ICC-ES Evaluation Report

ESR-4271
Reissued August 2019
Revised December 2019
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A Subsidiary of the International Code Council®

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

REPORT HOLDER:

FIREFREE COATINGS, INC.

EVALUATION SUBJECT:

FIREFREE 88® (FF88®) AND FIREFREE® CLASS A (FfA) FIRE-RETARDANT COATINGS

1.0 EVALUATION SCOPE

Compliance with the following codes:
- 2018, 2015 and 2012 International Residential Code® (IRC)

For evaluation with codes adopted by Los Angeles Department of Building and Safety (LADBS), see ESR-4271 LABC and LARC Supplement.

Property evaluated:
Surface burning characteristics

2.0 USES

FireFree 88® (FF88®) and FireFree® Class A (FfA) are water based fire-retardant coatings, as defined in IFC Section 803.4, that are field-applied by licensed applicators approved by FireFree Coatings, Inc., to exposed surfaces of unfinished Douglas Fir dimensional lumber or oriented strand board (OSB) 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:

FireFree 88® (FF88®) and FireFree® Class A (FfA) fire-retardant coatings are water-based latex paint that are brushed, rolled or sprayed using an airless spray gun. The FireFree® 88® (FF88®) is available in 5-gallon (18.9 L) buckets and FireFree® Class A (FfA) is available in 1-gallon (3.8 L) and 5-gallon (18.9 L) buckets, each with a shelf-life of two years from the date of manufacture for unopened containers and when stored at temperatures between 50°F to 85°F (10°C to 29°C).

4.0 INSTALLATION

4.1 General:

FireFree® 88® (FF88®) and FireFree® Class A (FfA) fire-retardant coatings 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 coated 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 a maximum relative humidity of more than 75 percent. The products must be thoroughly mixed before and throughout the application and applied using an airless spray gun, rolling, or brushing in one coat. The ambient air temperature for application must be limited to a minimum of 50°F (10°C) and maximum of 85°F (29°C) and relative humidity of not more than 75%. The manufacturer must be consulted for specific application conditions. Make sure that each coat of the fire-retardant coatings is thoroughly dry to the touch before applying the next coat. The maximum moisture content for the substrate must be below 17 percent for oriented strand board (OSB) and dimensional lumber. The cure time of fire-retardant coating is a minimum of 8 hours to a maximum of 48 hours.

4.2 Application and Surface Burning Characteristics:

When applied to unfinished Douglas Fir dimensional lumber and oriented strand board (OSB) in accordance with minimum nominal film thickness and coverage rate noted in Table 1, 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 (UL 723) and qualifies as a Class A finish in accordance with IBC Section 803.1.1, IFC Section 803.1.1 and NFPA 703.

4.3 Field Test:

The minimum dry film thickness must be in accordance with the thickness stated in Table 1. During application, the wet film thickness must be checked using a wet film thickness gauge to determine if dry film thickness stated in Table 1 is achieved.

5.0 CONDITIONS OF USE

The FireFree® 88® (FF88®) and FireFree® Class A (FfA) fire retardant coatings 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 in exposed interior locations having a maximum relative humidity of less than 75 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 Daily Application verification certificate 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; the 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 IBC.

5.6 The performance of products with overcoating layers is outside the scope of this report.

5.7 The coatings are manufactured in Portland, Oregon, 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 June 2018)

7.0 IDENTIFICATION

7.1 Containers of FireFree 88® (FF88®) and FireFree® Class A (FfA) fire-retardant coatings are identified by the label bearing the manufacturer’s name (FireFree Coatings, Inc.) and address, the product name, the date of manufacture, shelf life, the manufacturer’s instructions for application, and the ICC-ES evaluation report number (ESR-4271).

