



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

## APPLICATIONS INSTRUCTIONS

Firefree® Class A (FfA) is a water-based latex coating/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, see *Coverage*, *Wet Film* and *Dry Film Thickness* on page 2).

### SURFACE PREPARATION

Firefree Class A can be used as a primer on most surfaces. All surfaces to be coated must be clean, cured, firm, dry and free of dust, dirt, oil, wax, grease, mildew, loose flaking paint, efflorescence or any other contamination or condition that would adversely affect the performance of the coating. 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. Fill holes and surface irregularities with a suitable patching compound to match surface profile. Spot prime all patched areas with appropriate primer.

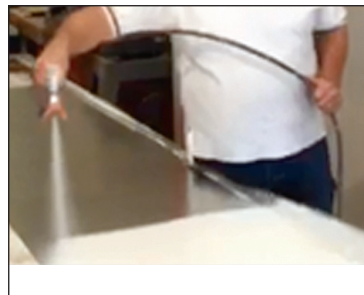
Metal and concrete surfaces must be primed.

For enamel, wall covering or glossy surfaces see following instructions:

Enamel finish coats: Apply one (1) coat of a latex primer or fast dry primer/sealer over FfA before applying a latex enamel or oil base enamel finish coat.

Glossy surfaces: All surfaces should be dulled with sandpaper.

Wall covering application: Apply one (1) coat of wall primer over product before applying wall covering.



### MOISTURE

Measure the moisture content of surfaces using a moisture meter. Do not apply material unless the moisture content is below the following maximum: Wood 17%. Do not commence work until such defects have been corrected.

### TEMPERATURE

**Do not apply FfA if air temperature is below 50°F (10°C).** Air circulation is important. If the coating is applied below 50°F, it may take the coating longer to be fully dried and consequently will interfere with the curing between coats. In addition, it could cause the intumescent coating to sag.

### HUMIDITY

We don't recommend applying the coating if relative humidity exceeds 75%. In humid conditions it may take 4 to 6 hours to dry. **Make sure that each coat of FfA is thoroughly dry to the touch before applying the next coat.** If the paint runs let it tack then use a brush or roller to feather it out. If you need to sand FfA use 100 grit sandpaper.

### SAFETY

Use personal protective clothing, including safety glasses to prevent any particles of paint from entering the eyes. Protective gloves are recommended for prolonged contact exposure. Respiratory protection is not required; however, make sure plenty of ventilation is allowed when sanding or spraying. Protective half mask can be used when painting to prevent breathing paint dust, particles from entering the lungs.

### APPLICATION METHOD

FfA can be applied by airless sprayer, roller or brush. **DO NOT THIN FIREFREE CLASS A.** If you need to strain FfA only use a gauze the size used in fly screen doors.

Spray-Airless: Capable of a pressure range of 780 to 3300 psi. Tip .017 to .023 heavy duty 4" to 12" (10.16 cm to 30.48 cm) fan width recommended.

Reduction: Do not thin. Firefree Class A can be stirred with a paint wood-paddle (this is the similar procedure like paint).

Apply at can consistency. Use of airless sprayer is recommended (use of a dedicated spray line is required)

Roller: Use a 1-1/4" (20-25mm) nap synthetic cover for heavy application. Other rollers may be used depending on desired finish.

Brush: For brush application, a nylon/fully loaded brush should be used. A laying on technique will reduce the brush marking.

## MULTIPLE COATS

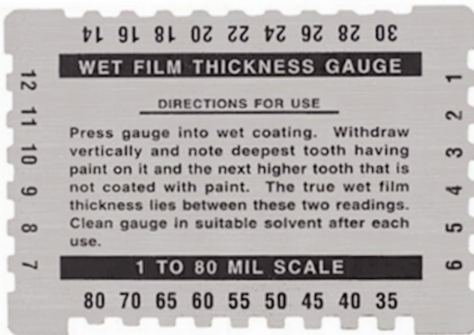
If multiple coats of FfA are required or if you are applying a top coat over FfA. **Make sure that each coat of FfA is thoroughly dry to the touch before applying the next coat.**

## COVERAGE/SPREAD RATE

Any consideration for quantity and waste or overspray is the sole responsibility of the end user. Waste factor will depend on the method of application (brush, roll or spray), job site conditions and other factors and should be based on the applicator's experience.

