



# Fire Retardant Treatments

## Osmose FirePRO Standards and Specification Information

Osmose FirePRO fire retardant treated wood products (FRTW) have been tested to BS EN 13501-1:2002 Fire classification of construction products and building elements.

## TREATMENTS

These tests are commonly referred to as 'reaction to fire tests'. Reaction to fire tests are commonly called up in regulations in both the building and transport sectors. The classifications of flammability are A1, A2, B, C, D, E and F.

Currently, Osmose hold approvals for the following substrates treated with Osmose FirePRO -

- Softwood plywood
- Birch Plywood
- Solid softwood
- Far Eastern Plywood
- LVL
- Softwood cladding (see note on external use\*)

Please check with Osmose for specific sizes tested and approval classification achieved. Osmose FirePRO treated wood can also be CE marked.

Further materials are undergoing testing. Please ask for an updated list.

\*Osmose FirePRO treated wood may be used in above ground external situations where it is effectively protected from direct rainfall and weathering. External grade wood coatings may give adequate long term protection, in combination with a programme of planned maintenance. Check with a coating manufacturer before use.

Osmose FirePRO HR treatment (humidity resistant) can be used where DI treatment (dry internal) is specified. The HR treatment will have the added benefit of humidity resistance and a cleaner appearance.

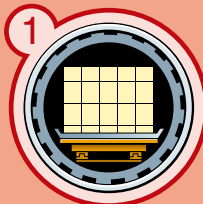
This table gives an overview of the classifications:

Classification: (European)	BS476 UK transpositions
A1	Non combustible
A2	Very limited combustibility
B	Class 0
C	Class 1
D	Class 3

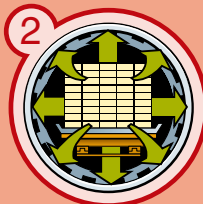


### Osmose FirePRO Treatment Process

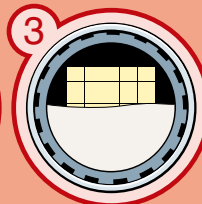
Osmose FirePRO treating solution is applied to timber products under rigidly controlled conditions using a vacuum pressure impregnation plant. Osmose FirePRO FRTW products must be Air or Kiln dried after treatment to ensure that the required properties of Osmose FirePRO are obtained.



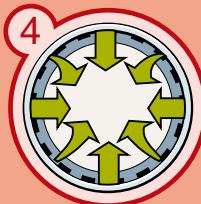
1 The timber is transferred into the treatment vessel.



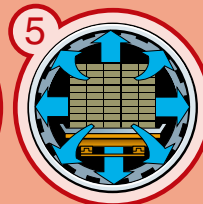
2 A vacuum pulls the air out of the vessel.



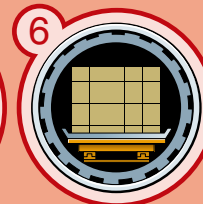
3 Osmose FirePRO solution fills the vessel.



4 The vessel is pressurised forcing the solution into the timber.



5 The solution is removed and final vacuum is applied removing excess.



6 The timber has now been treated with Osmose FirePRO solution.



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# TREATMENTS

## PTG Specification Codes

Osmose FirePRO Treatments to Euro Class C WPA Type HR\*

Treatment Codes	Thickness (mm)	Typical Component	Treatment Centre
5PFC 1	3.6	Plywood	●
5PFC 2	5.6	Plywood	●
5PFC 3	9	Plywood	●
5PFC 4	12	Plywood	●
5PFC 5	15	Plywood	●
5PFC 6	18	Plywood	●
5PFC 7	21	Plywood	●
5PFC 8	24	Plywood	●
5PFC 9	Any	Timber	●

Osmose FirePRO Treatments to Euro Class B WPA Type HR\*

Treatment Codes	Thickness (mm)	Typical Component	Treatment Centre
5PFB 1	3.6	Plywood	●
5PFB 2	5.6	Plywood	●
5PFB 3	9	Plywood	●
5PFB 4	12	Plywood	●
5PFB 5	15	Plywood	●
5PFB 6	18	Plywood	●
5PFB 7	21	Plywood	●
5PFB 8	24	Plywood	●
5PFB 9	Any	Timber	●

\* See classification in WPA Industrial Fire Retardant Treatment of Solid Timber and Panel Products 2006 manual.

