



FIRE RETARDANT COATINGS OF TEXAS, LLC
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FX LUMBER GUARD AND FX LUMBER GUARD XT

CSI Sections:
09 96 43 Fire-Retardant Coatings
06 05 73.13 Fire-Retardant Wood Treatment

1.0 RECOGNITION

FX Lumber Guard and FX Lumber Guard XT manufactured by Fire Retardant Coatings of Texas have been evaluated for use as fire-retardants when applied to Southern Yellow Pine, Spruce-Pine-Fir, Hem Fir or Douglas Fir lumber or wood structural panels made of Oriented Strand Lumber (OSB) or Yellow Pine or Spruce-Pine-Fir. The fire-retardant characteristics of the FX Lumber Guard and FX Lumber Guard XT were evaluated for compliance with the following codes and standards:

- 2018, 2015, 2012 and 2009 International Building Code® (IBC)
- 2018, 2015, 2012 and 2009 International Residential Code® (IRC)
- 2018, 2015, 2012 and 2009 International Fire Code® (IFC)
- 2018, 2015, 2012 and 2009 International Existing Buildings Code® (IEBC)
- 2015, 2012 and 2006 NFPA 703

2.0 LIMITATIONS

Use of FX Lumber Guard and FX Lumber Guard XT fire-retardants recognized in this report are subject to the following limitations:

2.1 Application of FX Lumber Guard and FX Lumber Guard XT fire-retardants shall comply with NFPA 703 and the required fire-retardant properties shall be maintained or renewed in accordance with the manufacturer’s instructions, in accordance with Section 803.4 of the IFC.

2.2 FX Lumber Guard and FX Lumber Guard XT fire-retardants have been evaluated for use in interior installations only. Use in roofing or other exterior applications, surfaces subjected to washing, or sustained humidity of 80 percent or higher is beyond the scope of this report.

2.3 Overcoating FX Lumber Guard and FX Lumber Guard XT is outside the scope of this report.

2.4 The use of FX Lumber Guard and FX Lumber Guard XT has not been evaluated for use with plywood and oriented strand board (OSB) for applications with shear walls.

2.5 FX Lumber Guard and FX Lumber Guard XT have not been evaluated for use as part of a fire-resistance rated assembly.

2.6 Fasteners shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper.

2.7 The fire retardant recognized in this report is produced by Fire Retardant Coatings of Texas in Haslet, Texas.

3.0 PRODUCT USE

3.1 General: FX Lumber Guard and FX Lumber Guard XT fire-retardants shall be applied in accordance with this report, the manufacturer’s installation instructions and the applicable code. Where there is a conflict, the most restrictive shall govern.

3.2 Application:

3.2.1 Application Instructions: FX Lumber Guard and FX Lumber Guard XT are applied by using rollers, brushes or sprayers in one-coat to surfaces that are clean, dry and free from dirt, grease, oil and prior coatings of paints, stains or sealers. The fire-retardants shall be applied when the ambient temperature is between 45°F and 95°F (7.2°C and 35°C, respectively). At time of application the moisture content of dimensional lumber shall not exceed 15 percent and the moisture content of plywood shall not exceed 19 percent. The fire-retardant products are applied at a coverage rate of 300 to 350 square feet per gallon (7.36 to 8.59 m²/L). FX Lumber Guard and FX Lumber Guard XT have a cure time of between 8 and 32 hours depending on temperature and humidity.

3.2.2 Applicators: Application of the FX Lumber Guard and FX Lumber Guard XT fire-retardants shall be by applicators approved by Fire Retardant Coatings of Texas, LLC after showing evidence that they possess the knowledge and equipment necessary to conform with the application procedures of Fire Retardant Coatings of Texas, LLC. A Certificate of Fire Retardant Treatment for each project, showing conformance with Fire Retardant Coatings of Texas’ application instructions, shall be made available to the building official (Figure 1 of this report shows a sample certificate).

3.2.3 Field Test: When required by the Building Official or Authority Having Jurisdiction (AHJ), a field test of treated substrates shall be conducted consisting of subjecting a treated and untreated substrate to a small flame source,

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





such as a propane torch, for a period of not less than 15 seconds and observing the results. Treated substrates will form a layer of black char and will exhibit a reduced rate of flame spread.

3.3 Design:

3.3.1 Interior Finish: When applied over lumber of Southern Yellow Pine, Spruce-Pine-Fir, Hem Fir or Douglas Fir and when applied to Oriented Strand Board (OSB) or plywood of Southern Yellow Pine or Spruce-Pine-Fir, the lumber, OSB or plywood, as applicable, has an interior finish classification of Class A, in accordance with Section 803.1.1 of the IBC, and is a Class A Fire-Retardant, in accordance with Section 3.3.1.1 of NFPA 703, with a flame spread index of 25 or less and a smoke-developed index of 200 or less, when tested in accordance with ASTM E84.

3.3.2 Lumber Strength Adjustments: When FX Lumber Guard and FX Lumber Guard XT is applied to lumber, the allowable design properties of each lumber species shall be based on modification factors determined from testing to ASTM D5664, as shown in Table 1 of this report.

