

Problem 5

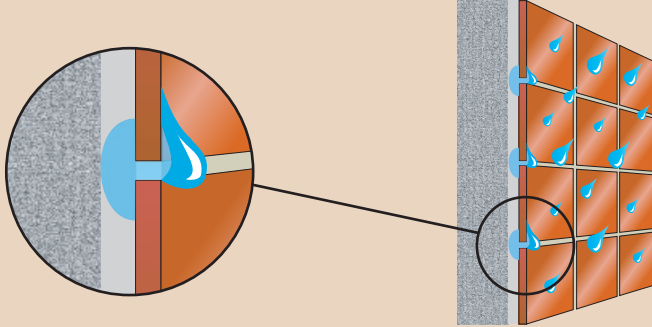
Tiling showers, bathrooms and wet rooms (intermittently wet areas)

Showers, bathrooms and wet rooms are very common applications for ceramic tiling. The tiles themselves are

not really affected by the action of water but the overall installation can be.

The fixing materials must be chosen to suit the level of exposure to water.

1 Adhesives and grouts are porous

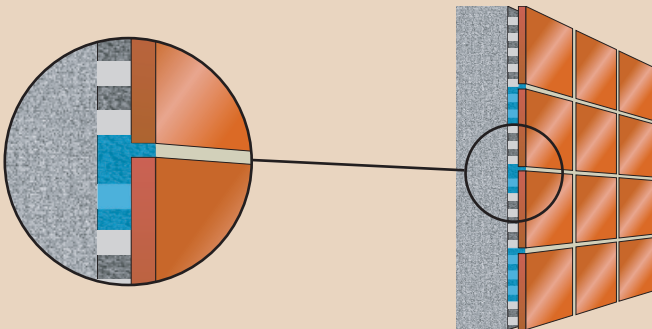


Most cement-based products including grouts and adhesives are porous to some extent.

They have minute voids left by the evaporation of un-combined water or by gaps between the aggregates.

These pores allow water to permeate through the grout into the adhesive and substrate.

2 Voids in the adhesive layer allow access for water



Voids left in the adhesive layer after bedding the tiles will allow any water that penetrates the grout or sealant to gather.

If this water has nowhere to escape to it may encourage mould growth.

Alternatively the trapped water may run along channels left in the adhesive bed and leak out at a different point to its entry.

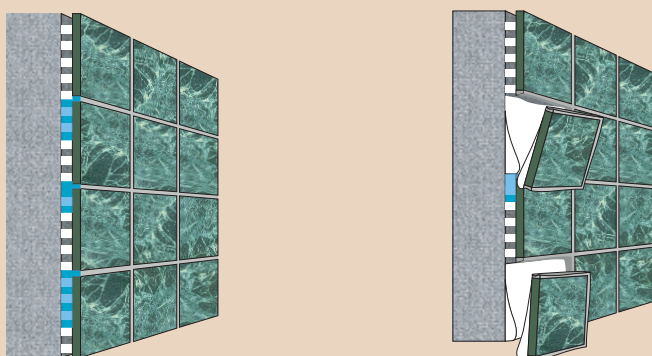
3 Some substrates are affected by water



Some substrates, particularly gypsum plaster and plasterboard, have very little strength when wet.

Continued water ingress will over time cause the substrate to fail.

4 Paste adhesives have limited resistance to water



Most ready-mixed adhesives are water-based. They set by allowing the water to dry out and form a strong hard bond.

However, when they are exposed to water they tend to weaken. Some are more resistant than others but almost all are affected eventually.



Use products appropriate for level of usage

There are too many possible combinations of product to list so below are three main levels in a hierarchy of water resistance based on the fact that:

- 1 Class D1 paste adhesives are less resistant than Class D2 paste adhesives, which are less resistant than cement-based adhesives.
- 2 Standard grouts are more porous than

- modified grouts, which are more porous than epoxy grouts.
- 3 Plaster and plasterboard are more affected by water than render, both of which are even better when tanked.

Products required

weber AD250 or weber PR360, weber SL450

weber.sys protec

weber.fix, weber.fix plus, weber.fix WR, weber.fix WR plus or weber.set SPF

weber.joint wall, stoneset fine wall and floor grout or weber.joint epoxy

Low usage showers

A domestic shower that is used a few times a day and does not have a high-pressure pumped water supply.

- Prime the wall with **weber AD250**.
- Fix tiles with **weber.fix** or **weber.fix plus** ensuring that a solid bed of adhesive (no voids) is achieved after bedding the tiles.
- Grout with **weber.joint wall** taking particular care to fill the joints completely.
- Fill the joints around all perimeters and internal corners with **weber SL450** silicone sealant rather than grout to allow for movement.

