

# TIMBER WINDOWS IN SERVICE

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*This document provides general advice on the procedures that are carried out during the manufacture of timber windows and the effect poor protection or changes in climatic conditions can have on the windows in service.*

## QUALITY CONTROL

BWF timber window manufacturers use a variety of quality control procedures to maintain the standard of their products. Many BWF manufacturers have obtained accreditation to the ISO 9002 Quality Assurance Standard. Any assurance regime requires the implementation of a number of quality checks and the maintenance of records during the production process.

## TIMBER SELECTION

Timber windows are manufactured to a number of British Standards. These standards recommend moisture content limits for the timber used during manufacture. The recommended limit is 16% +/-3%. When packs of timber are received by the manufacturer these are inspected and checked immediately. Moisture content readings are taken and any timber which exceeds this moisture content criteria, or displays any other unacceptable defect, is placed in quarantine and subject to Quality Control procedures which may result in the material being returned to the suppliers.

Once accepted the timber is stored under controlled conditions in well ventilated and covered storage areas. This further period of storage allows the timber to further stabilise and allows any timber which is likely to be susceptible to shakes, bow or distortion to be eliminated. At this stage and during the other stages of production regular inspections are undertaken and records kept. Any further unsuitable timber is rejected.

Almost all timber used in the manufacture of softwood windows is preservatively treated. This process is carried out after the sections have been machined. Preservative treatment is an expensive and time consuming process and it is important to the manufacturer that any timber which is likely to degrade or distort is eliminated prior to this process.

After preservative treatment the various elements are assembled to produce the window frames. The appropriate decorating coats are then applied to the window frames depending upon the client's requirements or the manufacturer's own specification. These processes can vary from a single base coat to a fully finished system.

## ***SITE PRACTICE***

On delivery to the customer good site practice will ensure that the quality of the product is maintained. Windows should be stored under cover and off the ground with adequate provision for ventilation. Those windows which have only received a base coat at the factory should have additional coats applied as soon as possible after receipt on site and certainly within three months. This will ensure the product remains stable and in a good condition.

## ***MOVEMENT***

Problems can occur if good site practice is not applied. Timber is an hygroscopic material and if left unprotected will either absorb or lose moisture due to the vagaries of the British climate. Incorrectly stored or unprotected windows exposed to direct wetting can absorb large amounts of water. If this is followed by very hot dry weather the rapid loss of this moisture can result in shrinkage, splitting and distortion of the window frame.

Most modern finishing systems are designed to protect timber from the direct effects of the weather and the small amount of timber movement which may result can be tolerated by the finishing coating.

Even in extremely poor weather conditions unless there is damage to the surface coating the amount of movement due to vapour flow is very small. However in extremely hot dry weather sufficient moisture vapour may be removed to produce movement which will affect the surface coating. This can on rare occasions result in splits in the surface coating, particularly at joints, even with fully finished systems. Such movement is beyond the control of the manufacturer.

## ***REPAIR***

Minor splitting is not detrimental to the timber if the damage to the surface finish is repaired as soon as is practical. This can be done with the correct filler and finishing system which will maintain the longevity of the timber window. Even light wetting will not affect the timber should this occur before the repair to the finishing coats can be carried out. Only prolonged wetting will result in adverse movement of the timber.

## ***FURTHER REFERENCES***

A number of publications available from BWF give further guidance on the care and installation of timber windows:

*Care of timber windows on site*  
*Installing timber windows*  
*Double glazing timber windows on site.*

**BWF Guide No 3**

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