

## TEST LABORATORY

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## **SFI Spec 3.3 Glove Test Certification**

Company Name: TechTrade LLC Report Number: 15-273-1 Address: 22 Hudson Pl Date of Report: 06/15/15

City, State, Zip: Hoboken, NJ 07030 Purchase Order No.: 06/003/15 Sub Form Contact: Ted Bart Phone: 516-764-1740

Type of Test: **TPP, Flammability** Part Number/Name: Pro-Tech 8 X+R

Specification/Revision: SFI Spec 3.3 Driver Accessories/Effective: June 11, 2012

Test Procedure: Paragraphs 5.1, 5.2, 5.4

Date of Test: 06/12/15

### **Thermal Protective Performance (TPP):**

### Requirements:

SFI Spec 3.3 requires the minimum TPP rating (cal/cm<sup>2</sup>) as shown below:

SFI Grade	Top Covering	Bottom Covering	Forchettes
1	≥ 6	N/A	N/A
5	≥ 19	≥ 7.6	≥ 6.0
10	≥ 38	≥ 15.2	≥ 7.6
15	≥ 60	≥ 24.0	≥ 12.0
20	≥ 80	≥ 32.0	≥ 16.0
25	≥ 100	≥ 40.0	≥ 20.0
30	≥ 120	≥ 48.0	≥ 24.0

The glove's SFI grade is classified by the TPP rating of the top covering. The bottom covering shall have a TPP  $\geq$  40% of the value required for the top covering TPP or SFI grade 1, whichever is greater. The forchettes shall have a TPP  $\geq$  20% of the value required for the top covering TPP or SFI grade 1, whichever is greater.

#### Results:

Top and Forchettes Covering of Gloves

Description/No. of Layers: 3 layers, Outer: Modacrylic 400 g/m²; Middle: Polyurethane Moisture Barrier .02mm; Inner: Kevlar/Cotton 210 g/m²

Sample	Test Number	Weight (ounces/yd²)	Thickness (mils)	TPP
1	2015.06.12-026	20.53	132	37.3
2	2015.06.12-027	20.10	132	36.6
3	2015.06.12-028	20.41	133	37.9
Average				37.2

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## Bottom Covering/Half:

Description/No. of Layers: Palm 4 layers, Outer: 100% Kevlar 220 g/m²; Middle: (1) layer, Modacrylic 400 g/m², (1) layer, Polyurethane Moisture Barrier .02mm; Inner: Kevlar/Cotton 210 g/m²

Sample	Test Number	Weight (ounces/yd²)	Thickness (mils)	TPP
1	2015.06.12-029	15.00	113	33.4
2	2015.06.12-030	14.77	116	34.1
3	2015.06.12-031	14.78	112	35.8
Average				34.4

## Bottom Covering/Half:

Description/No. of Layers: Palm 5 layers, Outer: Goatskin Leather 0.7-0.8mil; Middle: (1) layer, 100% Kevlar 220 g/m², (1) layer, Modacrylic 400 g/m², (1) layer, Polyurethane Moisture Barrier .02mm; Inner: Kevlar/Cotton 210 g/m²

Sample	Test Number	Weight (ounces/yd²)	Thickness (mils)	TPP
1	2015.06.12-032	49.85	188	69.6
2	2015.06.12-033	47.26	185	51.4
3	2015.06.12-034	51.23	189	83.0
Average				68.0

## Top Covering:

Description/No. of Layers: Knuckle Guard: 5 layers, Outer: 100% Kevlar 220 g/m²; Middle: (1) layer, Neoprene, (1) layer, 100% Kevlar 220 g/m², (1) layer, Polyurethane Moisture Barrier .02mm; Inner: Kevlar/Cotton 210 g/m²

Sample	Test Number	Weight (ounces/yd²)	Thickness (mils)	TPP
1	2015.06.12-036	39.41	274	105.0
2	2015.06.12-037	39.32	278	101.0
3	2015.06.12-038	40.39	290	112.3
Average				106.1

#### **Glove Meets SFI Level 5**

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# **Flammability Test:**

## Requirements:

The average after flame time shall be 2.0 seconds or less. The average char length shall be six (6) inches or less. Any melting or dripping of the material is cause for failure.

Top and Forchettes Covering Outer Layer Description: Modacrylic 400 g/m<sup>2</sup>

## Results:

Sample	After Flame Time (Sec.)	Char Length (Inches)
1	.2	1.7
2	.2	1.8
3	.2	1.4
4	.2	1.3
5	.2	1.4
Average	.2	1.52

#### **Glove Passed**

Bottom & Knuckle Guard Covering Outer Layer Description: 100% Kevlar 220 g/m<sup>2</sup>

## Results:

Sample	After Flame Time (Sec.)	Char Length (Inches)
1	.2	1.6
2	.2	1.3
3	.2	1.5
4	.2	1.6
5	.2	1.2
Average	.2	1.44

## **Glove Passed**

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## Flammability, Glove Seams Test:

## Requirements:

The average after-flame time for all finger and thumb tests shall be 2.0 seconds or less. Also, any melting, dripping, or splitting of the seam or material around the seam shall be cause for test failure.

#### Results:

Sample	After-Flame Time (seconds)
Finger 1 (Index)	.2
Finger 2	.2
Finger 3	.2
Finger 4	.2
Thumb	.2
Average	.2

Any melting, dripping, or splitting of the seam: No

## **Glove Seam Passed**

## **Test Report Summary:**

TPP Test of Each Glove Portion: (meets desired level): PASS

Flammability of Fabrics: PASS

Glove Seam Flammability: PASS

Thread Heat Resistance: PASS

The above test results **meet** the requirements of the specifications noted above.

This report applies only to the actual samples tested. SFI Laboratory does not certify, warrant or guarantee any products manufactured by others. Samples discarded within 1 year unless otherwise requested in writing by manufacturer.

SFI LABORATORY

Michael J. Sherbo Laboratory Manager

