



INTERTEK TEST REPORT

3933 US ROUTE 11

CORTLAND, NEW YORK 13045

REPORT NO.: G101511985CRT-001

RENDERED TO:

**PORTWEST, LLC
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SHEPERDSVILLE, KY 40165**

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STANDARDS USED:

ASTM F1790 - *Standard Test Method for Measuring Cut Resistance of Materials Used in Protective Clothing* 2005 Edition
CEN EN 388 - *Protective Gloves Against Mechanical Risks* 2003 Edition
ASTM D3389 - *Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader)* 2005 Edition
ASTM D3884 - *Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)* 2009 Edition
CENELEC EN 420 – *Protective Gloves – General Requirements and Test Methods* 2003 Edition
ASTM F1060 - *Standard Test Method for Thermal Protective Performance of Materials for Protective Clothing for Hot Surface Contact* 2008 Edition
ASTM F1358 - *Standard Test Method for Effects of Flame Impingement on Materials Used in Protective Clothing Not Designated Primarily for Flame Resistance* 1995 Edition

AUTHORIZATION:

The tests were authorized by Quote Number 500503128, 500516246, 500524406, 500530713 signed by Ray Carney and Robbie Irwin.

SPECIMEN DESCRIPTION:

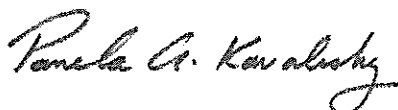
The tests were performed on specimens identified by the client as: UA100GN, UA110WB, UA120BK, UA140BK, UA145Y4, UA146BK, UA150OR, UA210GR, UA220RE, UA300NA, UA310GR, UA320BK, UA330YE, UA340YE, UA500RE, UA530RB, UA620GR, UA621BK, UA622G7, UA710BK, UA725YE, UA740BK, and UA790BK. The samples previously described, were received in pristine condition between 01/08/2014 and 05/15/2014 and evaluated between 02/12/2014 and 06/12/2014. The testing was performed at Intertek located in Cortland, NY.

CONCLUSION:

The samples submitted by Portwest House, were evaluated in accordance with ASTM F1790 - Standard Test Method for Measuring Cut Resistance of Materials Used in Protective Clothing 2005 Edition; CEN EN 388 - Protective Gloves Against Mechanical Risks 2003 Edition; ASTM D3389 - Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader) 2005 Edition; ASTM D3884 - Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method) 2009 Edition; CENELEC EN 420 - Protective Gloves - General Requirements and Test Methods 2003 Edition; ASTM F1060 - Standard Test Method for Thermal Protective Performance of Materials for Protective Clothing for Hot Surface Contact 2008 Edition; ASTM F1358 - Standard Test Method for Effects of Flame Impingement on Materials Used in Protective Clothing Not Designated Primarily for Flame Resistance 1995 Edition. Test data sheets are attached as an appendix (71 pages following).

Test Standard	ANSI 105 Rating					
	Cut	Puncture	Dexterity	Abrasion	Conductive	Flame
Style	ASTM F1790-05	EN 388-03	EN 420-03	ASTM 3389-05 / ASTM3884-09	ASTM F1060-08	ASTM F1358-95
UA100GN	1	4	5	2	n/a	n/a
UA110WB	1	3	5	1	n/a	n/a
UA120BK	1	2	5	0	n/a	n/a
UA140BK	1	3	5	1	n/a	n/a
UA145Y4	2	3	5	1	5	n/a
UA146BK	2	3	5	1	5	n/a
UA150OR	1	2	5	1	n/a	n/a
UA210GR	0	4	4	3	n/a	n/a
UA220RE	2	5	4	4	n/a	n/a
UA300NA	1	2	5	3	n/a	n/a
UA310GR	0	2	5	2	n/a	n/a
UA320BK	1	2	5	3	n/a	n/a
UA330YE	1	2	5	0	n/a	n/a
UA340YE	1	2	5	2	n/a	n/a
UA500RE	1	5	4	3	n/a	4
UA530RB	1	5	3	4	n/a	4
UA620GR	1	4	5	2	n/a	n/a
UA621BK	2	4	5	3	n/a	n/a
UA622G7	3	5	4	2	n/a	n/a
UA710BK	1	3	4	3	n/a	n/a
UA725YE	2	4	4	3	n/a	n/a
UA740BK	1	3	5	2	n/a	n/a
UA790BK	4	4	5	n/a	n/a	n/a

Report Prepared by:



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Report Approved by:



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ASTM F1790-2005

PRODUCT DESCRIPTION: Glove Palm – Style UA740BK

BLADE DESIGNATION: GRU-GRU TXTL BLD

BLADE LOT ID: 3785-255-2013-572457-001001

CALIBRATION: (cut length for 1.57mm ± 0.05mm (0.062in ± 0.002in) thick Neoprene with 500 gm load);
(For Calibration – Blade travel distance between 10mm & 15mm)

