FIREFREE 88®

Firefree 88®, a premium quality,
water-based, nontoxic, intumescent
fire retardant coating

Sold In Australia By

FIRE DEFENDER

Ph: 1300 347 374

APPLICATION INSTRUCTIONS

Firefree 88® (Ff88) is a water-based fire-retardant paint, and its application is similar to applying a regular water-based paint except for the recommended thickness which needs to be precisely complied with for adequate performance. (See *Wet Film* and *Dry Film Thickness* on page 2).

SURFACE PREPARATION

Firefree 88 can be used 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. Fill holes and surface irregularities with a suitable patching compound to match surface profile.

Glossy, glazed or dense surfaces: Etch or prime with an acrylic primer or fast dry oil-based primer/sealer. Always prime oil-based finish coatings with fast dry primer/sealer. Spot prime all patched areas with appropriate primer.

Metal and concrete: surfaces must be primed.

Enamel finish coats: Apply one (1) coat of a acrylic primer or fast dry primer/sealer over Ff88 before applying a acrylic enamel or oil-based enamel finish coat.

Glossy surfaces: All surfaces should be dulled with sandpaper.

Wall covering (Wallpaper) 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 Ff88 if air temperature is below 10ºC. Air circulation is important. If the coating is applied below 10°C, 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 Ff88 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 Ff88 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. This is a water based coating, also commonly known in America as a latex paint however, **it does not contain any latex**.

APPLICATION METHOD

Ff88 can be applied by airless sprayer, roller or brush. DO NOT THIN FIREFREE 88. If you need to strain Ff88 only use a gauze the size used in fly screen doors.

Spray-Airless: Capable of a pressure range of 54- 228 bar (780 to 3300 psi). Tip .017 to .023 heavy duty 10.16 cm to 30.48 cm (4"to 12") fan width recommended.

Reduction: Do not thin. Firefree 88 can be stirred with a paint wood-paddle (this is the similar procedure like paint). Use of airless sprayer is recommended (use of a dedicated spray line is required)

Roller: Use a 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 Ff88 are required or if you are applying a top coat over Ff88, **make sure that each coat of Ff88 is thoroughly dry to the touch before applying the next coat.**

COVERAGE

The recommended dry film thickness will determine the coverage rate. There is no set coverage rate that applies to all assemblies. The coating is made up of about 67% solids and thus, on average, the ratio of wet thickness to dry thickness is 1.5 to 1. For example; if the application recommended is 254um (10 mils) dry, then 381um (15 mils) wet would need to be applied. At such thickness, the theoretical coverage rate is about 2.6 square metre/litre). **Note that this is just an example and that the recommended thickness (and coverage) will depend on the project scope and will vary accordingly.** 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 Film Thickness Gauge (available from our website firedefender.com.au)** to measure each wet coat application. Each coat application can be built up to different levels of wet um thicknesses using multiple passes of coating with an airless spray gun, brush or roller. To measure the desired wet film thickness required during application process, use a wet film thickness gauge to monitor the coating being applied. To use the gauge, insert the teeth into the wet coating. The last tooth to be coated indicates the thickness achieved. It is important to ensure that the wet film coating applied is of sufficient thickness to give the required dry film thickness and coverage. For example, 381um (15 mils) wet film thickness will achieve 254um (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.

WET FILM THICKNESS GAUGE

DRY FILM THICKNESS (DFT)

The dry film thickness to be applied will be governed by:
- the assembly make up
- the material/substrate being coated
- the Australian standard you need to comply with. Refer to page 4 of this document for more detail.

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. Please refer to page 4 of this document for more detail.

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, FF88 will shrink due to evaporation of water. **If multiple coats of Ff88 are required, each coat of Ff88 must be thoroughly dry to the touch, before the next coat is applied.**

TINTING

If a flat finish is acceptable, Firefree 88 can be tinted using any colour chart without the need for any top coats.

TOP COAT OVER FF88

Ff88 comes in white with a flat finish. If a semi-gloss or gloss finish is desired, Ff88 can be top coated with most premium paints to achieve the desired colour and finish. Check for any reactions between Ff88 and the top coat. If any reaction should occur, apply a primer over the Ff88 prior to the top coat. **Make sure that each coat of Ff88 is thoroughly dry to the touch before applying the next coat.** For information on compatible top coats please contact Fire Defender.

MAINTENANCE

Surfaces which have been coated with Ff88 should be protected from abuse and abrasion. Damaged surfaces should be repaired and Ff88 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

Ff88 cannot be exposed to freezing temperatures. It is important to maintain storage temperatures above the freezing point. Ff88 should be stored at recommended temperatures between 10ºc to 29ºc.
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 a privately-owned company based in California USA. All products have been tested at accredited third party IAS www.iasonline.org fire testing laboratories. Ff88 is approved by FM Approvals www.fmapprovals.com, certified & tested by ICC and classified by the Underwriters Laboratories, and accepted by NY Material and Equipment Acceptance (MEA) Division. Firefree Coatings, Inc. is a member of NFPA, ICC and ASTM.

SOLD IN AUSTRALIA BY

FIRE DEFENDER

Australian supplier of fire retardants for use in commercial, multi-dwelling and domestic buildings. All products have been tested and comply with multiple Australian standards

- AS1530.3
- AS1530.4 including load bearing walls
- FRL ratings

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WET/DRY FILM THICKNESS GUIDE

Use the table below to identify what the wet & dry film thickness levels are for the Australian Standard you need to comply with. Please ensure you use a wet film thickness gauge to measure the thickness of the coatings. Wet film Thickness Gauges are available at www.firedefender.com.au. Incorrect application of Firefree 88 will result in a non-compliant coating leaving the property at risk. It is the responsibility of the applicator to ensure the correct thicknesses are applied to meet the relevant Australian standard. Over application will only improve the protection.

Apply one coat and measure the wet film thickness. This will help you determine how many coats you must apply to achieve the correct total wet film thickness. When spraying, we recommend no more than 2 passes of the gun – let dry then apply the next coat. It is better to apply several coats to achieve the correct thickness. Attempting to apply heavy coats may cause paint sag/runs and a greater drying time between coats.

For example; to achieve at total wet film thickness of 750 microns, 3 coats at 250 microns would be better than attempting a single coat at 750 microns or even 2 coats at 375 microns.

Assessment Number	Certficates	Substrate	Assemply	Dry Film thickness (microns)	Wet Film Thickness (microns)	Square Metre Per Litre	FRL
FCO-1753		110mm concrete/masonry wall	Metal framed wall	600-650	900-975	1.04	120/120/120
FCO-2278		Pressed metal	Metal ceiling tiles	1250	1875	0.51	-/60/60
FCO-2638		90mm x 45mm Douglas Fir	Timber wall	800	1200	0.87	-/60/60
FCO-2307		50mm T&G timber boards	Timber door leaf & frame	750	1125	0.87	-/60/60
FCO-2284		13mm T&G wood/timber	Timber ceiling boards	760	1140	0.87	-/60/60
FCO-1698		13mm non rated plasterboard	Plasterboard framed wall	560-630	840-945	1.04	-/60/60
	1570	90mm x45mm pine	Timber wall	625	938	1.04	-/30/30
	894	13mm plasterboard	Metal stud wall	375	563	1.74	30/30/30
	2096	10mm plasterboard	Timber stud wall	250	375	2.61	19 min
# FNE 7715		11mm Plywood sheet	Heat/smoke release	250	375	2.61	10 min