

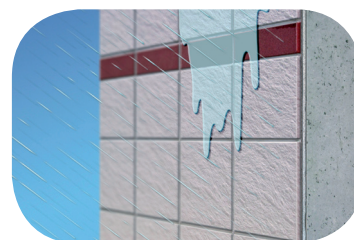
## Tiling on façades

### Water ingress from the joints

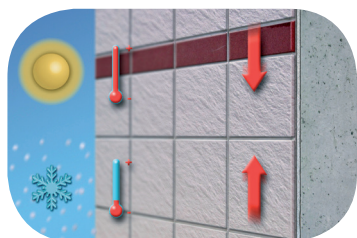
Most cement-based products including grouts and adhesives are porous to some extent. Joints between tiles are not 100% waterproof and water can enter the joint by capilarity or in case of microcracks in the joint, that could cause the tiles to debond.

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

Exterior tiling is exposed to more aggressive conditions than interior tiling. The effect of sun, wind, rain and frost shorten the life of the covering.



### Water expands on freezing



Pores in the grout will be vulnerable to frost damage. Voids behind the tile provide a possibility for water to gather and then to freeze. This can happen when the back-buttering method has not been used or if tiles have not been pressed enough in the tile adhesive.

Water expands on freezing, and when this happens in a confined space, it generates enormous forces. In cold climates the cumulative effect of repetitive cycles of freeze (expansion) and thaw (contraction), cause cracks in the adhesive, which can reduce bonding dramatically.

### Weathering effects (elevated temperature)

With temperature variations, different materials expand and contract at different rates. This results in stresses between the different materials, which could cause debonding and result in delamination.

Failure occurs when a ceramic tile expands and contracts with moisture and temperature at different rates than a concrete slab.



## Recommended products

### Tile adhesives



webercol flex

+

### Tile adhesives



webercol Plus

+

### Tile grouts



weberjoint perfect

## 1- Substrate preparation

Organize the works so that tile fixing will not be performed on surfaces exposed to the sun. Surface must be clean, dry, sound and free from dust, dirt, oil, grease or any contaminating material,...etc. Use a concrete repair mortar to repair holes and defects.

### Brick and block work

Allow at least 6 weeks before tiling, ensuring that the wall face is sufficiently flat.

### Concrete

Allow at least 7 weeks before tiling onto new concrete to ensure that it is fully dry.

Concrete smooth concrete surfaces may require additional priming with **webercol prime**.

### Allowance for movement

Flexible fraction joints of 5 mm minimum should be incorporated every 3m horizontally and every 5m vertically

## 2- Method of application

### Tile adhesive

It is important to select an adhesive with the appropriate level of flexibility to accommodate the expected strains from either differential thermal or moisture movement and / or deflection of the substrate under load.

- For façades up to 6 m high, **webercol plus** can be used, but **webercol flex** is recommended.
- Use **webercol flex** for heights up to 28 m
- Back-buttering method is mandatory to ensure full adhesion
- Press well the tiles using a rubber hammer to ensure full transfer of tile adhesive with the substrate and the tile.



### Tile grouting

It is recommended to have a minimum joint width of 4 mm around the tiles. Grouting should be done at least after 24 hours of fixing tiles, using **weberjoint perfect**.

**weberjoint perfect** can be applied to a width of up to 20 mm.

Remove any excess of adhesive from the joints to ensure full adhesion and filling of the gaps.



### Note

It is important to use a flexible adhesive and a high performance grout with for external applications.