APPLICATION INSTRUCTIONS

FIRESHIELD PAINT FOR WOOD

1FR / 2FR

INTRODUCTION

These Application Instructions must be read in conjunction with our Technical Data Sheets and Safety Data Sheets for each product. The purpose with these instructions is to further explain and assist in the application of the products.

FIRESHIELD 1FR is a water based, colourless resin varnish. FIRESHIELD 1FR is sensitive to moisture and must therefore always be used in conjunction with clear varnish sealer TOP 1FR, which is offered in flat (gloss 7) or semi-flat (gloss 20). Together FIRESHIELD 1FR and TOP 1FR comprise a technical painting system, not comparable to common varnishing of even surfaces.

Fine formations of cracks can occur in the coating, owing to movement in the surface. This does not impair the fire protection effect. Structures that move because of mechanical stress or that are constantly exposed to a higher humidity than 75%, e.g. doors and windows, are less suitable.

FIRESHIELD 2FR is a water based, white, flat PVA dispersion, which can be pigmented with pigment paste in order to obtain a desired pastel tone. Orders of large quantities of fully coloured FIRESHIELD 2FR can be supplied from the manufacturing plant. FIRESHIELD 2FR should, when used in areas with a constant air humidity higher than 75% or when a washable surface is required, be sealed with an approved varnish or top coat (TOPCOAT W).

The surface that is to be painted with FIRESHIELD 1FR & 2FR must be untreated and free from dust and grease. Water-based stains may be applied prior to treatment of FIRESHIELD 1FR if required for decorative purposes. Certain kinds of fatty wood, e.g. teak, should undergo a test coating of a small area to determine the adhesion.

Application should be avoided at temperatures below +10˚C. The paint should be kept at room temperature to aid easy application. The moisture in the wood must be carefully examined and it must not exceed 10% for undressed wood.

To facilitate application and increase the chances of a satisfactory surface finish, the fire-retardant paint should be stored at room temperature and mixed well before application so that the paint is homogeneous and smooth. Roller, brush or airless spraying can be used for application. Consult Fire Protection Coatings or retailer for recommended type of tools. Tools can be cleaned in water.

Fire Protective Coatings Ltd, exclusive importer of PROTEGA intumescent paints to the Australian and New Zealand markets

FIRE PROTECTION COATINGS LTD, PO Box 19-888, Woolston, Christchurch 8022

E-mail: info@fireshield.co.nz | Tel: 0800 FIRESHIELD / 0800 347 374

fireshield.co.nz

fireshield™
FIRE PROTECTION COATINGS

2.1 GUIDE VALUES FOR VARIOUS APPLICATION METHODS

APPLICATION METHOD	g/m²	MM WET	MM DRY	DRYING TIME[3]	SURFACE FINISH
Brush[1]	300-400	0,2-0,3	0,15-02	4 hours	Remaining brushstrokes
Roller, 18-22 mm nap	400-500	0,3-0,4	0,2-0,3	4 hours	Coarse, high nap structure
Airless 200/15[2]	1000-2000[4]	0,76-1,52	0,5-1,0	8 hours	Very even and smooth
Airless 200/17	1000-2000[4]	0,76-1,52	0,5-1,0	8 hours	Even and smooth
Airless 200/21	1030-2000[4]	0,76-1,52	0,5-1,0	8 hours	Low, soft structure

1. Type of brush
2. High-pressure pump with 200 bar pressure and a nozzle of a diameter of 0.015" (approx. 0.4 mm) spray angle 25-40° depending on the surface of the object.
3. Painting possible with FIRESHIELD paint. Can be painted with topcoat after 48 hours.
4. The specified wet volume assumes a larger spray object and application at room temperature.

NOTE: Never use the same tools for solvent-based paints as for aqueous paints. These items must be cleaned thoroughly and used only for the fire-retardant paint. Any filter in the spray gun must be removed and the line filter in the high-pressure pump must be set to 60 meshes or omitted entirely.

