

PRODUCT DATA SHEET



FIREFREE® CLASS A

FfA meets the Class “A” rating with 6 mils dry. It also complies with the extended 30 minute test.

PRODUCT INFORMATION

Firefree® Class A (“FfA”) is a water based, single component, self- priming, flame retardant paint that provides “Class A” ratings per ASTM E 84 and ASTM E 84, 30 Minute extended. This standard involves fire retardant tests which measures a product’s ability to slow down horizontal flame spread and smoke development.

FfA is listed and inspected by the International Code Council (“ICC”) and is listed by the California State Fire Marshal. FfA is safe and eco-friendly with low VOCs (<36gr/liter, per ASTM D3960) which is extremely low compared to the current EPA regulations of <50 gr/liter.

RECOMMENDED USES

FfA can be applied over most combustible materials, including oriented strand board (OSB), plywood, wood joists/trusses, wood paneling/ sheathing and other associated lumber where a fire retardant is needed to slow the spread of fire. As a result of its' superior fire-retardant performance, FfA provides significant material and labor cost reductions, resulting in significant savings when compared to other retardant materials.

Recommended uses are in both new, retrofit, and defective construction (residential, commercial, industrial and government), insulation and transportation. The projects using our products include historic properties, schools, health care (hospitals, assisted living), apartments, condominiums, high rises, hotels, stores, restaurants, oil and solar facilities, government facilities, military applications, and facilities, transportation (aero- space, aviation, light rail, maritime, energy).

FfA is designed for interior use. When FfA is used for Exterior applications, including as part of the Firefree Exterior System for wildfires, it must be protected by Firefree Exterior topcoat (“FfE”). 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. FfA is available in white and has a flat finish. If a different color or finish is desired, FfA can be top coated with most interior premium latex paints to achieve a different color and finish.

SPECIFICATIONS

ASTM E84 10 Minutes. FfA meets the 10-minute protection in accordance with ASTM E-84 Surface Burning Characteristics. This standard shows a product’s ability to reduce the spread of flame and smoke in the event of a fire. Some of FfA’s applications under this standard include structural wood framing, plywood, wood sheathing. **See Appendix A** for detailed information on ASTM E84 10 min specifications including test results and required thickness.

ASTM E84 30 Minutes Extended. FfA meets the extended 30 minute protection in accordance with ASTM E-84 Surface Burning Characteristics (Extended E-84, ASTM E2768). FfA can be used in building construction to comply for use in Type I and II (non-combustible) wood applications. It can also be use in areas such as air (return) plenum, mechanical rooms / electrical room. It can further be used in place of noncombustible materials in exterior walls of Type III and IV buildings, and in roof sheathing structures and on exterior wall assemblies, as a component value, when a rating is required. **See Appendix B** for detailed information on ASTM E84 30 min extended specifications, including test results and required thickness.

Wildfires (WUI) Protection.

Firefree Class A ("FfA") can also be used as part of the Firefree Wildfire System. 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 Wildland Urban Interface ("WUI"), as prescribed in the California Building Standards Code Section 704A (materials and construction methods for Exterior Wildfire Exposure) and the International Code Council (ICC).

The Firefree System is a two-product system. The first product is Firefree Class A ("FfA") which will provide the fire ignition resistant properties. The second product is Firefree Exterior ("FfE") Topcoat which will protect FfA from long term weather exposure.

The Firefree System can be used to harden building structures and can be applied to wall sidings, eaves, soffits, building projections and overhangs, to assist in the hardening and fire protection of buildings against wildfires and bushfires. In addition to its fire ignition resistant properties, the system can also assist with protection from radiant heat exposure and wind-blown embers. **See Appendix C** for detailed information on wildfire (WUI) specifications.

