



Intelligent Wood Systems

Treated Timber - Customer Information

Issued November 2016

IWS FR-Build Treated Timber

Flame Retardant
Water Repellent

All in one



IWS FR-Build Treated Timber

Main Features

The **IWS FR-Build** treated timber utilises a water-based blend of synergistic flame retardant ingredients which was developed with only the timber building fabric in mind.

IWS FR-Build treated timber:

- Utilises a groundbreaking all in one treatment:
 - Flame Retardant (FR)
 - Water Repellent (WR)
- The treatment was designed for structural timbers and formulated to provide robust resistance to site construction fires
- Is an audited, factory produced and controlled treatment
- Does not contain halides (chlorides or bromides), metals, phosphates or volatile organic compounds
- Is pH neutral and non-corrosive to treatment plant components
- Does not need to be kiln dried after treatment
- Is non-corrosive to metal fixing and fastenings
- Provides impregnation on all faces
- Designed for during construction, lasts the lifetime of the building for inherent added robustness
- STA FR Build approved product



Applications

Suitable for timber studs, rails, joists, plywood and OSB components used in timber frame buildings.

Appearance

IWS FR-Build treated timber has an indicative purple hue.



IWS-FR Treated Timber

1. Identification of Product and Supplier:

Product Name: IWS FR-Build treated timber

Scotland Supplier: Intelligent Wood Systems c/o Glenalmond Timber, Station Road, Methven, PH1 3QF, Tel 01738 840258

2. Composition

IWS FR-Build treated timber contains boron. It does not contain halogenated products, formaldehyde, heavy metal, phosphates or VOC's.

Leaching tests have shown suitability of the product for site weather conditions.

3. Hazards identification

IWS-FR treated timber can be classified as non-hazardous. However, this will depend on the application as with all preservative treatments.

4. Handling and Storage

As with all chemicals, operators should apply common sense on handling. When working with timber suitable PPE equipment should be worn.

After handling or working with treated timber, all exposed skin should be washed before commencing other activities such as eating, drinking or going to the toilet.

All lengths of timber over 6m long should be handled with a forklift or side loader equipped with a suitable four fork spreader beam attachment to prevent any undue strain on the timbers. All timber must be stored on bearers clear from the ground and suitably protected from the elements using .

Building components stored on a building site should be clear of the ground, stacked and protected so that they are not distorted or saturated by rainwater.

5. Exposed Timber From Cuts or Handling Errors

Care should be taken when handling the timber particularly with forklifts that there is no damage to the treated timber by careless forklift use, exposing significant untreated timber. As a general rule no more than 5% of the surface area should be exposed, any more than this you should seek expert advice.

Joist cut ends do not require re-treatment.

Care should be taken when using long lengths and manual handling risk assessment undertaken.

6. Responsibility

Since the users working conditions are not known by us, the information supplied is based upon our current knowledge of general working procedures. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given above must be regarded as a description of the safety requirements relating to the product.

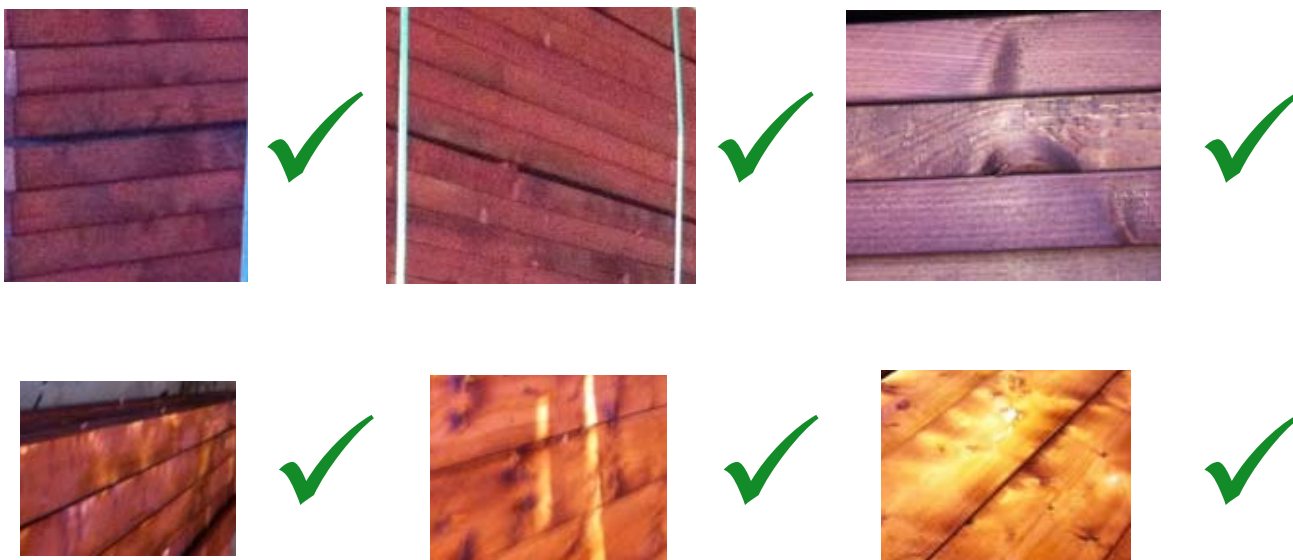
7. Product Finishes

With any water based chemical treatment there is a potential for raised surface grain to the faces. The occurrence of raised grain is not common in the IWS FR-Build product.

Colour variations may occur due to the natural variability of the relative proportions of heartwood and sapwood and darkening or lightening of some surfaces may occur.

We have tested timber treated with the IWS treatments and proven that the protection is consistently present across all surfaces of the timber even if the colour is patchy. This is because colours bind differently to the outer timbers in the treatment packs.

