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Code Compliance Research Report CCRR-1044

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DIVISION: 06 00 00 – WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 73.13 – Fire-Retardant Wood Treatment

DIVISION: 09 00 00 – FINISHES
Section: 09 96 43 – Fire-Retardant Coatings

REPORT HOLDER:
Fire Retardant Coatings of Texas, LLC
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REPORT SUBJECT:
FX Lumber Guard and FX Lumber Guard XT Fire Retardant Coatings

1.0 SCOPE OF EVALUATION

This Research Report addresses compliance with the following Codes:

- 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2012, 2009 and 2006 *International Residential Code®* (IRC)
- 2012, 2009 and 2006 *International Fire Code®* (IFC)
- 2012, 2009 and 2006 *International Existing Building Code®* (IEBC)

FX Lumber Guard and FX Lumber Guard XT fire retardant coatings have been evaluated for the following properties:

- Surface burning characteristics

NOTE: This report references 2012 Code sections with [2009 and 2006] Code sections showed in brackets where they differ.

2.0 USES

FX Lumber Guard and FX Lumber Guard XT are fire retardant coatings, as defined in IFC Section 803.4. The coatings are recognized in this Research Report for surface application to unfinished surfaces of Southern Yellow Pine, Spruce-Pine-Fir, Hem Fir, and Douglas Fir dimensional lumber, and Southern Yellow

Pine and Spruce-Pine-Fir plywood. The coatings are used to reduce the flame-spread classification of the lumber or plywood to achieve the flame-spread and smoke-developed indices required by the applicable Code.

The products have been evaluated under the following Code sections:

PROPERTY	IBC SECTION ¹	IRC SECTION ¹	IFC SECTION	IEBC SECTION
Surface burning characteristics	803.1	R302.9 [R302.9 and R315.1]	803.1.1	1205.9

¹ Section numbers in parentheses refer to the 2009 and 2006 Codes, respectively

3.0 DESCRIPTION

3.1 General:

The coatings are clear, water-based products supplied in 1 quart, 1 gallon, and 5 gallon containers, 55 gallon drums, and 250 gallon totes. The coatings have a shelf life of three years when stored in sealed containers at temperatures between 45° and 95°.

3.2 Surface Burning Characteristics:

When applied to unfinished dimensional Southern Yellow Pine, SPF, Hem Fir, and Doug Fir lumber or Southern Yellow Pine, Douglas Fir, and SPF plywood at a coverage rate of 300 to 350 square feet per gallon, the coated wood provides a flame-spread index of 25 or less and a smoke-developed index of 200 or less when tested in accordance with ASTM E84 or UL723, and qualifies as a Class A finish in accordance with IBC Section 803.1, IFC Section 803.1.1, and NFPA 703.

4.0 INSTALLATION

4.1 General:

FX Lumber Guard and FX Lumber Guard XT must be applied in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report.



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The manufacturer's published installation instructions and this Research Report must be strictly adhered to, and a copy of the instructions must be available on the jobsite at all times during installation.

The coatings are applied by spraying, rolling, or brushing in a one-coat application. The coating must be agitated before and throughout the application. The air temperature during application must not be below 45°F or above 95°F. The maximum moisture content for the substrate must not exceed 15 percent for dimensional lumber or 19 percent for plywood. The cure time for the coating is between 8 to 32 hours depending on air temperature. The material being treated must be clean, dry, and free from dirt, grease, oil, and all prior coatings such as paint, stains, and sealers. The coating must be applied by applicators approved by FRCT showing sufficient evidence that they possess the knowledge and equipment to conform with the application procedures of Fire Retardant Coatings of Texas.

The coatings have not been evaluated for use on surfaces that are subjected to washing or a sustained humidity of 80 percent or more. The coatings have not been evaluated for overcoating.

4.2 Field Test:

When observation of the treatment and/or field testing is required by the Code Official, such field testing must be conducted as follows:

The treated substrate will not have distinctive observable features. To ensure the substrate has been treated properly, the treated substrate must be exposed to the flame from a small fire source, such as a propane torch, applied to both a treated sample and an untreated sample for a period of not less than 15 seconds. The presence of the treatment is observable by comparison of the reactions of the substrates to the flame. Treated substrates will form a black char layer.

5.0 CONDITIONS OF USE

The FX Lumber Guard and FX Lumber Guard XT fire retardant coatings described in this Research Report comply with, or are suitable alternatives to, what is specified in those Codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict between the manufacturer's instructions and this report, this report governs.

5.2 Application is limited to the specific substrates set forth in Section 2.0 and to exposed interior locations having a sustained humidity of less than 80 percent.

5.3 Field testing must be performed by the approved applicator, as indicated in Section 4.2, when required by the Code Official.

5.4 A Certificate of Fire Retardant Treatment, as shown in Figure 1, must be submitted by the applicator to the Code Official describing the material treated; the location of the treated materials, product batch number or order number, including the square footage of the area treated; and the application rate.

5.5 Special inspections may be required when determined to be necessary by the Code Official in accordance with IBC Section 1705.1.1 [2009 - 1704.15, 2006 - 1704.13], as applicable.

5.6 The coating is manufactured in Haslet, Texas, under a quality control program with inspections by Intertek Testing Services NA, Inc. (AA-647).

6.0 SUPPORTING EVIDENCE

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Surface-applied Fire Retardant Coatings (AC308), dated February 2007 (editorially revised March 2012), and with NFPA 703, Standard for Fire Retardant Treated Wood and Fire Retardant Coatings for Building Materials, 2015 edition.

6.2 Intertek Listing Report "[FX Lumber Guard and FX Lumber Guard XT](#)" (W/N 21094).

7.0 IDENTIFICATION

The FX Lumber Guard and FX Lumber Guard XT fire retardant coatings are identified by a marking bearing the report holder's name (Fire Retardant Coatings of Texas) and address, the product name, batch number (BC#), date of manufacture, shelf life, application instructions, the Code Compliance Research Report number (CCRR-1044), and the Intertek Mark.

8.0 OTHER CODES

This section does not apply.

9.0 CODE COMPLIANCE RESEARCH REPORT USE

9.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

9.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

9.3 Reference to the Intertek website address at <https://bpdirectory.intertek.com> is recommended to ascertain the current version and status of this report.

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	Fire Retardant Coatings of Texas®, LLC 1150 Blue Mound Rd West #403 • Haslet, Texas 76052 Office (817) 710-5233 Fax (817) 439-8385 www.frctexas.com
FX LumberGuard Certificate of Fire Retardant Treatment	
To: _____ _____ _____	Date of Service: _____
Batch Code or Order No.: _____	
This is to certify that the material described below was treated with FX Lumber Guard and has been applied in conformance with FRCT's application specifications and Intertek Research Report CCRR-xxxx.	
Your Invoice # _____ dated _____ 20____.	
Description of material treated: _____ _____ _____	
Square Foot Treated: _____ Spread Rate: _____	
Applicator: Name: _____ Address: _____ City: _____ ST: _____ ZIP: _____ Phone: _____	
Applicators Signature: _____	
	
Fire Retardant Coatings of Texas is a federally registered trademark	

Figure 1 – Example of Certificate of Treatment (COT)