

Protecting a water-sensitive substrate

Tiles are often specified for areas that are likely to be subjected to high humidity or become wet such as kitchens, bathrooms and showers.

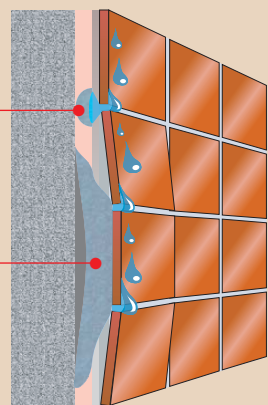
Whilst the tiles themselves are unaffected by water it is very difficult to ensure a complete seal at the grout joints. The tiling layer should not be

considered to be a waterproofing layer.

1 Some tiling substrates are affected by water

Water ingress starts to weaken plaster/plasterboard

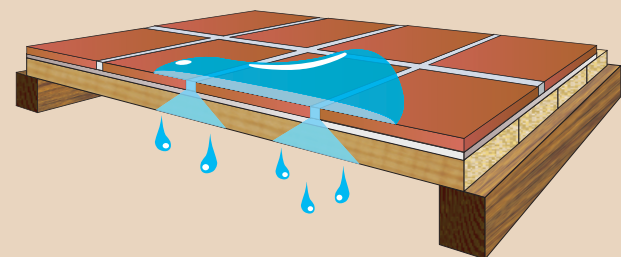
Saturated plaster/plasterboard loses all strength, collapses and dislodges tiles



Plaster will lose nearly all of its cohesive strength if it gets wet for any extended period.

Plasterboard has a paper face which also loses strength when wet.

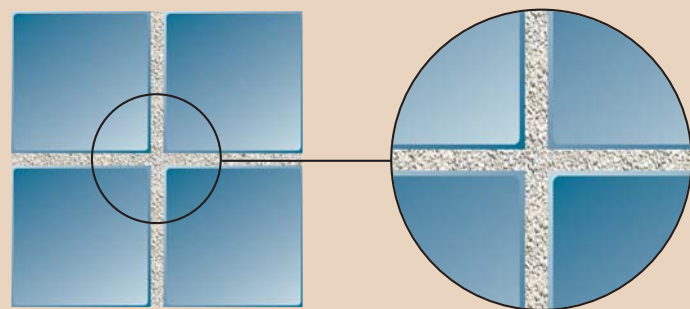
2 Cement-based grouts are not impervious to water



Cement-based grouts, whilst being unaffected by water once set, are porous and will therefore allow water to seep through.

If the joint is not completely filled with grout then of course this will allow water through.

3 Cement-based grouts are vulnerable to erosion and damage over time

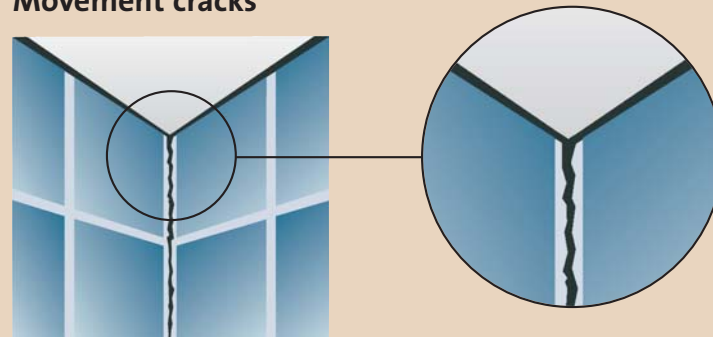


Normal wear and tear from traffic and cleaning will erode the grout over time.

The action of various chemicals, such as cleaning liquids can gradually weaken the grout.

Either or both of these actions can reduce the ability of the grout joint to resist the passage of water.

4 Movement cracks



Grout joints in corners between tiled surfaces and at junctions between dissimilar backgrounds should be filled with a flexible sealant to allow some movement between the surfaces.

However, these critical joints are often filled with the same grout that has been used for the rest of the area. The grout will almost certainly crack in time, leaving an opening for water passage.

Using weber.sys protec tanking system

Water-sensitive substrates such as plywood, plaster and plasterboard can be protected from damage by any water that penetrates the tiling layer,

by the application of a surface waterproofing layer, known as a *tanking system*. The most likely places for leaks are in internal corners and

around pipes, plugholes, trim etc. so these areas must be treated with care.

