# Installation, Treatment and Care

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#### Care of Timber Doors on Site

Internal and external doors and doorsets may be supplied `in the white', with a primer or stain base coat applied or as fully finished components. Each type needs careful handling and protection although the actual requirements vary. After delivery it is vital that doors are correctly treated to ensure that the moisture content is appropriate for the situation and that they are not physically damaged in unloading, storage and installation. Good practice avoids damage, maintains quality and saves money.

#### **Delivery and Storage**

Check doors at the time of delivery. All components should be checked at the time of delivery to ensure that they are in accordance with the order schedule, the delivery is complete and that the components, including any protective packaging, are not damaged.

Doors manufactured in accordance with BS1186: Parts 1 and 2: 'Quality of timber and workmanship in joinery' are made from timber with a moisture content between 10% and 19% depending upon their type and location. For long term performance of the door and finish, it is important that the appropriate moisture content is maintained during storage on site and during the construction process.

Wherever possible the sequence of deliveries should be coordinated to site requirements in order that doors are not kept on site unfixed for longer than necessary.

#### **Handle Doors Carefully**

Doors and doorsets should be handled carefully to avoid physical damage (do not lift by glazing bars) and to keep them clean. When door leaves are protected by shrinkwrapping or other packaging this should be kept in place as long as possible.

- Doors delivered in the white should be sealed or knotted and primed on all faces and edges immediately after delivery.
- Never hang a door before applying a protective coating.
- Store doors under cover in a dry ventilated building.
- Doors should be stored flat (never on edge or on end) on a level surface and kept clear of the floor on at least three level bearers. The bearers should be longer than the width of the doors.
- Doors should be protected from dirt and damage but without restricting air circulation.
- Natural finish doors should be stacked so that they are not partly exposed to daylight and opaque wrappings must not be torn.
- Exposure to ultra violet light can cause fading or discolouration of timber veneers.
- Whenever possible store doors and doorsets in the sequence they will be needed with codes or identifying marks visible to avoid double handling. Avoid dragging them across each other in the stack.
- Doors which have projecting sills or have the hardware fitted must have spacers between them in the stack to avoid damage
- Protect doors during site operations.
- Ensure that the moisture content of the wood is kept close to the level at which it was when the door was manufactured.
- Internal doors must be conditioned to the service conditions before fixing. They must be protected from abnormal heat, extreme dryness, humid conditions or sudden changes of temperature or humidity.
- Doors should not be stored or fitted in the building until the wet trades are finished and dried out.
- Treat doors like a piece of furniture.
- Factory finished door frames or door linings should ideally be fitted into preformed openings and not built in to masonry walls.
- Prefinished doors should retain their protective packaging until the latest possible time, ideally until after internal decorations have been completed.
- If it is necessary to separate the doors from doorsets, each door and frame should be given an identification mark so that the correct door is returned to the frame.

#### Installation

Doors should be fitted square, true and plumb and fixed in accordance with the manufacturer's instructions or the project specification.

Three hinges should be fitted to all external doors, doors weighing more than 20 kilograms and internal doors where large differences of temperature or humidity on opposing faces can be expected (e.g. bathrooms and airing cupboards).

Mortices for locks must not be cut through joints in the door framing as this will impair performance of the rail joint.

If any part of an external door or door frame is cut or drilled, swab the newly exposed timber with suitable preservative material and recoat with primer or stain.

Fire resisting doors should not be altered on site. Cutting of glazing apertures on site must not be carried out without the approval of the door manufacturer and the local Fire Officer, Ideally, the door frame should be set well back from the outer face of the wall or else be protected by a canopy. If not, the head of the frame should be provided with a projecting head drip. External doors opening outwards should be particularly well protected.

Glazed panels in doors must satisfy the requirements in respect of safety glass. Bead glazing must be correctly fitted using compound or glazing tapes to both sides of the glass.

# Finishing

External doors and frames with factory applied primer or base coat stain should have at least one of the finishing coats applied as soon as possible after delivery or installation. The back of external frames should be coated before installation.

#### Use good glazing practice

Glazing rebates and backs of beads should be sealed with an appropriate sealant.

Ensure surfaces and edges are in good condition before applying finishing coats. If the primer or base coat stain has deteriorated it should be recoated before further finishing

Finishing of external doors and frames should be carried out in dry weather using good exterior quality materials in accordance with the manufacturer's instructions.

On external doors, the finish should be an exterior quality paint or a 'high build' stain. ('Low build' types of stain should not be used on external doors.)

It should be noted that the use of dark coloured paint or stain finishes on external doors, particularly if located on the south or south west elevations of buildings, will result in high surface temperatures on the door and can increase the risk of distortion and of resin exudation through the finish.

