

OVERVIEW

The Firefree Wildfire System is the first and only intumescent exterior coating system that meets the ASTM ignition resistance and weatherization standards required for use in the International Wildland Urban Interface (“IWUI”), (materials and construction methods for Exterior Wildfire Exposure) and the International Code Council (ICC).

The Firefree System is a two-product system.

1. The first product is FfA which protects wood surfaces from flame fire exposure.
2. The second product is FfE which will protect FfA from long term weather exposure.

The Firefree System is designed to deliver fire-ignition resistance benefits in compliance with ASTM E-84 30-Minute Extended (“ASTM E2768-12 30-Minute Ignition”) and ASTM E2957 standards for exterior applications on building elements such as wall sidings, eaves, soffits, projections, and overhangs, helping to harden structures and enhance protection against wildfires and bushfires. In addition to ignition resistance, the system also helps shield structures from radiant heat exposure and wind-blown embers.

SYSTEM INFORMATION

<p>Firefree® Class A (“FfA”) is a water based, single component, flame-retardant coating tested to comply with ASTM E-84 30-Minute Extended (“ASTM E2768-12 30-Minute Ignition”) standard and ASTM E2957 Exterior Eaves to reduce wildfire risks to structures in wild-fire zone areas.</p> <p>These standards involve fire-retardant tests that measure a product’s ability to slow horizontal flame spread and smoke development.</p> <p>When FfA is used on exterior exposed areas under IWUI requirements, it must be protected with the Firefree Exterior (“FfE”) acrylic topcoat.</p> <p>FfA is listed and inspected by the International Code Council (ICC ESL-1206) and tested under the Western Fire Center (WFC) Eave Test, Report No. 21023</p> <p>FfA is safe and eco-friendly, with low VOC content (<36gr/liter per ASTM D-3960) and low emissions, which is extremely low compared to the current EPA regulations.</p> <p><i>Packaging:</i> 5 gall buckets <i>Shelf life:</i> 2 years from DOM <i>Color:</i> White <i>Finish:</i> Flat <i>Volume Solids:</i> 67% Tested to ASTM D5116 Organic Emissions Can earn LEED credits per Method v1.2, 2017</p>	<p>Firefree Exterior (“FfE”) Topcoat is a proprietary, premium, 100% acrylic, protective coating to be used exclusively over surfaces previously coated with Firefree Class A (“FfA”), to improve the durability of such products if used in exterior applications in compliance with Firefree Coatings recommendations.</p> <p><i>Packaging:</i> 5 gall buckets <i>Shelf life:</i> 2 years from DOM <i>Resin Type:</i> 100% Acrylic</p> <p><i>Color:</i> white, and available in two bases. Both bases are tintable to most colors: — White base not to exceed 4 oz of tint per tint/gal; — Deep base not to exceed 12 oz of tint per tint/gal). <i>Finish:</i> Satin 20-30 @ 60°F</p> <p><i>Solids by Weight:</i> 55% <i>Solids by Volume:</i> 42.9% <i>Weight per Gallon:</i> 10.69 lbs. (4.85 kg) <i>VOC:</i> <50 g/L (<6.09 oz/gal)</p> <p>FfE on its own does not have any fire-retardant properties.</p>
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There is no substitution of the FfE as this acrylic topcoat has passed the weatherization test (ASTM D2898, method B) over the Firefree intumescent coatings. Any substitution of either FfA or FfE would void any warranty express or implied.

SYSTEM SPECIFICATIONS

Product Name	DFT/WFT Application	Number of Coats	Coverage Rate per gallon
FFA Ignition Resistant	20 mils dry/30 mils wet	2	53 sq. ft/gal (1.30 m ² /litter)
FFE Acrylic Topcoat	6 mils dry/12 mils wet	2	110 sq. ft/gal (2.70 m ² /litter)

1. (“FFA”) at 20 mils dry/30 mils wet to achieve the 30-minutes ignition resistance, then
2. (“FFE”) at 6 mils dry/12 mils wet to protect the coating from weather exposure.

WET FILM THICKNESS (WFT) and DRY FILM THICKNESS (DFT)

The dry film thickness (DFT) must be strictly followed to ensure proper performance. During application, use a wet film thickness gauge to monitor the coating as it’s applied. Final DFT must also be verified — see third-party inspection section.