KEY FEATURES

- Most economical fire-retardant paint
- High performance fire-retardant paint
- Easy to use and apply
- Eco-friendly
- Used on various combustible materials
- Anti-Microbial (Excellent Mildew Resistance)
- Can be tinted (not to exceed 8 oz per tint/gal)

CERTIFICATION

- Meets all ASTM E-84 Fire Test Requirements
- ICC Listed, ESR4271 LARC
- ICC ESL 1205
- Tested to ASTM D5116 Organic Emissions
- Can earn LEED credits per Method v1.2, 2017
- Low VOC per ASTM D3960
- Color: White
- Finish: Flat
- Volume Solids: 67%

APPLICATION

FfA is a water-based latex paint and its application is similar to applying a regular water-based latex paint (except for the recommended thickness which needs to be precisely complied with for adequate performance). FfA can be brushed, rolled or sprayed using an airless spray gun. Additionally, because of its high percentage of solids, it will have an excellent spread rate and coverage. For application instructions, including surface preparation and recommended equipment, please read the FfA Application Instructions. **It is the sole responsibility of the customer to choose a qualified applicator for the Product and ensure that such applicator applies the Product in strict compliance with the Application Instructions and applies the recommended thickness.**

TESTING LABORATORIES AND LISTINGS

Testing Laboratories.

QAI Laboratories, Inc. Accredited IAS www.iasonline.org third party fire testing laboratory

-Certification # TL-220

-Accredited ISO/IEC 17025, certification # TL-383

CERTIFICATION/ COMPLIANCE & LISTINGS

Qualifies For LEED v4 Credit	CDPH/EHLB Standard Method v1.2, 2017 Emissions	Meets VOC regulations (OTC, SCAQMD CARB)	ICC ESL 1205 ICC ESR 4271 ICC ESL 1213 CAN/ULC
YES	YES	YES	YES

FFA Listings.

California State fire Marshal (CSFM), BML Listing No 2280-2112 Flame Spread.

International Code Council ("ICC") Report Numbers:

- California State Fire Marshal (CSFM), BML Listing No. 2280-2112
- International Code Council (« ICC ») LABC and LARC Supplement.

LIMITED WARRANTY

Firefree provides a ten (10) Year Limited Warranty from purchase of the Product. Please read the warranty below carefully as it contains important information from the manufacturer.

For a period of ten (10) years from purchase, FfA will not crack, peel, or chip if properly applied to a properly prepared and approved surface and if properly maintained. If FfA fails to meet the terms set forth above, Firefree will provide, at no charge, a quantity of FfA sufficient to repaint the surface affected. **This is the exclusive remedy for all warranty claims. This warranty specifically excludes labor or costs of labor or incidental or consequential damages associated with the use of this product.**

In the event of a warranty claim, the claimant must notify Firefree in writing of the defect promptly following discovery (within 10 days) and must submit (i) proof of purchase, including the date of purchase, (ii) proof that FfA was applied in strict compliance with Firefree's Applications Instructions for FfA, and that the recommended thickness was applied, and (iii) proof of the defect (including photos and sample of defective materials) and date of discovery. Firefree reserves the right to inspect any painted surface to which the warranty claim applies.

This warranty will be void if, post application, the Product is (a) treated by any abrasive process or material, (b) exposed to any biological solvent or caustic chemical or agent, (c) altered or repaired, or (d) exposed to exterior weathering unless, and only if, FfA is covered by the Ff Exterior Topcoat in strict compliance with Firefree's specifications and with FfE's Application Instructions. The warranty will also be void if the Product is; (i) diluted or adulterated, (ii) mixed with any other product, (iii) not stored or applied in strict compliance per Firefree's Applications Instructions for FfA, (iv) not applied in the required uniform thickness per Firefree's specifications, (v) not inspected in accordance with Firefree's instructions, or (vi) used after two (2) years from the date of purchase.

THIS WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES. THE MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE.

For further information, please call 888-990-3388/ 415-459-6488. Refer to Safety Data Sheet (SDS) for further safety and handling information.

ABOUT THE COMPANY

Firefree Coatings, Inc. is the leading developer of high-quality fire retardant and fire-resistant intumescent coatings that will help reduce the spread of fire, minimize smoke and toxic gases that would occur during a fire, thus giving occupants extra time to evacuate a building safely and limiting destruction of property. Our products are tested at third-party accredited International Accreditation Service (IAS) testing laboratories.