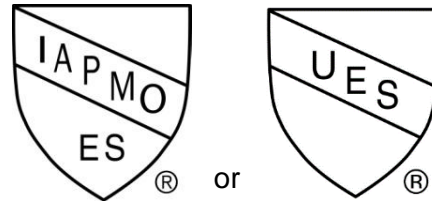
3.3.3 Wood Structural Panel Strength Adjustments: When FX Lumber Guard and FX Lumber Guard XT are applied to plywood and OSB, the allowable design properties of wood structural panels shall be based on modification factors determined from testing to ASTM D5516, as shown in Table 2 of this report.

4.0 PRODUCT DESCRIPTION

FX Lumber Guard and Lumber Guard XT are clear, water-based liquid applied fire-retardant. The fire-retardants are supplied in 1 quart, 1 gallon and 5 gallons (0.95L, 3.78L, and 18.9L, respectively) containers with a shelf-life of 3-years when stored in sealed containers at temperatures between 45°F and 95°F (7.2°C to 35°C).

5.0 IDENTIFICATION

Containers of FX Lumber Guard and FX Lumber Guard XT fire-retardants are identified with the manufacturer's name (Fire Retardant Coatings of Texas, LLC), address, product name, manufactured date, shelf life, application instructions and Evaluation Report number (ER-478). Either Mark of Conformity may be used as shown below:



IAPMO UES ER-478

6.0 SUBSTANTIATING DATA

6.1 Data in accordance with NFPA 703 Standard for Fire Retardant Treated Wood and Fire Retardant Coating for Building Products, 2015 Edition.

6.2 Data in accordance with ICC-ES Acceptance Criteria for Surface-applied Fire Retardant Coatings (AC308), dated February 2007, editorially revised March 2012.

6.3 Reports of testing for surface burning characteristics in accordance with ASTM E84.

6.4 Reports of testing for flexural properties of fire-retardant treated wood in accordance with ASTM D5516.

6.5 Reports of testing for evaluating the effect of fire-retardant treatments on strength properties of fire-retardant treated lumber in accordance with ASTM D5664.

6.6 Reports of testing for hygroscopic properties of fire-retardant wood and wood-based products in accordance with ASTM D3201.

6.7 Reports of testing for determining corrosion of metal in treated wood in accordance with AWPA E12.

6.8 Test results are from laboratories in compliance with ISO/IEC 17025.

6.9 Manufacturer's descriptive literature and installation instructions.



7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research carried out by IAPMO Uniform Evaluation Service on Fire Retardant Coatings of Texas' FX Lumber Guard and FX Lumber Guard XT fire-retardants to assess their conformance to the codes and standards shown in Section 1.0 of this report and documents the product's certification. Products are manufactured at the location noted in Section 2.7 of this report under a quality control program with periodic inspection under the surveillance program by IAPMO UES.

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For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



**TABLE 1
DESIGN VALUE ADJUSTMENTS FOR SOUTHERN YELLOW PINE LUMBER**

PHYSICAL PROPERTY	DESIGN LOAD ADJUSTMENT FACTORS¹
Static Bending, F_b	0.96
Modulus of Elasticity, E	0.91
Compression Parallel to Grain, F_c	0.96
Horizontal Shear, F_v	0.87
Tension Parallel to Grain, F_t	1.00
Compression Perpendicular to Grain, $F_{c\perp}$	0.95
Fastener Loads	0.87

¹Adjustment factors are limited to service temperatures of 100°F or less.

**TABLE 2
ADJUSTMENT VALUES FOR WOOD STRUCTURAL PANELS**

WSP	Design Load Reduction Factor
Plywood ¹	0.93
OSB	1.0

¹Representative of all plywood species.



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FX LumberGuard®

Certificate of Fire-Retardant Wood Treatment Labeling

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 IAPMO UES ER-478.

IAPMO UES ER-478 Design Values, 30 Minute Test, Surface Burning Characteristics FSI <25 SDI <200 Air Dried

Description of material treated:

Square/Board Foot Treated: _____ Spread Rate: 300-350 square feet per gallon

Species Treated: _____

Applicator / Treater:

Name: _____

Address: _____

City: _____ ST: _____ ZIP: _____

Phone: _____

Applicators Signature: _____



"Fire Retardant Coatings of Texas", "FX Lumber Guard / FX Lumber Guard XT" & "FRCT" Logo are federally registered trademarks of Fire Retardant Coatings of Texas®, LLC



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FX LumberGuard® XT

Certificate of Fire Retardant Wood 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 XT and has been applied in conformance with FRCT's application specifications and IAPMO UES ER-478. IAPMO UES ER-478 Design Values, 30 Minute Test, Surface Burning Characteristics FSI <25 SDI <200 Air Dried

Your Invoice # _____ dated _____ 20____.

Description of material treated:

Square Foot Treated: _____ Spread Rate: 300-350 square feet per gallon

Applicator:

Name: _____
 Address: _____
 City: _____ ST: _____ ZIP: _____
 Phone: _____

Applicators Signature: _____



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