

# ICC-ES Evaluation Report

ESR-3872

Reissued October 2023


This report also contains:

- CBC Supplement

Subject to renewal October 2024

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<p><b>DIVISION: 09 00 00 — FINISHES</b></p> <p><b>Section: 09 96 43 — Fire Retardant Coatings</b></p>	<p><b>REPORT HOLDER: FIRE RETARDANT COATINGS OF TEXAS, LLC.</b></p>	<p><b>EVALUATION SUBJECT: FX LUMBER GUARD AND FX LUMBER GUARD XT FIRE-RETARDANT PENETRANTS</b></p>	
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## 1.0 EVALUATION SCOPE

### Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015, 2012, 2009 and 2006 [International Residential Code® \(IRC\)](#)
- 2021, 2018, 2015, 2012, 2009 and 2006 [International Fire Code® \(IFC\)](#)
- 2021, 2018, 2015, 2012, 2009 and 2006 [International Existing Building Code® \(IEBC\)](#)

### Property evaluated:

Surface-burning characteristics

## 2.0 USES

FX Lumber Guard and FX Lumber Guard XT are fire-retardants, as defined in IFC Section 803.4 and are field-applied by applicators approved by Fire Retardant Coatings of Texas, LLC, to exposed surfaces of unfinished Southern Yellow Pine dimension lumber, Southern Yellow Pine plywood, or oriented strand board (OSB) rated sheathing Exposure 1 as an interior finish in the interior of new and existing construction to achieve the flame-spread and smoke-developed indices required by the applicable code.

## 3.0 DESCRIPTION

### 3.1 General:

FX Lumber Guard and FX Lumber Guard XT fire-retardants are clear, water-based products that come in 1-quart (1.0 L), 1-gallon (3.8 L), and 5-gallon (18.9 L) containers, 55-gallon (208 L) drums, and 250-gallon (946.4 L) totes. The products have a shelf life of three years from the date of manufacture when the containers are unopened and stored at temperatures between 45°F (7.2°C) and 95°F (35°C).

## 4.0 INSTALLATION

### 4.1 General:

FX Lumber Guard and FX Lumber Guard XT must be installed in accordance with this report, the manufacturer's published installation instructions and the applicable code. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

The surface to be treated must be free of dust, dirt, oil, paint, stain, varnish, or sealant. The products are not for use on surfaces that may be subjected to washing or sustaining humidity of 80 percent or more. The

products must be thoroughly mixed before and throughout the application and applied by manual-pump spraying, rolling, or brushing in one application. The ambient air temperature for application must be limited to a minimum of 45°F (7.2°C) and maximum of 95°F (35°C). The maximum moisture content for the substrate is 15 percent for dimension lumber, 19 percent for plywood, and 16 percent for oriented strand board (OSB). The cure time for the fire-retardant can be a minimum of 8 hours to a maximum of 32 hours. The performance of products with multiple applications is outside the scope of this report.

#### 4.2 Application and Surface-Burning Characteristics:

When applied to unfinished Southern Yellow Pine dimension lumber, Southern Yellow Pine plywood, or oriented strand board (OSB) rated sheathing Exposure 1 at a minimum coverage rate of 300 square feet per gallon (7.36 m<sup>2</sup>/L), the products provide a flame-spread-index of 25 or less and a smoke-developed index of 200 or less when tested in accordance with ASTM E84 and qualifies as a Class A finish in accordance with 2021 and 2018 IBC Section 803.1.2 (2015, 2012, 2009 and 2006 IBC Section 803.1.1), 2021 and 2018 IFC Section 803.1.2 (2015, 2012, 2009 and 2006 IFC Section 803.1.1) and NFPA 703.

#### 4.3 Field Test:

When required by the code official, observation of the treatment or field testing must be conducted in accordance with one of the following methods:

**4.3.1 Observation:** Observing the presence of a distinctive color (green, red, or orange) dye after application.

**4.3.2 Field Test:** For fire-retardants without dye, expose the treated substrate to a small fire source, such as a propane torch. The flame exposure must be applied for a maximum of 15 seconds to a treated substrate and an untreated substrate. Evidence of a treated substrate is observed by comparing the reactions to the flame where the treated substrate will form a visible black char layer.