Firefree Coatings is deeply committed to human safety and environmental issues and is strongly positioned to meet the increasing demand for fire safety for commercial, governmental, residential, and other markets. Firefree Coatings is a member of NFPA, ICC and ASTM E-05 Committee.

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APPENDIX A

ASTM E84 10-minute specification

Firefree Class A (“FfA”) meets the 10 minute protection in accordance with ASTM E-84 Surface Burning Characteristics. See below for test results and required thickness. This standard shows a product’s ability to reduce the spread of flame and smoke in the event of a fire. Some of FfA’s applications under this standard include structural wood framing, plywood, wood sheathing.

TESTING RESULTS

ASTM E-84, 10 minutes flame spread

DFT/WFT Application	Rating	FSI/SDI Results*	Substrate	Coverage Rate per gallon
6 mils dry (9 mils wet)	Class A	FSI-20 SDI-90	All wood / Combustible surfaces	178 ft ²
10mils dry (15mils wet)	Class A	FSI-5 SDI-90	All wood / Combustible surfaces	106.5 ft ²

*Indexes : FSI (Flame Spread Index) SDI (Smoke developed Index)



APPENDIX B

ASTM E84 Extended 30 minutes Specification

Firefree Class A (“FfA”) meets the extended 30-minute protection in accordance with ASTM E-84 Surface Burning Characteristics (Extended E-84, ASTM E2768) for interior applications. See below for test results and required thickness. FfA can be used in building construction to comply for use in Type I and II (non-combustible) wood application. It can also be use in areas such as air (return) plenum, mechanical rooms / electrical room; it can further be used in place of noncombustible materials in exterior walls of Type III and IV buildings, and in roof sheathing structures and on exterior wall assemblies, as a component value, when a rating is required.

Additional benefits of FFA:

- Contain the fire to the room of origin
- Insulates/protects the coated surface
- Limits charring on the surface
- Reduces damage to the wood, thereby saving the integrity of the wood.

TESTING RESULTS

ASTM E 84, Extended 30 minute duration test

DFT/WFT Application	Rating	FSI/SDI Results*	Substrates	Coverage rate per gallon
8 mils dry (12 mils wet)	Class A Extended 30min	FSI-0 SDI-45**	Lumber, Timber, Douglas Fir, Red Oak, Plywood Yellow pine T&G	133.5 ft ²
20 mils dry (30 mils wet)	Class A Extended 30min	FSI-0 SDI-0**	LVLs OSB	53ft ²

* Indexes: FSI (Flame Spread Index) SDI (Smoke developed Index)

** Meets the smoke index rating of ≤50 for plenum spaces

Based on the results obtained from the 30-Minute Extended test, Firefree Class A showed a minimal char damage, proving FfA’s ability to help maintaining the structural integrity of the wood materials during a fire. Please refer to the fire test data for more information.

For specifications on use of FfA as part of the Firefree Wildfire System, see Appendix C, Wildfire (WUI) specifications.



APPENDIX C
Wildfire (WUI) Specifications

The Firefree Wildfire System recently received listing reports ESL-1205 and ESL-1206 from ICC Evaluation Service (ICC-ES), for both ASTM E2768-11 for ignition resistance (ASTM E84 30 Minutes Extended) and ASTM D2898-10 for weatherization, confirming that the our premier fire retardant system complies with the 2018 International Wildland Urban Interface Code prescribed under Section 503 Ignition Resistant Materials.

SPECIFICATIONS

Product Name	DFT/WFT Application	Number of Coats	Coverage Rate per gallon
FfA Ignition Resistant	20 mils dry (30 mils wet)	2	53sq ft/gal (1.30M2/L)
FfE Acrylic Topcoat	6 mils dry (12 mils wet)	2	110sq ft/gal (2.70M2/L)

In addition to protecting FfA, FfE will provide both an exterior stain-resistant prime and a durable white, satin finish. If a different color or finish is desired, FfE can top coated with most premium paints to achieve the desired color and finish. Firefree Coatings can tint FfE for orders of (>200 gallons,>800 liters). Please contact Firefree for more information.

There should be no substitution of either FfA or FfE as they have been designed as a system (both weather and fire). Any substitution would void, and warranty express or implied.



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