Due to the nature of the treatment process and timber being a natural material, there can be a wide variation of colouring on the product. The following have all been successfully treated with IWS FR-Build:



“The dye is attracted to the timber more than the FR element and as a consequence you may see patchiness throughout the interior of the packs whilst retaining correct FR uptakes as the active chemicals are all clear”

Dr Tony Kelly, Lonza Wood Protection



9. Post-Treatment Machining

IWS FR-Build treated timber does not require to be re-applied.

10. Post-Treatment Storage and On-Site Protection

When received treated timber should be free from surface liquid. Drying will be accelerated when stored in a well ventilated, weather protected area.

Impregnation of timber imparts a low moisture uptake. This may cause slight swelling across the end grain surfaces. If this occurs treated material should be stored, open stacked, to provide sufficient ventilation for moisture to evaporate. The timber will re-dry to its original dimensions when placed in the same temperature and humidity conditions in which it was machined and profiled prior to treatment.

Flat items such as sheets of plywood should be separated and either stickered horizontally or stacked more or less vertically, with air space between them to promote drying.

11. Gluing

Pre-Treatment

Assemblies which are to be treated may first be glued using a suitable waterproof adhesive. Consult the glue manufacturer on the suitability and use of their particular product and follow the directions of the appropriate regional standards.

Melamine urea formaldehyde, emulsion polymer isocyanate, melamine formaldehyde and phenol resorcinol formaldehyde types are generally used.

Polyvinyl acetate, Casein, or urea formaldehyde types are **NOT** recommended.

It is important that the glue lines should be fully cured as required by the glue manufacturer, usually several days before the assembly is sent for treatment.

Where enclosed cavities are involved, access holes must be drilled to permit the entry and exit of preservative solutions.

Structural grade plywood to EN standards may be treated provided it is of an appropriate grade.

IWS-FR treated timber which is to be bonded prior to treatment should be glued using a suitable waterproof adhesive e.g. Resorcinol Formaldehyde, Phenol Formaldehyde, Kascanite and exterior PVA glue. The glue manufacturer's recommendations should be followed at all times and sufficient time allowed for glues to cure properly before treatment.

12. Metal Fixings & Fittings

i) IWS treatments have no corrosive effect on mild steel fittings and fixtures.

IWS-FR can be used in roofs and on truss rafters in extreme conditions. Should products on-site be mishandled and allowed to get wet then normal practise (as below) for treatments should be followed.

The timber must be at a moisture content below 20% before mild steel fixings and fittings are applied and must remain below 20% in service.

ii) Where higher moisture contents (above 20%) are expected in service, galvanised steel, stainless steel, copper, aluminium or brass fixings and fittings should be used. At least 24 hours should elapse after treatment before these fixings are applied.

iii) For trussed rafter manufacture, the provisions of BS 5268: Part 3 should be followed. Trussed rafters should be stored on-site and out of ground contact. Rafters should be protected in accordance with Section 7 of BS 5268, if the storage time exceeds two weeks.

13. Floor Coverings And Plasterboard/Absorbent Composite Board Materials

Where IWS treated timber is to be in contact with floor coverings, plasterboard or other absorbent material, care should be taken to ensure a that the surface moisture content of the product is less than 16% in accordance with standard building practice prior to fixing.

14. Typical Applications

If in doubt about any particular area of application or compliance with other relevant standards or specifications, it is advisable to consult with IWS on 01738 840258.

The treatment process parameters are varied to match the end use of the timber and its species. It is therefore extremely important that you make sure that the timber has been treated to the correct specification. This list, which is not totally exhaustive, gives an indication of the range of timbers and timber based products which can be treated:

- Wall frames
- Sole plates
- Beams and rims
- Joists
- Sub-floors
- Roof timbers
- Battens

15. Misuse

DO NOT USE IWS-FR IN THE FOLLOWING SITUATIONS:

1. Below dpc and/or in ground contact.
2. In termite areas below the termite shield.
3. In direct contact with foodstuffs.
4. In an exterior situation without a protective coating.

Service Treatment Checklist

When you are having your product service treated the following criteria must be met:

Timber Components (studwork/joists etc)	
Required Specification	Conforms
Must be Spruce	Yes / No
Max timber length Perth = 21m	Yes / No
Tank pack size max 1.1m x 1.1m Perth	Yes / No
m/c max average 20% with no reading over 24% as this is the criteria permitted under current structural standard	Yes / No
All inner or outer bark removed	Yes / No
Free from dirt, sawdust, surface coatings, surface water, plastic wrapping, ice and snow	Yes / No
Do not excessively tighten banding	Yes / No
Used treated stickers for timber packs	Yes / No
Do not treat timber wrapped in polythene	Yes / No
Do not treat frozen timber	Yes / No
Do not fix metal fittings prior to treatment	Yes / No
Plywood	
Required Specification	Conforms
Must be Spruce Ply	Yes / No
Tank pack size max 1.1m x 1.1m Perth	Yes / No
Must sticker plywood (where appropriate) as follows: Sticker sections are min 8mm - max 12mm thick and min 25mm - max 38mm wide all must be same dimensions Stickers must be equidistantly spaced and in line with outer two stickers 25mm in from end	Yes / No

Production Office:
IWS c/o Glenalmond
Station Road
Methven
Perthshire
PH1 3QF
T: 01738 840258

Admin/Accounts Office:
IWS c/o Glenalmond
Shore Road
Harbour
Perth
PH2 8BD
T: 01738 587988

sales@intelligentwoodsystems.com

www.intelligentwoodsystems.com

Lonza

Lonza Wood Protection

