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

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).

	ANSI 105 Rating					
	Cut	Puncture	Dexterity	Abrasion	Conductive	Flame
Test Standard	ASTM F1790-05	EN 388-03	EN 420-03	ASTM 3389-05 / ASTM3884-09	ASTM F1060-08	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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ASTM F1790-2005

PRODUCT DESCRIPTION: Glove Palm – Style UA220RE

BLADE DESIGNATION: GRU-GRU TXTL BLD **BLADE LOT ID:** 8549-183-2013-570735-001001

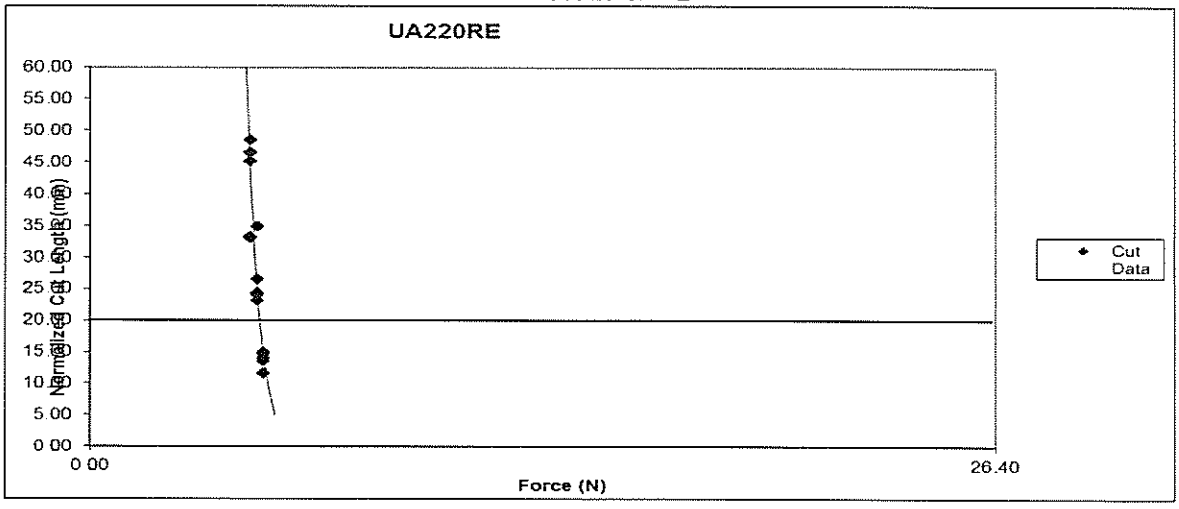
CALIBRATION: (cut length for 1.57mm ± 0.05mm (0.062in ± 0.002in) thick Neoprene with 500 gm load):
(For Calibration – Blade travel distance between 10mm & 15mm)

Before Sample Testing (A): 12.91 mm
CB = [A+B)/2]: 13.16 mm

After Sample Testing (B): 13.40 mm
Normalized Correction Factor (12.7/CB): 0.97

Column	1	2	3
Reading Number	Force (N)	Cut Length (mm)	Normalized Cut Length (mm)
1	5.06	12.01	11.65
2	5.06	14.00	13.58
3	5.06	14.39	13.96
4	5.06	15.12	14.67
5	5.06	15.36	14.90
6	4.85	23.87	23.15
7	4.85	24.78	24.04
8	4.85	25.14	24.39
9	4.85	27.36	26.54
10	4.85	35.96	34.88
11	4.65	33.97	32.95
12	4.65	34.24	33.21
13	4.65	46.58	45.18
14	4.65	47.93	46.49
15	4.65	49.94	48.44

Normalized Reference Load (RL): 4.92 N (502 g)
Corrected Load: 1.031
R-Squared: 0.8992
ANSI/ISEA Classification for Cut Resistance: Cut Level – 2



CEN EN 388-2003

PRODUCT DESCRIPTION: Glove Palm - UA220RE (grey leather & white felt liner)

NO. OF LAYERS: 2 **LAYUP:** Grey Leather / white felt

CONDITIONING: In accordance with EN 388:2003; section 5.3, at a temperature 23°C ± 2°C and a relative humidity of 50% ± 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	172.1
	2	196.0
	3	159.7
2	1	163.8
	2	199.5
	3	173.2
3	1	190.5
	2	208.8
	3	161.9
4	1	167.9
	2	148.5
	3	155.1
Average		174.7

ANSI/ISEA 105-2011 Classification for Puncture Resistance (Table 2): 5

CEN EN 420-2003

PRODUCT DESCRIPTION: Whole Glove – UA220RE

Glove Size: XLarge		Pin Diameter (mm)				
Able To Pick Up Pin?	11	9.5	8	6.5	5	Level
Sample 1	Yes	Yes	Yes	Yes	No	4
Sample 2	Yes	Yes	Yes	Yes	No	4
Sample 3	Yes	Yes	Yes	Yes	No	4
Sample 4	Yes	Yes	Yes	Yes	No	4

ASTM D 3389-2005/ASTM D 3884-2009

PRODUCT DESCRIPTION: UA220RE (Grey)

STANDARD: ASTM D 3884-09

WHEEL LOAD: 1000 grams

Abrasion Cycles: (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	**3,250**		**Specimen 4**	**3,180**
Specimen 2	**3,600**		**Specimen 5**	**1,500**
Specimen 3	**4,180**		**AVERAGE**	**3,142**

Note: All five specimens have a hole.

Note: ANSI 105 does not list an endpoint, or procedure for leather. Per Client: Abrade until 3,000 cycles, or a hole through material, using 1,000 grams load.

ANSI/ISEA 105-2011 Classification for Abrasion Resistance (Table 3): 4 (report average of cycles creating a hole; see note above)