DFT THIRD PARTY INSPECTION

Firefree Coatings (“Firefree”) requires that all surfaces to which the Product was applied be inspected a by third party special inspection agency, or QA/QC qualified inspector to verify that the Product has been properly applied in the required uniform thickness.

To obtain a list of inspections agencies, go to www.psiousa.com, www.terracon.com or contact Firefree Coatings to help. The hiring of an independent inspector is the responsibility of the contractor.

SURFACE PREPARATION

STEP 1 - FFA	<p>Firefree Class A can be used as a primer on most combustible materials. However, the surface moisture content must not be more than 12% before applying FFA.</p> <p>Raw wood:</p> <ul style="list-style-type: none"> – Fill holes and surface irregularities with a suitable patching compound to match surface profile. Spot prime all patched areas with appropriate primer. <p>Existed Painted Surfaces:</p> <ul style="list-style-type: none"> – Ensure that the surfaces are not flaky or cured. – All surfaces to be coated must be clean, cured, firm, dry and free of dust, dirt, oil, wax, grease, mildew, loose or flaking paint, efflorescence or any other contamination or condition that would adversely affect the coating’s performance. – Etch or prime (with a latex primer or fast-dry oil-base primer/sealer) glossy, glazed or dense surfaces. Always prime oil-based finish coatings with fast-dry primer/sealer. <p>Wood Shingles Siding:</p> <ul style="list-style-type: none"> – Requires penetrating adhesive wood primer. <p>Do not commence work until such defects have been corrected.</p>
STEP 2 - FFE	<p>FfE is designed to be applied on top of Firefree Class A.</p> <ol style="list-style-type: none"> 1. Before applying FFE, allow the FFA to cure fully. 2. Check the moisture level — it should not exceed 6%. <p>Curing time varies depending on temperature, humidity, and weather conditions.</p>

Please refer to the Application Instructions for detailed guidance.

TEMPERATURE

FFA and FFE should only be applied when material, air, and surface temperatures are above 50°F (10°C) or below 95°F (35°C) and will remain within such temperature range for at least 24 hours.

- Temperatures must remain above 5° above the dew point during application and drying time.
- Do not expose to rain, fog or any moisture during application and drying time.
- Application during extreme weather conditions (including winter) is not recommended.
- Limit exposure to heavy moisture for at least 10 days after application is completed.

APPLICATION METHOD

<p>FFA can be applied by airless sprayer, roller, or brush.</p> <p>Spray-Airless (recommended): Capable of a pressure range of 780 to 3300 psi. Tip .015 to .017 heavy duty 4" to 12" (10.16 cm to 30.48 cm) fan width recommended.</p> <p>Firefree Class A can be stirred with a paint wood-paddle (this is the similar procedure like paint). Apply at can consistency.</p> <ol style="list-style-type: none">1. Use a spray line specifically dedicated to latex paints.2. Alternatively, you may use a line that has only been used for water-based paints. Spray lines used for other than latex paint are not recommended. <p>Roller: Use a 1-1/4" (20-25mm) nap synthetic cover for heavy application. Other rollers may be used depending on desired finish.</p> <p>Brush: For brush application, a nylon/fully loaded brush should be used. A laying on technique will reduce the brush marking.</p>	<p>FFE can be applied by airless sprayer.</p> <p>Spray (Airless): Recommended low pressure tip size; use .013" (0.033 cm) - .015 (0.038 cm).</p> <p>Follow the recommendation of the pressure range set by the tip manufacturer. Heavy duty 4" to 12" (10.16 cm to 30.48 cm) fan width recommended.</p>
<p>If you need to strain FFA or FfE only use a gauze the size used in fly screen doors. <u>DO NOT THIN FIREFEE CLASS A or FIREFREE EXTERIOR TOPCOAT.</u></p> <p>It is the sole responsibility of the customer to choose an experienced, qualified applicator for the System and ensure that such applicator applies the System in strict compliance with the Application Instructions and applies the recommended thickness.</p>	

If you have any questions about the application, please contact our Technical Team for assistance.