



INTERTEK TEST REPORT

3933 US ROUTE 11

CORTLAND, NEW YORK 13045

REPORT NO.: G101511985CRT-001

RENDERED TO:

**PORTWEST, LLC
1272 OMEGA PARKWAY
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 ASTM F1790-05	Puncture EN 388-03	Dexterity EN 420-03	Abrasion ASTM 3389-05 / ASTM3884-09	Conductive ASTM F1060-08	Flame ASTM F1358-95
Style						
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 UA320BK

BLADE DESIGNATION: GRU-GRU TXTL BLD

BLADE LOT ID: 8549-183-2013-570735-001001

CALIBRATION: (cut length for $1.57\text{mm} \pm 0.05\text{mm}$ ($0.062\text{in} \pm 0.002\text{in}$) thick Neoprene with 500 gm load):
(For Calibration – Blade travel distance between 10mm & 15mm)

Before Sample Testing (A): 14.19 mm
CB = $[A+B]/2$: 14.27 mm

After Sample Testing (B): 14.35 mm
Normalized Correction Factor ($12.7/CB$): 0.89

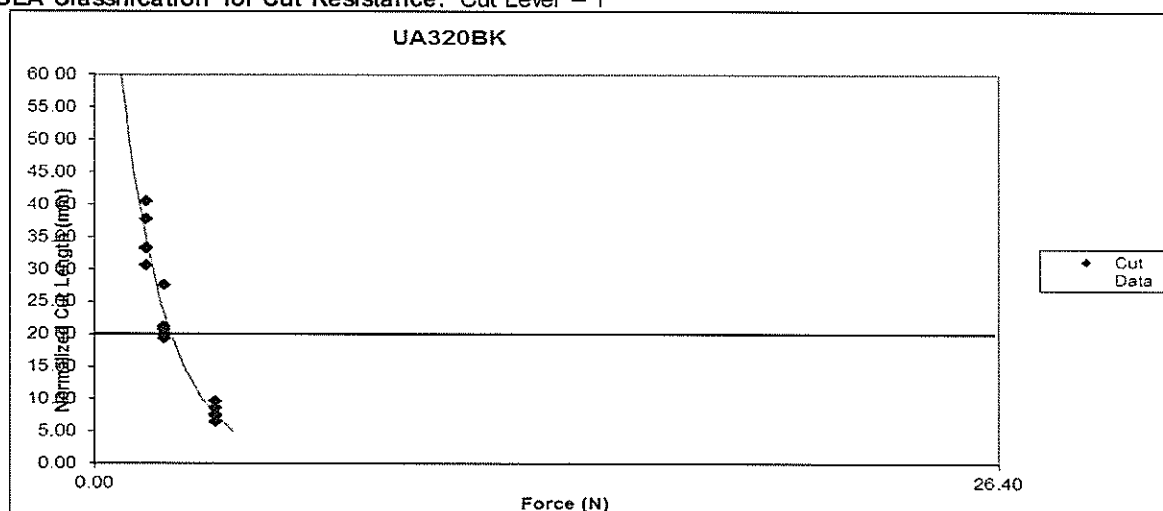
Column	1	2	3
Reading Number	Force (N)	Cut Length (mm)	Normalized Cut Length (mm)
1	5.06	5.01	4.46
2	5.06	5.60	4.98
3	5.06	5.67	5.05
4	5.06	5.93	5.28
5	5.06	6.80	6.05
6	2.02	21.77	19.38
7	2.02	22.40	19.94
8	2.02	23.26	20.70
9	2.02	23.83	21.21
10	2.02	30.93	27.53
11	1.52	34.42	30.63
12	1.52	37.30	33.20
13	1.52	37.46	33.34
14	1.52	42.47	37.80
15	1.52	45.47	40.47

Normalized Reference Load (RL): 2.23 N (227 g)

Corrected Load: 1.031

R-Squared: 0.9568

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



CEN EN 388-2003

PRODUCT DESCRIPTION: Glove Palm - UA320BK (black coated)

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	36.2
	2	43.3
	3	37.5
2	1	48.6
	2	30.9
	3	33.9
3	1	34.1
	2	33.8
	3	32.4
4	1	37.3
	2	36.7
	3	38.5
Average		36.9

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

CEN EN 420-2003

PRODUCT DESCRIPTION: Whole Glove – UA320BK

Glove Size: 7/Small		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

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: UA320BK (Black/Black)

STANDARD: ASTM D 3389-05

THICKNESS: 1.06 mm

WHEEL LOAD: 500 grams

<u>Abrasion Cycles:</u> (just before coating has a hole abraded through it; per ANSI 105-2011; 5.1.3) Or, desired classification minimum reached.				
Specimen 1	>1,001*		Specimen 4	>1,001*
Specimen 2	>1,001*		Specimen 5	>1,001*
Specimen 3	>1,001*		AVERAGE	>1,001*

*Testing stopped, desired endpoint reached.

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