7.2 The report holder’s contact information is the following:

FIREFREE COATINGS, INC.
8 COMMERCIAL BOULEVARD, SUITE E
NOVATO, CALIFORNIA 94949
(415) 459-6488
www.firefree.com
info@firefree.com

<table>
<thead>
<tr>
<th>MINIMUM NOMINAL FILM THICKNESS</th>
<th>THICKNESS AND TYPE OF WOOD SUBSTRATE</th>
<th>COVERAGE RATE SQUARE FEET PER GALLON (m²/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FireFree® Class A (FfA) 6 mils dry (9 mils wet)</td>
<td>¾ inch OSB</td>
<td>178 (4.37)</td>
</tr>
<tr>
<td>FireFree® Class A (FfA) 8 mils dry (12 mils wet)</td>
<td>Nominal 2x6 Douglas Fir sawn lumber</td>
<td>133.5 (3.27)</td>
</tr>
<tr>
<td>FireFree® Class A (FfA) 10 mils dry (15 mils wet)</td>
<td>¾ inch OSB</td>
<td>106.5 (2.61)</td>
</tr>
<tr>
<td>FireFree Class A (FfA) 20 mils dry (30 mils wet)</td>
<td>⅛ inch OSB</td>
<td>53 (1.30)</td>
</tr>
<tr>
<td>FireFree Class A (FfA) 20 mils dry (30 mils wet)</td>
<td>¾ inch OSB</td>
<td>53 (1.30)</td>
</tr>
<tr>
<td>FireFree 88® (FF88®) 10 mils dry (15 mils wet)</td>
<td>¾ inch OSB</td>
<td>106 (2.6)</td>
</tr>
</tbody>
</table>

SI: Units conversion: 1 Inch = 25.4 mm
Applicator’s Certification

To

This is to certify that the material described below has been applied with Firefree 88, a water latex based fire retardant coating, in accordance with Firefree Coatings Inc., application instructions and ICC-ES Report ESR-4271.

Description of wood material treated: _________________________________
Spread Rate: ___________________
Project Name: ______________ Location: ______________________________

If, in the event, existing coated surfaces are damaged or altered, reapplication by an experienced approved applicator is required in order to keep in force the limited time warranty.

Certify by:  Name: _________________________ / Company: __________________________
Address: ____________________________ City / State: ___________________________
Applicators Signature: _________________________ Title: ________________

FIGURE 1—EXAMPLE OF MANUFACTURER’S CERTIFICATE FOR FIREFREE 88 (FF88)

Applicator’s Certification

To

This is to certify that the material described below has been applied with Firefree Class A, a water latex based fire retardant coating, in accordance with Firefree Coatings Inc., application instructions and ICC-ES Report ESR-4271.

Description of wood material treated: _________________________________
Spread Rate: ___________________
Project Name: ______________ Location: ______________________________

If, in the event, existing coated surfaces are damaged or altered, reapplication by an experienced approved applicator is required in order to keep in force the limited time warranty.

Certify by:  Name: _________________________ / Company: __________________________
Address: ____________________________ City / State: ___________________________
Applicators Signature: _________________________ Title: ________________

FIGURE 2—EXAMPLE OF MANUFACTURER’S CERTIFICATE FOR FIREFREE CLASS A (FIA)
1.0 REPORT PURPOSE AND SCOPE

Purpose:
The purpose of this evaluation report supplement is to indicate that FireFree 88® (FF88®) and FireFree® Class A (FfA) Fire-Retardant Coatings, described in ICC-ES master evaluation report ESR-4271, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:
- 2017 City of Los Angeles Building Code (LABC)
- 2017 City of Los Angeles Residential Code (LARC)
- 2017 California Fire Code (CFC)
- 2017 California Existing Building Code (CEBC)

2.0 CONCLUSIONS

The FireFree 88® (FF88®) and FireFree® Class A (FfA) Fire-Retardant Coatings, described in Sections 2.0 through 7.0 of the master evaluation report ESR-4271, comply with the LABC Section 803.1.1, LARC Section R302.9, LA RC Section AJ601.2, CFC Section 803.4, and CEBC Section 314.22, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The FireFree 88® (FF88®) and FireFree® Class A (FfA) Fire-Retardant Coatings, described in this evaluation report must comply with all of the following conditions:

- All applicable sections in the master evaluation report ESR-4271.
- Special inspections, in accordance with LABC Section 1705.1.1, may be required when determined to be necessary by the code official.
- Use of the fire retardant coatings as an alternative to fire retardant treated wood (FRTW) is outside the scope of this supplement.

This supplement expires concurrently with the master report, reissued August 2019 and revised December 2019.