### Model Specification Clauses:

#### For Temporary and Permanent End Uses:

The material as detailed [*insert quantity, material, species*] to be treated to [*Euroclass B or Euroclass C*] using a WPA Type HR humidity resistant process to the specification code [*see above*].

Note: A supplement to Building Regulations Approved Document B has been issued to include Euroclasses for fire performance alongside the old British classifications. The UK transpositions are:  
Euroclass C --- UK Class I  
Euroclass B --- UK Class 0

Osmose FirePRO is suitable for treatment to WPA Fire Retardant Commodity Specifications FR1, FR2, FR3 and FR4. Pre-treatment moisture content of timber commodities must always be below 28% unless otherwise specified. Also other pre-treatment requirements include: Timber commodities must be free of materials that may affect the fire performance of Osmose FirePro treated timber e.g. Sawdust, bark, paint etc.



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#### Osmose FirePRO Fire Retardant Treated Wood Products

Osmose FirePRO\* fire retardant treated wood (FRTW) products are pressure impregnated with an Osmose FirePRO Interior high temperature fire retardant chemical formulation based on proprietary Osmose technology. Historically, fire retardants have depended upon phosphorus based compounds to achieve fire performance properties. While the unique Osmose FirePRO chemistry contains no phosphates, independent testing performed in accordance with industry standards has shown Osmose FirePRO FRTW products exhibit fire performance properties without compromising other critical engineering properties such as strength, durability, corrosivity, and hygroscopicity. Osmose FirePRO FRTW products exhibited strength durability, low hygroscopicity, and resistance to fastener corrosion.

#### Application

Osmose FirePRO FRTW products are permitted for use in interior, above ground applications where the adopted building regulations permit the use of wood products or fire retardant wood products such as: roof systems, cladding, sheathing, joists etc. It can also be used in other interior applications such as exhibition stands. The specifier and/or end user is responsible for reviewing the test data on Osmose FirePRO FRTW products to determine if they are acceptable for the intended end use.

#### Working Properties

After treatment, exposure to rain, snow, or mud must be avoided.

Osmose FirePRO FRTW products must be stored indoors or under sheets that offer protection from the elements.

Osmose FirePRO FRTW can be cross cut and drilled, but not planed or rip sawn. There are no limitations on the milling or cutting of Osmose FirePRO treated plywood.

Under normal temperature and humidity conditions, most latex and oil-based paints and stains can be used with Osmose FirePRO FRTW products.

It should be noted that the use of some paints may affect the fire properties of the end product and care must be taken to select an appropriate paint. Always follow the coating manufacturer's instructions.

Use fixings and other hardware which are in compliance with building regulations for the intended use.

Use fixings, hardware or any metal products as recommended by their manufacturer.



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#### IMPORTANT INFORMATION

##### Fire Retardant Treated Wood Products

- Wear a dust mask and goggles when cutting or sanding wood.
- Wear gloves when working with wood.
- All sawdust and construction debris should be cleaned up and disposed of after construction.
- Wash work clothes separately from other household clothing before re-use.
- FRTW products should not be used where they may come into direct contact or indirect contact with drinking water, except for uses involving incidental contact.
- Do not use FRTW products under circumstances where they may become a component of food, animal feed, or beehives.
- Do not use FRTW products for mulch.
- Only FRTW products that are visibly clean and free of surface residue should be used.
- If wood products are wet during construction, they should be replaced.
- Do not burn treated wood. See Disposal Recommendations.
- Disposal Recommendations: FRTW products which are no longer useable (e.g. cut ends, broken boards, timber taken out of service) should not be burned. They may be disposed of in landfills, or burned in commercial or industrial incinerators or boilers, in accordance with National and local regulations.
- It should be noted that the use of some paints may affect the fire properties of the end products and care must be taken to select an appropriate paint. Always follow the coating manufacturer's instructions.
- Use fixings and other hardware which are in compliance with building regulations for the intended use.
- Use fixings, hardware or any metal products as recommended by their manufacturer.
- Mould growth can and does occur on the surface of many products, including untreated and treated wood, during prolonged surface exposure to excessive moisture conditions. To remove mould from the treated wood surface, wood should be allowed to dry. Typically, mild soap and water can be used to remove remaining surface mould.



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All FRTW products are treated by independently owned facilities

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