



BWF Guide No. 11

Care of Timber Doors on Site

Making sure you get the most from your timber doors in service

This publication counts towards your CPD (cat.4):



The woodworking CPD programme



**BRITISH
WOODWORKING
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1: Introduction

Doors and doorsets manufactured by members of the British Woodworking Federation are designed and manufactured using the best available techniques to produce high performance rated components. After delivery it is vital that doors are correctly treated to ensure that they are not physically damaged in unloading, storage and installation. In addition it is important to maintain the moisture content of the timber, to a level that is suitable for final installation of the joinery component to ensure that there is not excessive expansion or contraction of the timber, resulting in product failure.

Good practice will help to avoid damage, maintain quality and reduce the cost of remedial works

Contemporary timber joinery is supplied in a range of finishes, ranging from stained or primed undercoat to fully finished. The requirements for handling and installing may vary slightly between products and the technical advice from the manufacturer of the product should be sourced before accepting delivery.

2: Delivery and Storage

2.1 Check the 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.

Timber used in the manufacturer of doors will be graded in accordance with BS EN 942:1996 Timber in joinery - "General classification of timber quality" and the

workmanship will meet the requirements of BS 1186 Part 2:1998 "Timber for and workmanship in joinery" - Specification for workmanship.

2.2 Moisture Content

Although the British Standards state that the moisture content of timber in the doors should be in the range of 10% and 16% depending upon their type and location. Recent research has indicated that 15% (+/- 2%) moisture content is the optimum level and the environment that product is stored on site should be protected from the elements and the temperature maintained to ensure that the product is stored in conditions as close to its final installation as possible. This will help to prevent movement in the timber sashes.

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 co-ordinated to site requirements in order that doors are not kept on site unfixed for longer than necessary.

2.3 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. It is important to risk assess the weight of the product and ensure that there is the appropriate means to move and lift the product into location.

When door leaves are protected by shrink- wrapping or other packaging this should be kept in place as long as possible as there are many other trades who will be working in close proximity to the joinery product and could cause damage to it.

Doors delivered as raw timber should be sealed and primed on all faces and edges immediately after delivery. It is important to contact the manufacturer of the joinery to ensure that the correct base coat and top coat product is applied, using the manufacturers recommendations. All joinery should be fully finished before installing, with special care taken to ensure that all surfaces (including parts of the frame that are built into the reveal are correctly sealed and finished. Never hang a door before applying a protective coating.

2.4 Store doors under cover and in a dry and 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 and the gap beneath the doors should be at least 90 mm to allow for air circulation around the product. The placement of the bearers should ensure that the door is well supported across its entire width and length. If the product is un packaged and unprotected, then a layer of protective plastic or foam should be inserted to ensure that the bearers do not mark the face of the door.

Doors should be protected from dirt and damage but without restricting air circulation. Product should not be stacked face to face; bearers should be inserted between levels to allow air circulation.

Bearers should be placed in line with each other over the levels to ensure that the load weight is transferred equally down through the product and the additional weight does not cause the doors to bow or twist.

If the doors are stored in a stack, the contractor must ensure that the stack is stable and there is no danger of it falling over.

Natural finish doors should be stacked so that they are not partly exposed to daylight and opaque wrappings must not be torn. Ultra Violet rays can affect the surface and cause fading or discoloration of timber and veneers.

In addition, U V rays can affect the ability for the product to achieve correct adhesion with the coating system once applied.

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. Ensure that there is suitable manpower on site to lift and move doors without dragging them.

Doorsets which have projecting sills or have the hardware fitted must have spacers between them in the stack to avoid damage.

2.5 Protect your doors during site installation

Doors on site are at risk of being damaged by other contractors or construction materials that they come into contact with. Wet trades (such as plasterers) introduce high levels of moisture into the property during construction and you should ensure that all wet trades are completed on site and the building has been allowed to fully dry out before any installation of timber doors takes place. By ensuring that the moisture content of the wood is kept as close as possible to the level at which it was when the door was manufactured, will keep movement of the timber to a minimum. .