The thickness of the wet film must be checked at regular intervals when applying FIRESHIELD paint. What is known as a measuring cam is used to measure the wet film. Before applying the last coat of fire-retardant paint, it is a good idea to measure the dry film so as to establish how much paint will be needed for the final application in order to achieve the requisite dry film. It is also important to carry out a final inspection of the paint before applying the topcoat. Table 2.2 below shows the paint volume ratio, wet film to dry film, of FIRESHIELD paint for 1FR and 2FR in accordance with our Technical Data Sheets to comply with the necessary Group 1-S rating.

2.2 PAINT VOLUME RATIO – WET FILM TO DRY FILM

PRODUCT	WET PAINT (g/m²)	WET FILM (µm)	DRY FILM (µm)
FIRESHIELD 1FR	300	230	150
FIRESHIELD 2FR	400	305	250

FIRE PROTECTION COATINGS LTD, PO Box 19-888, Woolston, Christchurch 8022
E-mail: info@fireshield.co.nz | Tel: 0800 FIRESHIELD / 0800 347 374
fireshield.co.nz

fireshield™
FIRE PROTECTION COATINGS

TOPCOAT

A topcoat is used to protect the intumescent paint from moisture or environmental impact. It is important for this topcoat to be tested and approved by Fire Protection Coatings Ltd. If you apply an unapproved topcoat, there is a risk of this inhibiting the foaming effect of the intumescent paint. Contact Fire Protection Coatings Ltd or your dealer for information on approved topcoats.

REPAIRS

Damages during transport can be repaired using the same products as those included in the original system. Sand the damaged surfaces and remove the topcoat to at least 5cm away from the damage. Clean the sanded surface to remove grease and dust. Then apply the necessary amount of fire-retardant paint. Fire-retardant filler can be used for minor damage or for smoothing out the area between damaged and undamaged surfaces. Leave the fire-retardant paint to dry for at least 48 hours at room temperature, then sand the transition point between the repair and the undamaged flat surface. Finish off your repair using the topcoat you used previously.

INSPECTION AND MEASUREMENT

The contractor must meticulously measure the wet film thickness of the various coats of paint. These measurements must be recorded, be accessible, and submitted when required to the respective authorities, as well as to Fire Protection Coatings Ltd for quality assurance purposes.

BUILDING INSPECTION

A building inspection has to take place in order to verify that the designated fire protection class has been achieved. This building inspection will be carried out by the contractor and include a specification of the calculation of the necessary amount of paint and the fire-retardant system selected.

CERTIFICATE

The contractor should also issue a certificate which confirms that fire¬proofing has been carried out and that it meets the relevant fire protection require¬ments. This certificate must also include a list of the documents which verify the building inspection.

TEST AREAS

Circular areas of a diameter of 30 mm are used as test areas. Five measurements must be carried out within each test area, and the average will constitute the measurement for the test area.

The approved thickness for the size of the surface required is achieved when the test areas do not fall below the prescribed coat thickness and the results from the individual test area do not fall below 85% of the prescribed coat thickness. If measurements show that the requirements are not met in any parts of an object, the number of measurements should be increased for this part.

There must be a sufficient number of test areas, and these must be distributed over the object in such a manner as to demonstrate that the measurements are representative of the structure (see figure 3.1 below). When distributing these, you should pay particular attention to the parts of the structure where the coat thickness is expected to be thinnest. It is generally true that the larger or more complicated the structure is, the more test areas are required.

3.1 NUMBER OF TEST AREAS REQUIRED

REQUIRED LAW -FACE SIZE m^2	MINIMUM NUMBER OF TEST AREAS
-1	3
1-3	9
3-10	15
10-30	21
30-100	27
100 -	27 for the first $100m^2$ + 9 for each additional sub-surface $<100m^2$

Fire Protective Coatings Ltd, exclusive importer of PROTEGA intumescent paints to the Australian and New Zealand markets

FIRE PROTECTION COATINGS LTD, PO Box 19-888, Woolston, Christchurch 8022
E-mail: info@fireshield.co.nz | Tel: 0800 FIRESHIELD / 0800 347 374
fireshield.co.nz