

# FirePRO\*

## A fire retardant for industrial vacuum pressure treatment

### DESCRIPTION

FirePRO treated wood products have the following properties:

- Fire Performance
- Low Smoke Development Values
- Strength Durability
- Low Hygroscopicity
- Resistant to fastener corrosion

FirePRO is a proprietary blend of fire retardants which is applied as a water-based solution by vacuum pressure impregnation. FirePRO treated wood products are designed to greatly enhance safety when fire protection is necessary. In correct applications, FirePRO treated wood and plywood provide excellent flame spread reduction as well as decreased smoke development.

FirePRO treated products are intended for use in areas not exposed to weather such as roof systems, studs and flooring joist and other weather protected applications not in direct contact with the ground.

Various plywood and solid timber species treated with FirePRO have been tested by an accredited independent test facility in accordance with the European Classification BS EN 13501-1:2002 Fire classification of construction products and building elements.

With correct application, two levels of fire protection performance can be achieved depending on loadings

BS EN 13501-1:2002 Classification	Equivalent to BS476 Classification
Class B	Class 0
Class C	Class 1

### FirePRO Dry Powder

FirePRO is supplied as a dry powder which must be dissolved in water to create a treating solution. This solution is applied to timber using vacuum pressure impregnation.

#### Properties

Colour: White  
Density: Powder  
Solubility: Soluble in water  
Odour: Odourless  
pH: N/A

FirePRO dry powder is supplied in 900Kg supersacks. It is a uniquely layered product that requires the use of full bag increments when preparing treating solutions.

### Selection of Timber

Any species of wood and various types of wood products may be treated with FirePRO, however only those tested can be classified as approved to BS EN 13501.

Wood products should be new, clean, unpainted and dry (see operations manual for recommended maximum moisture content).

FirePRO treated timber should not be machined or milled, therefore every attempt should be made to perform these operations before treatment.

There are no limitations on the milling or cutting of FirePRO treated plywood.

### FirePRO Treating Solution

FirePRO dry powder is diluted with water to obtain a treating solution with a concentration between 4% and 15% according to the treating specification.

Working storage and mix tanks of FirePRO will need temperature management to avoid formation of crystals.

The solubility of the components is related to temperature and concentration of the solution and any crystals that occur can easily be re-dissolved with slight heating and agitation. Water pre-heated to 49°C will dissolve the materials most effectively. Lower temperatures will result in additional time being required to dissolve the materials.

FirePRO solution temperature must never exceed 52°C.

The batch size must be determined according to full supersack increments. Addition of one supersack of FirePRO dry powder will increase the water volume by approx. 800 Litre and will result in a temperature drop of 4 - 6°C. Dry powder should be added to water at a uniform rate and while being vigorously stirred.

FirePRO treating solutions are initially clear and odourless but may appear to turn slightly yellow to reddish brown after repeated cycles. The colour of used solutions comes from soluble resins and extractives in the wood, and will vary with the species being treated.

### Properties of the Treating Solution

Colour: Colourless  
Specific Gravity: 1.02 – 1.07  
Miscibility: Miscible  
Odour: Odourless  
pH: 8.6 (5% solution) to 8.3 (15% solution)

## Application

FirePRO treating solution should be applied using a vacuum pressure impregnation plant operated in accordance with the Operations Manual.

## Drying of treated timber

The optimum properties of FirePRO fire retardant treated wood products, such as low hygroscopicity, low corrosion, non-blooming, and resistance to thermal degradation, are dependent upon proper drying after treatment.

It is recommended that all FirePRO treated wood products are kiln dried in accordance with the kiln manufacturer's instructions.

## Packaging and storage

The dry powder is supplied in supersacks which are delivered on wooden pallets with straps connected to the four corners for easy handling. The pallets may be moved via forklift, taking care to ensure that the sacks are not punctured. When in position the sacks may be hoisted using the corner straps revealing a spout on the bottom which can be untied when in position over the mixing tank.

FirePRO supersacks should be stored inside and be kept dry.

To maintain package integrity and to minimize caking of the product, a stock rotation system should be operated. Sealed supersacks have a shelf life in excess of one year.

## Handling and Safety Precautions

In the UK, the Control of Substances Hazardous to Health Regulations 2002 (COSHH) may apply to the use of this product at work. Engineering control of operator exposure must be used where reasonably practicable in addition to the items of personal protective equipment listed below. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

### Dry Powder

The handling and safety precautions shown on the FirePRO product label must be understood and followed.

May damage fertility. May damage the unborn child.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Use personal protective equipment as required.

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

IF exposed or if you feel unwell:

Get immediate medical advice/attention.

The bags and dry powder must be disposed of as hazardous waste.

Restricted to professional users.

See the FirePRO Safety Data Sheet for further information.

## Treating Solution

The working solution is not classified as hazardous, however the following is recommended:

Wear suitable gloves and eye/face protection.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

## FirePRO Treated Wood

### Description

FirePRO fire retardant treated wood and plywood are intended for interior use or weather protected exterior applications only. Once the product has been kiln dried after treatment, exposure to rain, snow, or mud must be avoided.

See the User's Guide to FirePRO treated wood products wood for additional and important information.

### ADDITIONAL INFORMATION

FirePRO is approved as a wood preservative by the UK Health and Safety Executive under The Control of Pesticides Regulations 1986 (as amended) for use as directed. **HSE No. 8967**. The approval holder and marketing company in the UK is Protim Solignum Limited.

FirePRO contains boric acid and disodium tetraborate.

Use wood preservatives safely. Always read the label and product information before use.

FirePRO treated wood products are produced by independently owned and operated wood processing facilities.

Koppers provides a range of products and technologies for the treatment, protection and enhancement of timber. Information and advice is available on all aspects of our products from the Technical Services Department.

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