Products required

weber.sys protec
weber PR301/weber PR360, weber SL450
weber.set SPF/weber.set rapid SPF
stoneset fine wall and floor grout/weber.joint wide flex/weber.joint epoxy

Stage 1: Assess and prepare the surface

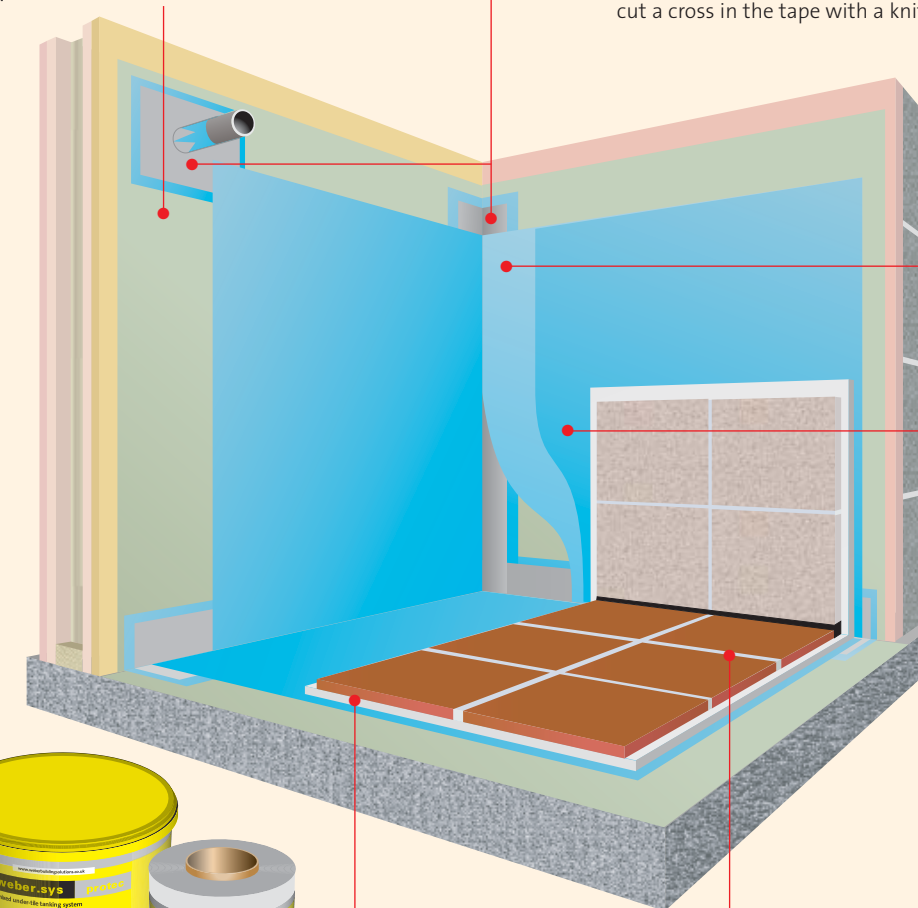
The surface must be clean, dry and sound. Existing surface layers (such as paint, tiles etc) must be well adhered to a sound substrate. The surface to be coated must be free of wax and grease, and any dirt or dust must be washed off and allowed to dry.

Prime porous surfaces such as plaster, plasterboard or sand/cement with **weber PR360** and impervious surfaces, such as existing tiles and paint with **weber PR301**. Leave to dry for 1 to 3 hours.

Stage 2: Protect critical areas with weber.sys protec tape

Apply **weber.sys protec** into the vertical and horizontal corners, into any small cracks (less than 2 mm wide), along any joints between boards with a short-bristle brush. Apply it liberally to the base of any protruding pipes and over a square area within 100 mm of the pipe.

Cut a length of joint tape to fit and bed it into the **weber.sys protec**. Corners should be taped in all three directions to ensure a secure seal. For sealing around pipes, cut a cross in the tape with a knife.



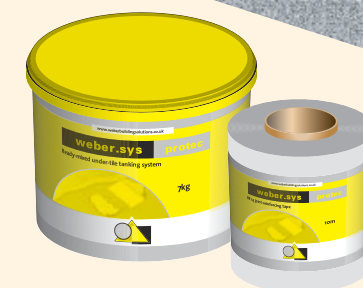
Stage 3: Apply the first coat of weber.sys protec

Apply a first coat of **weber.sys protec** with a roller or brush and allow to dry.

Stage 4: Apply the second coat of weber.sys protec

Apply a second coat of **weber.sys protec**, rolling/brushing at 90° to the direction of the first coat, to ensure that the surface is completely protected.

Leave to dry (1 – 2 hours at 20°C).



Stage 5: Fix the tiles

Leave **weber.sys protec** until dry, then fix tiles using a polymer-modified, cement-based adhesive such as **weber.set SPF** or **weber.set rapid SPF**. If the substrate beneath the tanking system is flexible, a more flexible adhesive should also be used.

Stage 6: Grout the tile joints

Allow the adhesive to fully dry, normally at least 24 hours (less for rapid adhesives) and then fill the joints with an appropriate grout – **stoneset fine wall and floor grout** and **weber.joint wide flex** offer increased resistance to water, soiling and limited movement. **weber.joint epoxy** is specified where chemical resistance or impermeability is required.

Fill the joints around the perimeter and in all horizontal and vertical internal corners with **weber SL450** to allow for movement.

Allow the grout and sealant to fully cure before putting the installation into use.

