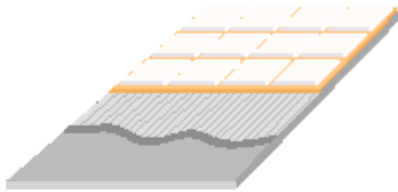
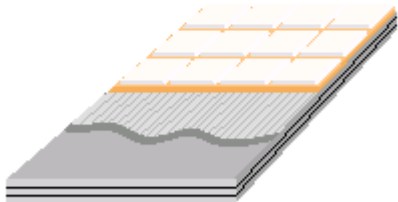


# Tiling on Wooden Surfaces

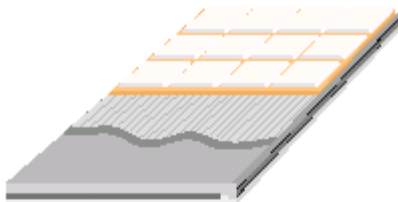
Wooden boards can provide a suitable substrate on to which tiles can be affixed. However, wooden floors can vary from floor boards, plywood, to chipboard and other wood composites. The form of wooden floor will affect not only the necessary preparation but also the type of adhesive that can be used and the methods by which the adhesives can be applied.



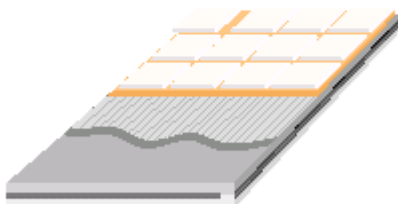
Plywood



Floorboards



Chipboard and other wood composites



Floating chipboard and plywood floors

## Plywood (Water and boil proof)

### Preparation

Rigidly fixed external grade plywood (WBP) provides an ideal substrate on which to apply tiles. Plywood is usually used to cover a poorer substrate and hence usually requires fixing to that substrate. 15mm-18mm exterior grade plywood screwed down at maximum centres of 300 mm is usually sufficiently rigid to receive tiles.

Alternatively a reinforced decoupling matting system such as **Watec@2E** can also be used. Call 020 8778 9000 for more information.

If the plywood is not rigidly fixed any deflection exhibited can cause a failure to occur in the tiling. Ceramic tiles are brittle as, generally, are floor adhesives. Any deflection in the floor could then cause stresses to build up that are stronger than the adhesion of the adhesive to the tile or wooden substrate.

Seal the reverse side and edges with **Flexibond** at a dilution rate of 1: 5-6 parts clean water. Also leave provision for ventilation behind the boards to prevent warping from atmospheric changes. Once boards have been fixed it is necessary that they are stabilised to the ambient humidity and conditions otherwise warping can occur.

There should be no necessity to prime floors unless the substrate is extremely dusty.

Plywood is sensitive to water and in wet areas care should be made to prevent water ingress. In this situation we would recommend tanking out the installation with **Bis-Watertite** Tanking System.

### Adhesives

**Vitri-Flex**, **Bis-Xtra** or **Vitri-Rapid**, **Vitri-Flow**, **Bissem Standard** or **Fast-Set** incorporating **Flexibond** can be used, however the floor MUST be rigid. If there is significant deflection present **Bis-Flex** or **Timber-Fix** should be considered. However, it should be remembered that these products are designed to accept lateral, horizontal, movements in floorboards. If there is sufficient vertical deflection the adhesive may remain adhered but the deflection may raise stresses large enough to crack the brittle tile surface.


Paste adhesives such as **Power Showerproof**, **Showerproof** or **Mega-Grip** may be used for wall applications. Drying times would depend upon site conditions.

### Grouting

Grouting may commence once the adhesive bed has firmed up. Polymer modified grouts or **Timber-Fix** must be used in this situation. Drying will vary according to the site and ambient conditions.

### Movement Joints

Any movement joints visible should be followed through the tiling to the surface. Failure to do this may result in excessive movements within the structure being transferred to the tiles with the likelihood of resultant failure of the system. Owing to the complexity of this subject please refer to Technical Bulletin TB4.



Smaller size tiles are put under less strain than the larger format when laid on an overly springy floor. The choice of tile and possible rebracing of the floor must be considered in these circumstances.



**Bis-Flex** and **Timber-Fix** are flexible adhesives but should not be used as an alternative to correctly bracing the floor.