## WET FILM THICKNESS (WFT)

Always use a wet mil film gauge to measure each wet coat application. Each coat application can be built up to different levels of wet mil thicknesses using multiple passes of coating with an airless spray gun, brush or roller. **To measure the desired film thickness required, during application process, use a wet film thickness gauge to monitor the wet film thickness being applied.**



To use the gauge, insert the teeth into the wet basecoat. The last tooth to be coated indicates the thickness achieved. It is important to ensure that the wet film applied is of sufficient thickness to give the required dry film thickness and coverage. For example, 15 mils wet film thickness will achieve 10 mils dry film thickness. **Note that this is just an example and that the recommended thickness will depend on the project scope and will vary accordingly.** See chart above.

## DRY FILM THICKNESS (DFT)

The dry film thickness to be applied will be recommended by Firefree and will vary upon:

- the assembly make up
- the material/substrate being coated
- the fire rating being required.

**The dry film thickness recommended by Firefree needs to be precisely complied with for adequate performance, thus during application, the wet film thickness should be checked using a wet film thickness gauge.**

## DRYING TIME

Drying time is when the surface is thoroughly dry to the touch. Drying times are dependent upon a number of factors:

*Temperature - Air movement - Humidity - Thickness of product- Method of application.* During the drying process, FfA will shrink due to evaporation of water. **If multiple coats of FfA are required, each coat of FfA must be thoroughly dry to the touch, before the next coat is applied.**

## TOP COAT OVER FfA

FfA comes in a white, satin finish. If a different color or finish is desired, FfA can be top coated with most premium paints to achieve the desired color and finish. For large orders (>200 gallons) FfA can be tinted by Firefree. Please contact Firefree for such custom tinted orders. Check for any reactions between FfA and the top coat if any reaction should occur apply a primer over the FfA prior to the top coat. **Make sure that each coat of FfA is thoroughly dry to the touch before applying the next coat.** For information on compatible top coats please contact Firefree.

### Flame Spread Index Rating:

DFT/WFT Application	FSI/SDI Results*	Coverage rate per gallon
6 mils dry (9 mils wet)	FSI-20 SDI-90	178 ft <sup>2</sup>
10 mils dry (15 mils wet)	FSI-5 SDI-30**	106.5 ft <sup>2</sup>

### ASTM E 84, Extended 30 Minute Duration Test

DFT/WFT Application	FSI/SDI Results*	Coverage rate per gallon
8 mils dry (12 mils wet)	FSI-0 SDI-45**	133.5 ft <sup>2</sup>
20 mils dry (30 mils wet)	FSI-0 SDI-0**	53 ft <sup>2</sup>

\*Indexes: FSI (Flame Spread Index ) SDI (Smoke Developed Index)

\*\* Meets the smoke index  $\leq 50$  for plenum spaces

FfA can be used in an exterior application as part of the Firefree Exterior System. Please contact Firefree for specifications on the Firefree Exterior System.

### **THIRD PARTY INSPECTION**

All surfaces to which FfA have been applied should be inspected by an accredited special inspection agency, or ICC certified professional, or a Firefree Coatings QA/QC qualified inspector to verify that FfA has been properly applied in the required uniform thickness. If an independent testing agency is retained, it should ensure that preparation of substrate is in accordance with manufacturer's recommendations. It should randomly obtain test samples during application to verify that wet/dry film thickness of the intumescent coating/paint complies with Firefree's requirements.

### **PAINTED SURFACES & PRIMERS**

When painting over existing painted surfaces, check for any reactions between FfA coating and the existing paint, If any reaction should occur, apply a primer over the existing paint prior to applying FfA. For information on approved compatible primers, contact Firefree.

### **MAINTENANCE**

Surfaces which have been coated with FfA should be protected from abuse and abrasion. Damaged surfaces should be repaired and FfA should be reapplied to the original specified dry film thickness to maintain specific rating.

### **CLEAN UP**

Wash brushes, rollers, spray guns & pumps and other painting tools in COLD clean water promptly after painting. Clean and remove any dried product. Use all products completely or dispose of properly. Local disposal requirements vary; consult your sanitation department or state-designated agency for more information on disposal options.

### **STORAGE & TEMPERATURE**

FfA cannot be exposed to freezing temperatures. It is important to maintain storage temperatures above the freezing point. FfA should be stored at recommended temperatures between 50° F to 85°F (10°c to 29°c).

Expected shelf life: (2) years from the date of manufacture (DOM). Product must be kept at recommended storage conditions and in original unopened containers.

### **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 fire tested at a third-party accredited International Accreditation Service (IAS) testing laboratories. Firefree Class A is listed by the California State Fire Marshal, listing #2280-2112.

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

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