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TEST LABORATORY

SFI Spec 54.1 Test Certification

Company Name:	TPR ² Corporation	Report Number:	18-023
Address:	36 Plains Rd.	Date of Report:	02/21/18
City, State, Zip:	Essex, CT 06426	Purchase Order No.:	Sub Form 1/5/18
Contact:	Rick Barone	Phone:	860-767-8772

Type of Test: **Thermal, Flame Barrier, Fire Extinguishing Performance, Vapor Fire – Thermal and Flame Resistance**

Part Number/Name: **Temprotex P/N AFES-F1ER (NHRA), AFES-F5E (NASCAR)**

Specification/Revision: SFI Spec 54.1 Non-Flammable, Thermal Barrier/Fire Extinguishing Coatings
Effective: January 17, 2008

Test Procedure: Paragraph 5.1.3, 5.2.3, 5.3.3

Date of Test: 02/08/18

THERMAL AND FLAME BARRIER PERFORMANCE OVER COMPOSITES

Part No./ Material Description: **Temprotex P/N AFES-F1ER (NHRA), AFES-F5E (NASCAR)**

Test Panel Size: 0.050" (+/- 0.010") thickness carbon fiber panel, approximate size, 6" x 6"

Record panel thickness: 0.059

Coating thickness: 0.020" (+/-0.002") coating thickness on one side of the test panel.

Record coating thickness: 0.021

Requirements:

SFI Spec 54.1 The after-flame time shall be fifteen seconds or less. Additionally, no flare up in the presence of the torch, no reigniting and no burn through of the panel may occur. Any one such occurrence shall be considered a failure:

Results:

Changes in flame bloom: **NO**

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THERMAL AND FLAME BARRIER PERFORMANCE OVER COMPOSITES cont.

Description of change:
N/A

After-flame time: 1 seconds **PASS**

Burn through: **PASS**

Please Circle One: **PASS**

FIRE EXTINGUISHING PERFORMANCE SPECIFICALLY OVER COMPOSITES

Test Panel Size: 0.050" (+/- 0.010") thickness carbon fiber panel, approximate size, 8" X 8"

Record panel thickness: .126

Coating thickness: 0.020" (+/-0.002") coating thickness on one side of the test panel.

Record coating thickness: .018

Requirements:

SFI Spec 54.1 The burning oil shall extinguish within fifteen seconds of being poured onto the panel. After 30 seconds any remaining oil shall not reignite on the panel nor should the panel surface ignite. Any one such occurrence shall be considered a failure.

Results:

After-flame time: 2 seconds **PASS**

After 30 seconds oil does not reignite: **PASS**

Panel surface does not reignite: **PASS**

Please Circle One: **PASS**

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VAPOR FIRE - THERMAL AND FLAME RESISTANCE

Test Panel Size: 0.050" (+/- 0.010") thickness carbon fiber panel, approximate size, 12" X 12"

Record panel thickness: .135

Coating thickness: 0.020" (+/-0.002") coating thickness on one side of the test panel.

Record coating thickness: 0.24

Requirements:

During the test, the sample panel shall not ignite. Immediately after the methanol burns off, the coating shall be intact on the panel surface. Upon cool down of the panel (at least 10 minutes), the coating shall be intact on the panel surface. Any one such occurrence shall be considered a failure.

Results:

Test panel does not reignite: **PASS**

Coating is intact on test panel: **PASS**

After cool down, coating is intact on test panel: **PASS**

Please Circle One: **PASS**

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Test Report Summary:

Thermal and Flame Barrier Performance Test (over composites): **PASS**

Fire Extinguishing Performance (over composites): **PASS**

Vapor Fire – Thermal and Flame Resistance Test: **PASS**

Please check one of the following:

Upon completion of this test and evaluation of the data, this Non Flammable, Thermal Barrier / Fire Extinguishing Coating **meets** or exceeds the performance test criteria established in SFI Specification 54.1.

Upon completion of this test and evaluation of the data, this Non Flammable, Thermal Barrie/Fire Extinguishing Coating has **failed** to meet the test criteria of SFI Specification 54.1.

To the best of my knowledge, the above is true and correct.



Michael J. Sherbo
SFI Lab Manager

02/08/18
Date