorfastness Dry Cleaning AATCC 132-2001-5A	7.2.3 Table 4	Color change 4.0		N/A
Dimensional change Commercial AATCC 96-1999 IIIe-A and/or E@145°F	7.3.1	Woven L+/- 4% W+/-2%	1 st Cycle: Length = Width = 5 th Cycle: Length = Width =	N/A
		Knitted L+/- 7% W+/-5%	1 st Cycle: Length = Width = 5 th Cycle: Length = Width =	
Water Resistance AATCC 35-2000	7.5	1gram of water penetration Level 1	As rec. 0.3g After 5 Laundering 0.4g	Tested on report 06211 PASS
Water Resistance AATCC 127-1998 (Hydrostatic Head)	7.5	>200 cm of water As Received & After 5 Launderings	>200 cm of water As Received and after 5 Launderings	Tested on report 06211 PASS
Water Resistance AATCC 22-2001	7.5.1	90 new, 70 after 5 washings	100 80	Tested on report 06211 PASS

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