Medium usage showers/wet rooms

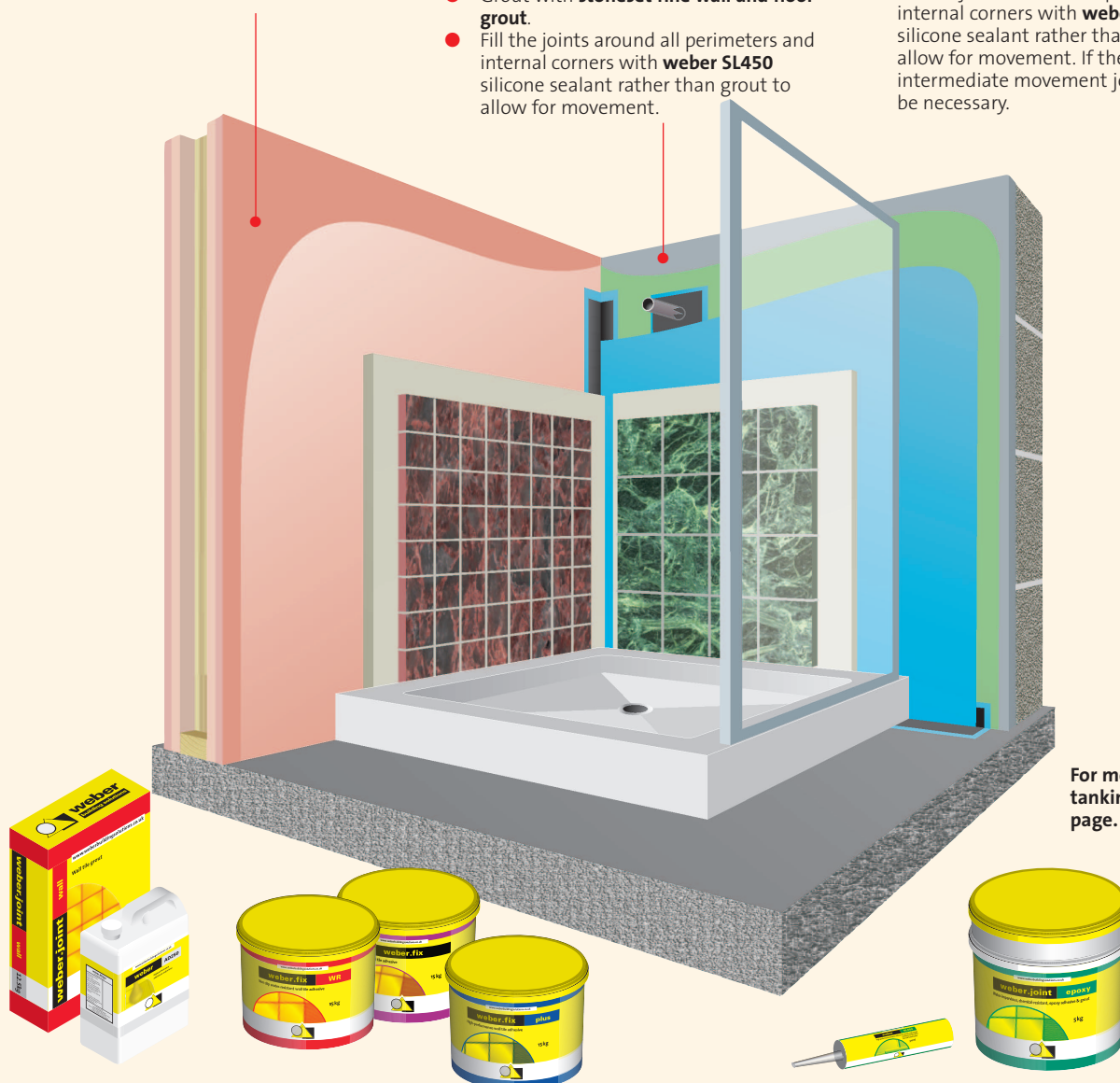
A domestic shower that is used heavily or has a high-pressure pumped water supply.

- If the substrate is water sensitive, for example, plaster, plasterboard, or if the room is to be used as a wet room, protect it by priming with **weber PR360** and then applying **weber.sys protec** tanking system.
- Fix wall tiles with **weber.fix WR** or **weber.fix WR plus** and floor tiles with **weber.set SPF** or **weber.set rapid SPF**. Ensure that a solid bed of adhesive is achieved after bedding the tile.
- Grout with **stoneset fine wall and floor grout**.
- Fill the joints around all perimeters and internal corners with **weber SL450** silicone sealant rather than grout to allow for movement.

High usage showers

Showers in commercial and public areas such as sports centres that could be in very frequent or prolonged use.

- The substrate should be one that is unaffected by water such as render or concrete.
- Prime with **weber PR360** and then apply **weber.sys protec** tanking system.
- Fix tiles with a cement-based adhesive such as **weber.set rapid SPF**. Ensure that a solid bed of adhesive is achieved after bedding the tiles.
- Grout with **weber.joint epoxy**.
- Fill the joints around all perimeters and internal corners with **weber SL450** silicone sealant rather than grout to allow for movement. If the area is large, intermediate movement joints may also be necessary.



For more details on tanking, see next page.