INTERTEK TEST REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

REPORT NO.: G101630259CRT-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

AUTHORIZATION:

The tests were authorized by Quote Number 500524422 signed by Ray Carney and Robbie Irwin.

SPECIMEN DESCRIPTION:

The tests were performed on specimens identified by the client as: UA721 (Hi-Vis yellow and orange glove) and UA722 (Black and Gray Glove). The samples previously described, were received in pristine condition on 04/14/2014 and evaluated between 06/04/2014 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. Test data sheets are attached as an appendix (6 pages following).

	ANSI 105 Rating			
	Cut	Puncture	Dexterity	Abrasion
Test Standard	ASTM F 1790-05	EN 388-03	EN 420-03	ASTM 3389-05 / ASTM 3884-09
Style				
UA721	3	3	5	3
UA722	4	4	5	3

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APPENDIX
ASTM F1790-2005

PRODUCT DESCRIPTION: Glove Palm – Style UA721

BLADE DESIGNATION: GRU-GRU TXTL BLD **BLADE LOT ID:** 3874-105-2014-590024-001001

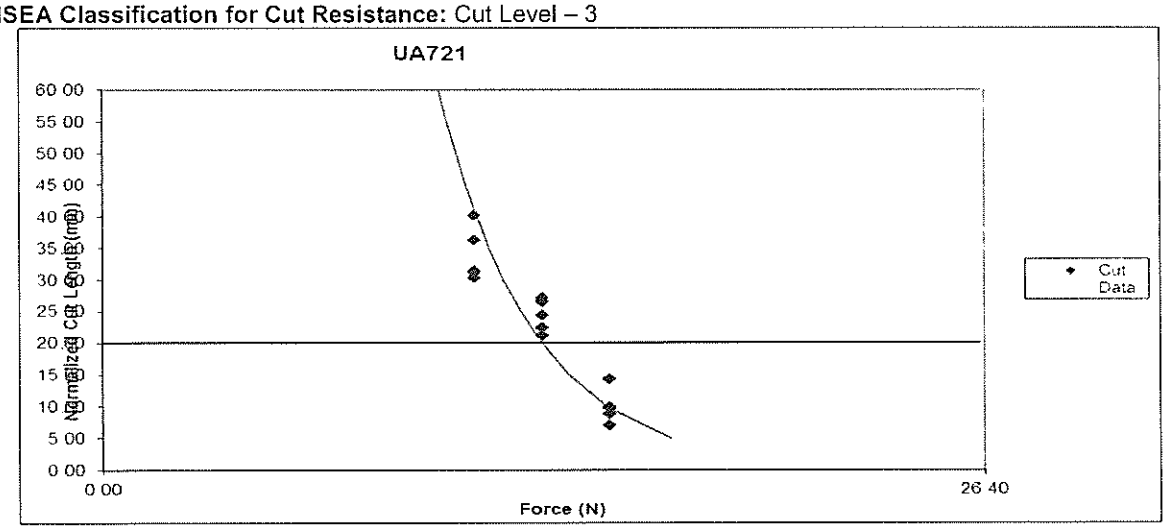
CALIBRATION: (cut length for 1.57mm ± 0.05mm (0.062in ± 0.002in) thick Neoprene with 500 gm load):
(For Calibration – Blade travel distance between 10mm & 15mm)

Before Sample Testing (A): 14.57 mm
CB = [A+B)/2]: 14.75 mm

After Sample Testing (B): 14.92 mm
Normalized Correction Factor (12.7/CB): 0.86

Column	1	2	3
Reading Number	Force (N)	Cut Length (mm)	Normalized Cut Length (mm)
1	15.17	8.19	7.04
2	15.17	10.26	8.82
3	15.17	11.36	9.77
4	15.17	11.47	9.86
5	15.17	16.73	14.39
6	13.14	24.59	21.15
7	13.14	25.94	22.31
8	13.14	28.29	24.33
9	13.14	30.80	26.49
10	13.14	31.53	27.12
11	11.12	35.21	30.28
12	11.12	36.04	30.99
13	11.12	36.48	31.37
14	11.12	42.07	36.18
15	11.12	46.73	40.19

Normalized Reference Load (RL): 13.14 N (1340 g)
Corrected Load: 1.031
R-Squared: 0.8546
ANSI/ISEA Classification for Cut Resistance: Cut Level – 3



CEN EN 388-2003

PRODUCT DESCRIPTION: Glove Palm - UA721 (black coated, padded palm & Hi Vis green textile)

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	64.2
	2	61.5
	3	66.3
2	1	70.0
	2	63.7
	3	69.1
3	1	69.9
	2	45.3
	3	57.9
4	1	56.8
	2	58.0
	3	72.2
Average		62.9

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

CEN EN 420-2003

PRODUCT DESCRIPTION: Whole Glove - UA100GN

Glove Size: Medium	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
Sample 3	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
Sample 3	Yes	Yes	Yes	Yes	Yes	5

ASTM D 3389-2005/ASTM D 3884-2009

PRODUCT DESCRIPTION: UA721 (Black / Hi-Vis Yellow) **STANDARD:** ASTM D 3389-05

THICKNESS: 6.00mm **WHEEL LOAD:** 500 grams

Abrasion Cycles: (just before coating has a hole abraded through it; per ANSI 105-2011; 5.1.3) Or, desired classification minimum reached.				
Specimen 1	>1500*		Specimen 4	>1050*
Specimen 2	>1500*		Specimen 5	1047
Specimen 3	>1050*		AVERAGE	>1229

Notes: 1) Specimens were not smooth, and flat. Glove palm is padded with stitching pattern.

2) Specimens tested with stitching, and padding left in place.

3) Stitching thread begins to break-down within the first 25 abrasion cycles.

*No failure, or coating break through; testing stopped (Specimens 1 through 4)

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