Before Sample Testing (A): 13.28 mm
CB = [A+B]/2: 13.65 mm

After Sample Testing (B): 14.01mm
Normalized Correction Factor (12.7/CB): 0.93

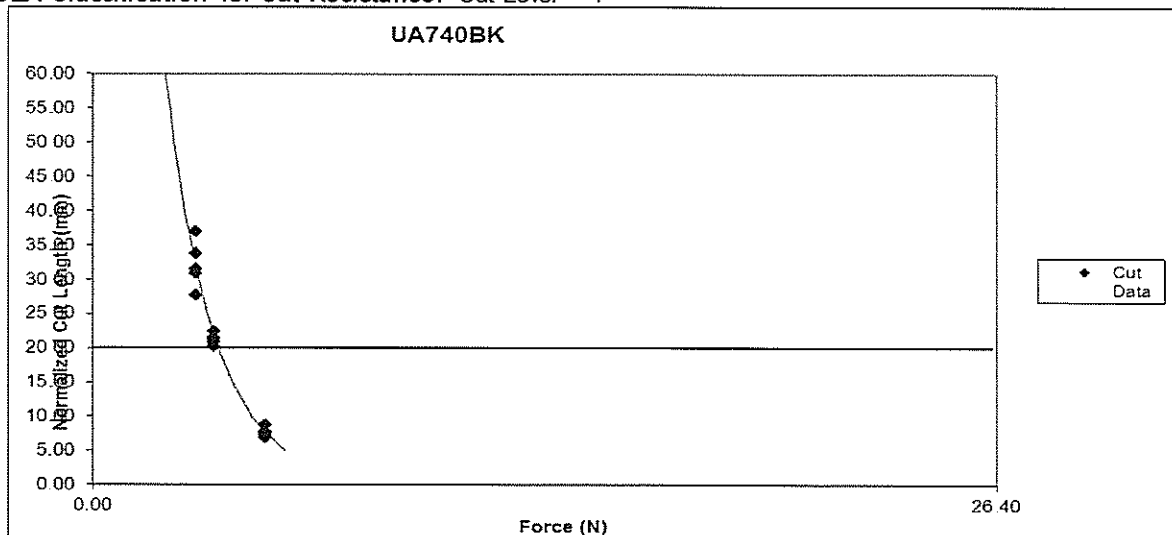
Column	1	2	3
Reading Number	Force (N)	Cut Length (mm)	Normalized Cut Length (mm)
1	5.06	7.45	6.93
2	5.06	7.91	7.36
3	5.06	8.29	7.71
4	5.06	8.32	7.74
5	5.06	9.35	8.70
6	3.54	21.73	20.21
7	3.54	22.42	20.85
8	3.54	22.89	21.29
9	3.54	23.04	21.43
10	3.54	24.01	22.33
11	3.03	29.84	27.75
12	3.03	33.15	30.83
13	3.03	33.87	31.50
14	3.03	36.35	33.81
15	3.03	39.69	36.91

Normalized Reference Load (RL): 3.68 N (375 g)

Corrected Load: 1.031

R-Squared: 0.984

ANSI/ISEA Classification for Cut Resistance: Cut Level – 1



CEN EN 388-2003

PRODUCT DESCRIPTION: Glove Palm - UA740BK (black leather stitched to foam)

CONDITIONING: In accordance with EN 388:2003; section 5.3, at a temperature $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and a relative humidity of $50\% \pm 5\%$ for at least 24 hours. Per EN 388:2003; sec. 5.4: Test performed in a different environment shall be started within 5 minutes after removal from conditioning.

Specimen No.	Puncture No.	Force to Puncture (N)
1	1	63.1
	2	65.3
	3	78.6
2	1	77.2
	2	70.2
	3	78.7
3	1	67.2
	2	60.0
	3	73.6
4	1	76.5
	2	64.6
	3	61.2
Average		69.7

ANSI/ISEA 105-2011 Classification for Puncture Resistance (Table 2): 3

CEN EN 420-2003

PRODUCT DESCRIPTION: Whole Glove – UA740BK

Glove Size: 8 M		Pin Diameter (mm)				
Able To Pick Up Pin?	11	9.5	8	6.5	5	Level
Sample 1	Yes	Yes	Yes	Yes	Yes	5
4Sample 2	Yes	Yes	Yes	Yes	Yes	5

Glove Size: Large		Pin Diameter (mm)				
Able To Pick Up Pin?	11	9.5	8	6.5	5	Level
Sample 1	Yes	Yes	Yes	Yes	Yes	5
Sample 2	Yes	Yes	Yes	Yes	Yes	5

ASTM D 3389-2005/ASTM D 3884-2009

PRODUCT DESCRIPTION: UA740BK (Blue/Grey/Black)

STANDARD: ASTM D 3884-09

WHEEL LOAD: 500 grams

<u>Abrasion Cycles:</u> (end point shall be when the first thread or yarn is broken; per ANSI 105-2011; 5.1.3 Or, desired classification minimum reached)				
Specimen 1	575		Specimen 4	700
Specimen 2	900		Specimen 5	1,100
Specimen 3	1,000		AVERAGE	855

Note: ANSI 105 does not list an endpoint, or procedure for this material. Testing thin leather-like material layer, over foam layer (palm), with stitching pattern. Endpoint regarded as tear/hole through outer layer, exposing foam under layer.

Note: All five specimens had hole; exposing the foam layer. See photos below.

ANSI/ISEA 105-2011 Classification for Abrasion Resistance (Table 3): 2 (material not covered by ANSI 105)