## 5.0 CONDITIONS OF USE:

The FX Lumber Guard and FX Lumber Guard XT fire-retardants described in this 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 report, the manufacturer's published instructions, and the applicable code. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.
- 5.2 Application must be limited to construction of the specific substrate set forth in Section 2.0, to exposed interior locations having a sustaining humidity of less than 80 percent.
- 5.3 Field testing must be performed by the approved applicator, as indicated in Section 4.3, when required by the code official.
- 5.4 The manufacturer's Certificate of Fire-Retardant Treatment (COT), as shown in [Figures 1](#) and [2](#), must be submitted by the approved 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 Section 1705.1.1 of the 2021, 2018, 2015 and 2012 IBC or Section 1704.15 of the 2009 IBC, or Section 1704.13 of the 2006 IBC, as applicable.
- 5.6 The performance of products with multiple applications is outside the scope of this report.
- 5.7 The fire-retardants are manufactured in Fort Worth, Texas, under a quality control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with [ICC-ES Acceptance Criteria for Surface-applied Fire-retardant Coatings \(AC363\)](#), dated February 2007 (editorially revised April 2022).

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3872) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

- 7.2 In addition, containers of FX Lumber Guard and FX Lumber Guard XT fire retardants are identified by the label bearing the manufacturer's name (Fire Retardant Coatings of Texas, LLC) and address, the product name, the date of manufacture, shelf life and the manufacturer's instructions for application.
- 7.3 The report holder's contact information is the following:

**FIRE RETARDANT COATINGS OF TEXAS, LLC**  
**4500 GRANTS LANE**  
**FORT WORTH, TEXAS 76179**  
**(817) 710-5233**  
[www.frctexas.com](http://www.frctexas.com)



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 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, ICC-ES ESR 3872, ICC-ES ESL-1087, and ICC-ES ESL-1064.

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

FIGURE 1—EXAMPLE OF CERTIFICATE OF TREATMENT (COT) FOR FX LUMBER GUARD



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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, ICC-ES ESR-3872, ICC-ES ESL-1087, and ICC-ES ESL-1064.

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: \_\_\_\_\_



"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

FIGURE 2—EXAMPLE OF CERTIFICATE OF TREATMENT (COT) FOR FX LUMBER GUARD XT

DIVISION: 09 00 00—FINISHES

Section: 09 96 43—Fire-Retardant Coatings

## REPORT HOLDER:

FIRE RETARDANT COATINGS OF TEXAS, LLC

## EVALUATION SUBJECT:

FX LUMBER GUARD AND FX LUMBER GUARD XT FIRE-RETARDANT PENETRANTS

## 1.0 REPORT PURPOSE AND SCOPE

## Purpose:

The purpose of this evaluation report supplement is to indicate that FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in ICC-ES evaluation report ESR-3872, have also been evaluated for compliance with the codes noted below.

## Applicable code edition(s):

- 2022 California Building Code® (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 California Residential Code® (CRC)
- 2022 California Fire Code® (CFC)
- 2022 California Existing Building Code® (CEBC)

## 2.0 CONCLUSIONS

## 2.1 CBC:

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CBC Section 803.1.2, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of 1705.1.1, when determined to be necessary by the code official. Use of the fire-retardant as an alternative to fire retardant treated wood (FRTW) is outside the scope of this supplement.

## 2.1.1 OSHPD:

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CBC Chapter 8 [OSHPD 1, 1R, 2, 4 and 5], provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapter 8, 17 and 17A, as applicable. Use of the fire-retardant as an alternative to fire retardant treated wood (FRTW) is outside the scope of this supplement.

## 2.1.2 DSA:

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CBC Chapter 8 [DSA-SS, DSA-SS/CC], provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of the CBC Chapter 8 and 17A, as applicable. Use of the fire-retardant as an alternative to fire retardant treated wood (FRTW) is outside the scope of this supplement.

**2.2 CRC:**

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CRC Section R302.9, provided the design and installation are in accordance with the 2021 *International Residential Code*<sup>®</sup> (IRC) provisions noted in the evaluation report. Use of the fire-retardant as an alternative to fire retardant treated wood (FRTW) is outside the scope of this supplement.

**2.3 CFC:**

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CFC Section 8034, provided the design and installation are in accordance with the 2021 *International Fire Code*<sup>®</sup> (IFC) provisions noted in the evaluation report.

**2.4 CEBC:**

The FX Lumber Guard and FX Lumber Guard XT Fire-Retardant, described in Sections 2.0 through 7.0 of the evaluation report ESR-3872, comply with CEBC, provided the installation, conditions of use and identification are in accordance with the 2021 *International Existing Building Code*<sup>®</sup> (IEBC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued October 2023.