**Timber-Fix** is not a waterproof grout.

## Floorboards

### Preparation

Floorboards can be an ideal substrate on which to apply tiles. However, as with other wooden floors it is necessary for the floor board to be well fixed and rigid prior to tiling. Floorboards are often tiled as a secondary process after some other covering has been taken up. In these cases the boards must not only be stable, but clean and free from all polishes, grease and residual adhesives that may affect the bond.

It is important that the deflection common to boarded floors is reduced to a minimum.

# Tiling on Wooden Surfaces

Ceramic tiles are brittle as too, generally, are floor adhesives. Any deflection in the floor could cause stresses to build up that are stronger than the adhesion of the adhesive to the tile or wooden substrate.

Once boards have been fixed it is necessary that they are stabilised to the ambient humidity and conditions otherwise warping can occur.

If the boards are of the tongue and groove type they should be glued as well as being screwed down where possible at minimum 300 mm centres. Alternatively a reinforced decoupling matting systems such as **Watec@2E** can also be used. Call 020 8778 9000 for more information. In this situation polymer modified adhesives should always be used.

Floorboards are sensitive to water and in wet areas care should be made to prevent water ingress. In this situation we would recommend tanking out the installation with **Bis-Watertite** Tanking System.

## Adhesives

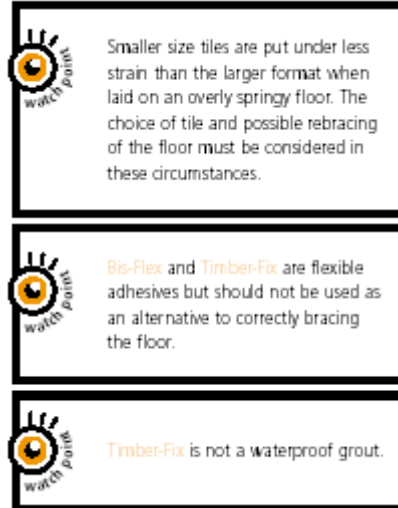
When direct fixing **Bis-Flex** or **Timber-Fix** can be considered. However, it should be remembered that these products are designed to accept lateral, horizontal, movements in floorboards. If there is sufficient vertical deflection the adhesive may remain adhered but the deflection may raise stresses large enough to crack the brittle tile surface.

## Grouting

Grouting may commence once the adhesive bed has firmed up. Polymer modified grouts or **Timber-Fix** must be used in this situation. Drying will vary according to the site and ambient conditions.

## Movement Joints

Any movement joints visible should be followed through the tiling to the surface. Failure to do this may result in excessive movements within the structure being transferred to the tiles with the likelihood of resultant failure of the system. Owing to the complexity of this subject please refer to Technical Bulletin TB4.



## Chipboard and other Wood Composites (MDF HDF)

### Preparation

It is important that the deflection common to boarded floors is reduced to a minimum. Ceramic tiles are brittle as too, generally, are floor adhesives. Any deflection in the floor could cause stresses to build up that are stronger than the adhesion of the adhesive to the tile or wooden substrate. All boards must be screwed down at maximum centres of 300 mm which is usually sufficiently rigid to receive tiles.

Seal the reverse side and edges with **Flexibond** at a dilution rate of 1: 5-6 parts clean water also leave provision for ventilation behind the boards to prevent warping from atmospheric changes.

Where possible overlay with exterior grade WBP plywood screwed down at 300mm intervals. In these instances a thinner plywood layer than the usual 18 mm may be suitable. Once boards have been fixed it is necessary that they are stabilised to the ambient humidity and conditions otherwise warping can occur. Alternatively a reinforced decoupling matting system such as **Watec@2E** can also be used. Call 0208 788 9000 for more information. In this situation a polymer modified adhesive should always be used.

Even if water resistant composites are used, an external source of water such as leaking pipes or appliances can cause the composite to soak up water and expand. If the boards are allowed to expand this will result in a structural change of the substrate. No adhesive will absorb such a permanent change. This is often seen by cracking in the tiles that follow the outline of the boards used.

As Chipboard and other Wood Composites are so sensitive to water care should be made to prevent water ingress. In this situation we would recommend tanking out the installation with **Bis-Watertite** Tanking System.

