

Floor tiling with large tiles



Technical constraints

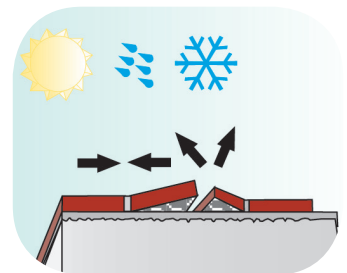
Large tiles are a must in all tiles showrooms nowadays. This trendy solution needs special application methods (2 persons to lay the tile, back-buttering method mandatory), and special care. We will treat here the case of large tiles only.

The case of thin tiles will be explained in case number 7.

Substrates move slightly with changes in temperature and moisture

When the substrate slightly expands or contracts due to changes in temperature or water content, tiles of different materials behave differently for example:

- Shrinkage in the screed as it dries
- Thermal expansion in hot weather
- Moisture induced expansions caused by entrapped water
- Thermal cycling of under-floor / under-tile warming systems



Large tiles suffer more strain levels than small tiles

The increase in strain is cumulative across the width of the tile. The further a contact point is from the center of a tile, the more adjacent points in the tile and substrate will be stretched away from each other. For a given set of circumstances, a smaller tile will be less likely to delaminate than a larger one.

Large tiles are placed under more stress by any deflection in the floor

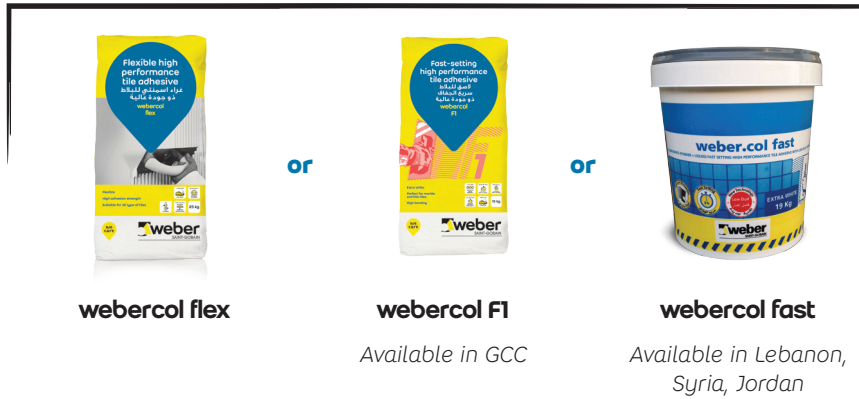
When non rigid substrate deflects, the rigid tile cannot behave in the same manner. For a given deflection in the substrate, the chord height that the tiles try to bridge will be higher for larger tiles.

This may result in higher stresses; therefore it requires to use an adhesive with greater flexibility to prevent delaminating or breakage failures.



Recommended products

Tile adhesives



Tile grouts



1- Substrate preparation

Substrate must be clean and sound with enough resistance.
Special attention must be given to new construction prior to laying tiles.
The concrete needs to be cured for a minimum of 28 days.
Flatness of the substrate is very important. A maximum tolerance of 3 mm difference each 2 meters is allowed.

2- Method of application

Tile adhesive

It is important to select an adhesive with the proper level of flexibility to accommodate the expected strains from either differential settlement, thermal exposure, deflections or moisture variations of the substrate under load.

For large size tiles bigger than 3600 cm², use the appropriate flexible tile adhesive such as **webercol flex**, **webercol fast** or **webercol F1**. The back buttering method is mandatory to ensure a better transfer of adhesive on the back of the tile.

Using an appropriate notched trowel, apply the tile adhesive evenly on the substrate to have a uniform thickness.

Ask for technical advice in case of special applications.

Tile grouting

Grouting should be done at least 24 hours after fixing tiles, using **weberjoint perfect** (only 3 hours after using **webercol fast** or **webercol F1**).

To compensate the low quantity of joints induced by the large size of tiles, and to absorb dimensional changes, joint width should be at least 4 mm.



Note

Select a flexible adhesive and leave a 4 mm minimum joint width between tiles when fixing large tiles.