## Ensure all Surfaces and Edges are Finished

It is important that all surfaces of doors are painted. For external doors or other doors subject to wetting or take up of moisture it is especially important that the full finishing system is applied to the top and bottom edges of the door leaf. The bottom edge should be coated before fitting the door.

Factory finished doors should be checked and any small areas made good in accordance with the manufacturer's recommendations. The door manufacturer may disclaim responsibility for any defect or failure that may subsequently occur which is attributable to non-compliance either wholly or in part with the advice given in this copy.

In addition to the recommendations of the British Wood Working Federation given above, the following points regarding achieving a long lasting finish to doors should be noted.

# **Getting the Best Finish**

The secret to a smooth finish is a series of sanding stages (either work by hand or use an electric sander). Always work with the grain and progressively change to a finer sandpaper. Make sure that sharp edges are slightly rounded, especially on doors designed to endure weather conditions, as these areas are where breakdown of any coating usually begins.

Note: Recommendations from the manufacturers of wood stain and preservatives differ, for example some recommend a different base coat preservative. It is essential that the manufacturers instructions are followed closely. Below is a guide to ensuring the finished door is fully protected and sealed. However, our recommended number of treatments is the minimum required, irrespective of manufacturers recommendations. We do not recommend using varnish on Exterior Doors.

	Recommended number of coats of preservative	Recommended number of coats of wood stain
Exterior	2	3
Interior	1	3

#### Preparing and Cleaning

Ensure all carpentry enabling the door to be fitted is completed, remove any hinges or door furniture. Remove all dust and grease, by wiping all surfaces with either white spirit or cellulose thinner, (check the recommendations from the manufacturer of your preservative, stain or wood stain). A vacuum cleaner with a small brush or nozzle will help you get into all areas. Remember to wipe down again after rubbing down.

#### **Preserving Untreated surfaces**

Use TWO coats of a clear preservative for all exterior woodwork, one coat for any interior woodwork that requires preserving. Follow the manufacturers recommendations regarding application closely.

#### **Applying Wood Stains**

Most wood stain is toxic and or flammable - Follow the manufacturers instructions closely and consider the ventilation aspects of the location where you will be working. Choose the type of product you wish to use carefully. Consider the product you will be applying the wood stain to. Do not use an interior wood stain on an exterior door.

Always treat the end grain and ensure that a good treatment is applied to all surfaces. Pay close attention to top and bottom edges, cut areas for lock and hinge housings and holes for letter plates

#### Coat All Areas

Always apply the correct number of coats of wood stain at the right time intervals as recommended by the manufacturers of the wood stain. Always sand the door lightly between applying coats, and remember to re-clean all surfaces.

#### Staining or Dyeing the Surface

A number of differing treatments are available to change the colour of the wood. If possible, save any off cuts to test the colour on, if this is not possible, always test a less conspicuous small area before applying the full covering. Follow the manufacturer's recommendations regarding application and ensure that the requisite amount of recommended coats is applied. Remember the final colour is dependent on the type of wood being treated.

#### Maintaining the Door

Inspect the condition of all external joinery, especially the decorative and glazing systems, at maximum intervals of one year and carry out remedial work as required. Care should be taken to also follow the recommendations on maintainance inspection from the manufacturers of the stain or paint. Always follow the inspection regime that has the shortest interval of inspection.

#### Overall

The golden rules in achieving a fine long-lasting surface for your door, are, ensure you have enough time to do the job; consider where you will be working, the weather conditions (if applicable) and be fully aware of the manufacturers instructions before starting work.

### ESSENTIAL INSTRUCTIONS FOR FITTING THE 4 PANEL FIRE DOOR (FD30)

SOLID FIRE DOOR WITH MINIMUM FIRE RESISTANCE OF 30 MINUTES • SUITABLE FOR USE TO ACHIEVE BS 476:PART 22:1987 FIRE DOOR STATUS FIT TO COMPLY WITH ASSESSMENT REFERENCE CHILT/A05115 • FOR INTERNAL USE ONLY

#### **Important Notes:**

Both Single Leaf and Double Leaf doorsets must incorporate a 20 x 4mm LP2004 perimeter intumescent seal. A 1mm intumescent gasket must be fitted under all hinge blades. Double leaf doorsets may be equally rebated to a maximum depth of 12mm. Doors must be installed in the manner tested and not materially altered in any way. Glazing apertures may NOT be cut into this door.