Before fitting internal doors, they should be conditioned to the moisture levels and temperatures of the service conditions. In addition, 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 the building has dried out.

2.6 Treat pre finished doors like a piece of furniture.

Factory finished door frames or door linings should ideally be fitted into pre-formed openings and not built into masonry walls.

Pre-finished doors should retain their protective packaging until the latest possible time, ideally until after internal decorations have been completed. Protective packaging should be removed once all site contractors have finished and the final clean of the property takes place.

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.

3: Installation

3.1 Doors should be fitted square

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

Three hinges should be fitted to all external doors, doors weighing more than 20 kilogram's and internal doors where large differences of temperature or humidity on opposing faces can be expected (E.g. bathrooms and airing cupboards). This will help in ensuring the doors is correctly supported along its hinge edge.

3.2 Locating the frame within the reveal

In an ideal situation, external door frames should be set well back from the outer face of the wall or else be protected by a canopy to protect it from direct exposure to the elements. If not, the head of the frame should be provided with a projecting head drip.

Upon installation all drip channels (such as the one in the bottom of the sill) should be checked to ensure that it has correct projection and will not allow water to track back into the joinery or property. Drip channels must not be filled, removed or interrupted.

Special care needs to be taken when installing outward opening external doors as this type will get the most exposure to the elements in use to ensure that they are suitably finished on all surfaces.

3.3 Hardware should be located in a suitable position _

Cutting through joints in the door framing will impair performance of the rail joint. When fitting hardware such as mortice locks, the location of the machining for the lock should be chosen as to not interrupt any of the joints in the door or the door frame as this will impair the structural integrity of the joint.

During the fitting of hardware, if any part of a previously treated external door or door frame is cut or drilled, swab the newly exposed timber with a suitable organic solvent preservative treatment and re-coat with primer or stain. If in doubt, contact the manufacturer to source details of the appropriate finishing system.

3.4 Good Glazing Practice

Glazing rebates and all surfaces of beads (including end grain) should be sealed with an appropriate sealant and top coat in line with manufacturer's recommendations.

Glazing 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 and fitted using mechanical fixings in line with manufacturers' recommendations.

Glazing panels should be checked for damage and the contractor notified immediately. Sometimes manufacturers protect the glass and frames by applying a protective plastic self adhesive sheet to the internal and external faces of the product and you should discuss your requirements at the point of order with the manufacturer if this is required.

3.5 Pressure washing of buildings after completion

After completion of a building, there is much construction dirt and debris on the external face of the building.

It is sometimes cleaned using pressure washers; however joinery must be protected with a physical barrier before any washing takes place, as the abrasive nature of the process and chemicals used can damage both the glass units and the painted surface.

3.6 Fire resisting doors should not be altered on site

Fire resisting doors and doorsets need special consideration when fitting. They must be fitted in line with manufacturers' recommendations, ensuring that all components of the design (seals/ hinges etc) are present and correct. Ensure that any contractor fitting or maintaining your fire doors is qualified and competent and that any amendments to the design are in line with the global assessment or certification that is in place for your door.

The fire door label must not be removed from the door and regular checks of the doors should take place to ensure that the seals are engaging and not damaged in use. If in doubt, contact the technical team of the BWF CERTIFIRE Scheme.

4: Finishing and Maintenance:

It is recommended that decoration be commenced as soon as possible after installation (preferably within days). Prolonged exposure of bare timber or priming/base coats will effect the long term performance of subsequent coats.

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.

4.1 Check the surface of the timber before finishing

If the primer or base coat stain has deteriorated, or the surface has been exposed to light for longer than three months, it should be re-coated before further finishing coats are applied.

Finishing of external doors and frames should be carried out in dry weather using only 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.

4.2 Ensure all surfaces and edges are painted

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 for damage to the finish 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 information sheet.

4.3 Further advice

Further advice is available on the BWF website or through the BWF Technical department www.bwf.org.uk

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Revised July 2001

Revised 23.06.14 – Draft. HM