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**EVALUATION CENTER**  
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**RENDERED TO**

**Fire Retardant Coatings of Texas**  
**1150 Blue Mound Road West #202**  
**Haslet, TX 76052**

**PRODUCT EVALUATED: FX Lumber Guard on SPF Lumber**  
**EVALUATION PROPERTY: Surface Burning Characteristics**

**Report of testing FX Lumber Guard on SPF Lumber for compliance with the applicable requirements of the following criteria: CAN/ULC S102-10, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies**

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## 2 Introduction

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Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Fire Retardant Coatings of Texas to evaluate the surface burning characteristics of FX Lumber Guard applied to SPF Lumber. Testing was conducted in accordance with the standard methods of CAN/ULC S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.

This evaluation began June 5, 2014 and was completed the same day.

## 3 Test Samples

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### 3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly by the client. All product descriptions and identifications were provided by Fire Retardant Coatings of Texas, and Intertek accepts no responsibility for any inaccuracies provided. Samples were not independently selected for testing. Samples were received at the Evaluation Center on June 2, 2014.

### 3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Upon receipt of the samples at the Intertek Coquitlam laboratory, they were placed in a conditioning room where they remained in an atmosphere of  $23 \pm 3^{\circ}\text{C}$  ( $73.4 \pm 5^{\circ}\text{F}$ ) and  $50 \pm 5\%$  relative humidity.

The sample material consisted of 6 in. wide by 8 ft. long treated lumber. The samples were identified as FX Lumber Guard applied to 2 in. x 8 in. SPF lumber.

For each trial run, four 6 in. wide by 8 ft. long pieces were screwed together to form 22 in. wide sample decks. Three decks were then butted together end to end to form the required 24 ft. sample length and placed on the upper ledge of the flame spread tunnel. A layer of 6mm reinforced cement board was placed over top of the samples, the tunnel lid was lowered into place, and the samples were then tested in accordance with CAN/ULC S102-10.



## 4 Testing and Evaluation Methods

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### 4.1. TEST STANDARD

The results of the tests are expressed by indexes, which compare the characteristics of the sample under tests relative to that of select grade red oak flooring and inorganic-cement board.

#### (A) Flame Spread Index:

This index relates to the rate of progression of a flame along a sample in the 25 foot tunnel. A natural gas flame is applied to the front of the sample at the start of the test and drawn along the sample by a draft kept constant for the duration of the test. An observer notes the progression of the flame front relative to time.

The test apparatus is calibrated such that the flame front for red oak flooring passes out the end of the tunnel in five minutes, thirty seconds (plus or minus 15 seconds).

#### (B) Smoke Developed:

A photocell is used to measure the amount of light, which is obscured by the smoke passing down the tunnel duct. When the smoke from a burning sample obscures the light beam, the output from the photocell decreases. This decrease with time is recorded and compared to the results obtained for red oak, which is defined to be 100.

## 5 Testing and Evaluation Results

### 5.1. RESULTS AND OBSERVATIONS

#### (A) Flame Spread

The resultant flame spread Indexes are as follows:  
(Index rounded to nearest 5)

FX Lumber Guard Applied to SPF Lumber	Flame Spread	Flame Spread Index
Run 1	9	10
Run 2	11	
Run 3	14	

#### (B) Smoke Developed

The areas beneath the smoke developed curve and the related classifications are as follows:  
(Classification rounded to nearest 5)

FX Lumber Guard Applied to SPF Lumber	Smoke Developed	Smoke Developed Classification
Run 1	57	40
Run 2	20	
Run 3	38	

#### (C) Observations

During the tests, the sample surface ignited at approximately 38 to 43 seconds, and the flame began to progress along the sample length until it reached the maximum flame spread.

## 6 Conclusion

The FX Lumber Guard applied to 2 in. by 6 in. SPF Lumber, submitted by Fire Retardant Coatings of Texas, exhibited the following flame spread characteristics when tested in accordance CAN/ULC S102-10, *Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies*.

A series of three test runs of each material was conducted to conform to the requirements of the National Building Code of Canada.

Sample Material	Flame Spread Index	Smoke Developed Classification
FX Lumber Guard Applied to SPF Lumber	10	40


The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

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