#### When You Get Your Fire Door

Doors should be stored dry and flat using no less than three battens, spaced across the length and full width of the doors for support. Doors must not be fitted into newly plastered buildings or into buildings before they are roofed and glazed. After removal of the protective wrapping, doors should be inspected on all sides. Any roughness or slight gaps at the joints can be rectified by light sanding. An appropriate wood filler may be used, if necessary, to achieve a perfect finish. Before fitting, doors should be sealed on both sides and all four edges including cut-outs for locks etc. Base coat stains or primers are not considered to be an adequate sealant - a good quality paint or varnish should be used. It is important that the end grains on the top and bottom edges of the door are fully sealed, as this is where moisture can most easily enter the door. Always follow the manufacturers instructions for the paint, stain or varnish to be used. This must be done prior to hanging.

#### Fire Door Hardware

Any hinge on which a fire door is hung should be made entirely from non-combustible materials having a melting point of at least 800c. Hardware used on fire doors can significantly affect performance in fire. Guidance is available in a 'Code of Practice for Hardware essential to the optimum performance of fire resisting timber doorsets' published by the Association of Builders' Hardware Manufacturers in 1983.

#### Leaf Size Adjustment

The height and width of the door leaves may be adjusted by a maximum of 3mm on any edge for fitting purposes.

#### Door Frames

Door frames may be softwood or hardwood with a minimum density of 510kg/m3 and must be class J30 as specified in BS EN 942:1996. The minimum timber frame section must be 70mm x 32mm. A 12mm deep planted stop is adequate for single acting door frames whilst double acting frames may be scalloped or square. If frames are square, the maximum radius to the corners of the leaf is 8mm. Frame joints may be mortise and tenon, mortise housed, half lapped or mitred, except transoms that must be mortise housed or butt jointed and glued and screwed.

As a general guideline, gaps should not exceed 4mm except for the threshold where 10mm is acceptable to allow for floor coverings. Door leaves must not be proud of each other or from the door frame by more than 1mm

# Fixing and Sealing to Structural Opening

This is an important factor in the fire resistance performance of fire resisting door sets. The supporting construction must be capable of staying in place and intact for the full period of fire resistance required from the door set. The frame jambs are to be fixed using steel fixings at 500mm maximum centres. The fittings must be of the appropriate type for the supporting construction and must penetrate to a minimum depth of 50mm. It is not necessary to fix the frame head but packers must be inserted. Guidance for various methods of sealing the frame to structural opening gap is given in BS 8214:1990 "Code of Practice for fire door assemblies and no metallic leaves" which should be referred to where appropriate. Regular maintenance of the door finish must be carried out to protect the timber from deterioration.

# Our Guarantees

We pride ourselves on supplying quality products, and are pleased to offer the following guarantees on our products:

10 Year Manufacturing Defect Warranty on all hardwood and pine door products.;

1 Year Manufacturer's Defect Warranty on Gates & Frames

All Guarantees are subject to the door or product being prepared, installed and treated in accordance with our recommendations for Installation, Finishing and Care, detailed on the door label. Subject to the terms set out below, the manufacturer warrants that all doors (except those expressly excluded from this warranty) shall be free from defects in material and workmanship which would render the said doors unserviceable or unfit for their ordinary, recommended use, for a period of ten years from the date of purchase. This warranty extends and is available only to the first retail purchaser of the door(s) and is not available and may not be enforced by any person to whom such door(s) are transferred by such a purchaser. Subject as expressly provided in these terms, and except where the doors are sold to a person dealing as a consumer (within the meaning of the Unfair Contract Terms Act 1977), all warranties, conditions or other terms implied by statute or common law are excluded to the fullest extent permitted by law. Where the doors are sold under a consumer transaction as defined by the Customer Transaction (Restrictions on Statements) Order 1976 the statutory rights of the purchaser are not affected by these terms. The following matters are also excluded from this warranty: Unsatisfactory service or appearance or any other defect caused by failure to follow recommended handling, fitting finishing and maintenance instructions.

The appearance of field finished doors is not warranted in any event. Natural variations in the colour or texture of wood shall not be considered as defects. Warp, twist cup or bow shall not be considered a defect unless they exceed the following tolerances: Warp, 6mm in the plane of the door itself; Cup, 2mm across the width of the door; Bow, 4mm along the length of the door. Any warranty against warp does not apply in any event to the following: all doors which are wider than 914mm, or higher than 2,134mm doors that are improperly hung or do not swing freely. Delamination caused by failure to protect and seal all exposed surfaces of the door including failure to lacquer top and bottom edges of the door. In respect of doors covered by this warranty, the manufacture may, as its option and in its sole discretion, either repair the door(s) without charge or replace the door(s) without charge, in the same state of fitting and/or finishing as was originally supplied and the manufacturer shall have no further liability whatsoever to the purchaser.