## Adhesives

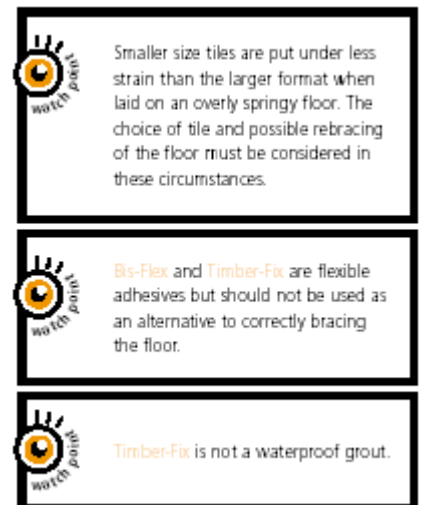
As an adhesive **Bis-Flex** and **Timber-Fix** can be considered. However, it should be remembered that **Timber-Fix** is designed to accept lateral, horizontal, movements in floorboards. If there is significant vertical deflection the adhesive may remain adhered but the deflection may be sufficient to raise stresses large enough to crack the brittle tile surface. A paste adhesive such as **Power Showerproof** is suitable for wall or worktop applications.

## Grouting

Grouting may commence once the adhesive bed has firmed up. Polymer modified grouts or **Timber-Fix** must be used in this situation. Drying will vary according to the site and ambient conditions.

## Movement Joints

Any movement joints visible should be followed through the tiling to the surface. Failure to do this may result in excessive movements within the structure being transferred to the tiles with the likelihood of resultant failure of the system. Owing to the complexity of this subject please refer to Technical Bulletin TB4.



# Tiling on Wooden Surfaces

## Floating chipboard and plywood floors

### Preparation

Ensure that:

The floor is stable and able to withstand addition loads without undue deflection.

The concrete base is flat and free from any raised or dished areas. The insulation layer (generally a foam) is of sufficient density to provide a firm support to the tiled finish. Seal the back and edges of the boards to prevent distortion due to atmospheric changes. Once boards have been fixed it is necessary that they are stabilised to the ambient humidity and conditions otherwise warping can occur.

The sheets have tongue & groove edges and are fully interlocked when laid and well bonded with a wood adhesive. If possible avoid an excessive number of joints. All boards must be flat, dry and clean before tiling commences.

A perimeter gap is left of at least 15mm between board edges and the walls and any other interruptions in the substrate. This gap may be filled with an insulation strip extending from the subfloor to the tiled surface.

It is important that the deflection common to boarded floors is reduced to a minimum. Ceramic tiles are brittle as too, generally, are floor adhesives. Any deflection in the floor could cause stresses to build up that are stronger than the adhesion of the adhesive to the tile or wooden substrate. An easy way to test for deflection is to fill a glass of water to the brim and place it on the wooden floor.

On walking around the floor (simulating heavy foot traffic) if movement is seen in the water or spillage occurs, the floor is liable to deflection and is generally not suitable to receive tiling. Overlaying with exterior grade plywood should be considered. Alternatively a reinforced decoupling matting system such as **Watec®2E** can also be used. Call 020 8778 9000 for more information. In this situation **Bis-Flex** or **Vitri-Flex** should be used.

If possible we recommend the boards to be overlaid with exterior grade WBP plywood screwed down at 300mm intervals. In these instances a thinner plywood layer than the usual 18 mm may be suitable.

Chipboard and plywood are sensitive to water and in wet areas care should be made to prevent water ingress. In this situation we would recommend tanking out the installation with **Bis-Watertite** Tanking System.

### Adhesives

For direct application **Bis-Flex** rubber crumb adhesive and **Timber-Fix** (up to 3mm bed) can be considered. However, it should be remembered that these products are designed to accept lateral, horizontal, movements in floorboards. If there is significant vertical deflection the adhesive may remain adhered but the deflection may be sufficient to raise stresses large enough to crack the brittle tile surface.

Even if water resistant composites are used, an external source of water such as leaking pipes or appliances can cause the composite to soak up water and expand. If the boards are allowed to expand this will result in a structural change of the substrate. No adhesive will absorb such a permanent change. This is often seen by cracking in the tiles that follow the outline of the boards used. As Chipboard is moisture sensitive, we do not recommend it is used in wet areas without the surface being waterproofed with **Bis-Watertite** Tanking System.

### Grouting

Grouting may commence once the adhesive bed has firmed up. Due to the excessive flexural movement that can occur within this type of installation a polymer modified grout must be used. We recommend **Wide-Joint Grout** with the addition of **Grout Additive** or **Timber-Fix**.

### Movement Joints

Any movement joints visible should be followed through the tiling to the surface. Failure to do this may result in excessive movements within the structure being transferred to the tiles with the likelihood of resultant failure of the system. Owing to the complexity of this subject please refer to Technical Bulletin TB4.

