

INSTALLATION INSTRUCTIONS

CERAMIC TILES



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1- Choosing the proper **tools and implements** (notched trowel, rubber mallet, suction-cups and cross-spacers for installing tiles, rubber trowel for grouting) is of the utmost importance.

2- The **substrate** (wall or floor) to be tiled must be perfectly **level**, with no defects in planarity. We recommend that damp areas be waterproofed beforehand. A difference in thickness in the adhesive layer will produce different stresses on the ceramic tile surface which will result in projecting tile edges.

3- The **surface** to be tiled must be completely **free of dust** or any other substance that could negatively affect tile adhesion. This will promote better bonding strength of the adhesive on the substrate.

4- During installation, there should be enough **light** to allow us to easily spot any sort of defect, especially the appearance of projecting tile edges. During this phase, work should be performed with more lighting than that which will illuminate the area once the work is finished. The use of **spotlights** will prove helpful in this regard.

5- Selecting the **type of adhesive** to use is **fundamental**. We must take into account the properties of the substrate to be tiled (surface of brick, wood, plaster, metal, etc.), as well as the characteristics of the chosen ceramic tiles (porous wall tiles, stoneware tiles or porcelain tiles). The appropriate adhesive is recommended in the **PORCELANOSA** catalogues.

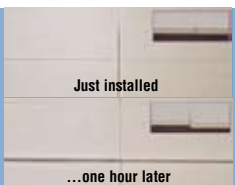
6- The **thin-bed installation method** is recommended, with a flexible adhesive. For formats larger than 31,6x31,6 (1.000 cm²) the buttering-floating technique is recommended, that consists of applying the adhesive on both the substrate and the back of the tile.



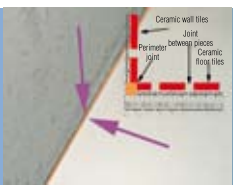
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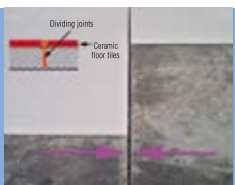
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7- Being as these are rectified tiles, they require **careful handling**, to avoid nipped edges, chipping or scratches on the surface of tiles.

The **Ceramic Tile Guide*** recommends that tiles **not be installed with a joint width less than 1.5 mm** between pieces.

8- For the installation of rectified materials, it is recommended that **cross-spacers of at least 1 mm** be used. In rustic models the minimum joint recommended is 3 mm. It is recommended that rectangular tiles, when arranged in a staggered layout, be installed at **3/4th-piece intervals**.

9- During **installation stoppages**, it should be kept in mind that the tiles already installed have contracted, and those which we are going to install will experience the same movement. Therefore, it is necessary to **predict the possible movement**, since if we continue tiling on the same level, the subsequent contraction may give rise to a slight difference in level.

10- It is recommended that you consider the inclusion of **perimeter joints**, which will help to absorb any movements after installation. These joints must be left empty, or else filled with a compressible material; the minimum recommended width for those joints is 8 mm. This joint is concealed with the skirting or with the tile itself.

11- If the substrate already has its own **structural joints** or dividing joints, these should be respected when ceramic tiles are installed. It must be remembered that the maximum surface area to be covered with ceramic tiles without dividing joints is 50 m² to 70 m² for interiors and half that size for exteriors.

12- During the installation phase, before setting has fully taken place, we should continuously **check already installed** pieces, since there is still time to fix any faults. A **rubber mallet** can be used to tap down projecting tiles and a **suction-cup** can be used to pull up pieces that are sunken in excess.



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13- Before grouting, it should be made sure that **installation joints** (between tile and tile) are **empty and free of bonding materials** and traces of dirt and grime. Any intermediary substance may make installation joints less effective, in addition to hindering the adhesion of the grout.

14- Joints should be grouted once tiles are firmly bonded to the substrate. In the special case of floor tiles, the manufacturer's recommendations should be followed, so as to enable enough **time to elapse** before tiles are walked on or subjected to any loads.

15- The **grouting material** should be applied with a **rubber trowel**, and the use of metallic trowels should be avoided at all times, since they may damage the glazed surface of tiles. Grouts in a wide range of colours are available on the market, which make it possible to match the shade of any setting created. The appropriate grout colour is recommended in the **PORCELANOSA** catalogues.

16- Removing excess grouting material should be performed using a **sponge dampened in water**. This operation should be done in timely fashion, since if the grouting material is left in contact with the glazed surface of tiles for too long, it hinders cleaning, especially in those models the surface of which has relief.

17- It is absolutely necessary that already installed ceramic **floor tiles be protected** with the proper means so as to prevent possible damages until the building project is complete, due to the presence of abrasive materials and ongoing movement of tools. This will not only help to protect tiles, but it will also make subsequent cleaning easier.

18- The use of cleaning agents that contain **hydrofluoric acid (HF)** and solid detergents with particles that **may abrade** the tile surface should be avoided. Hydrofluoric acid would completely remove the glazed surface of tiles, thus causing irreparable damage.