bonded flooring

Definition

Interior and exterior flooring consisting of limestone or marble tiles bonded with adhesive mortar to an adequate support.
The reference document is the schedule of technical instructions for paving works produced by the C.S.T.B. "Interior ceramic flooring in ceramic tiles and similar bonded by means of adhesive mortars" No. 3267 of October 2000.

Choice of flooring

The stone can be chosen from a selection of natural stone tiles measureing 30.5 x 30.5 x 1 cm or 40 x 20 x 1 cm.
The surface area and the dimension of the tiles depend on the stone's compressive strength.
One should check that the resistance to wear is compatible with the conditions of use and that its frost resistance is sufficient for exterior use.

The marble setter must be particularly careful in order to harmoniously distribute the natural shades of the stone.

Support

Supports are characterised by their composition and evenness.

• Composition

Possible supports: paving on platform, solid slab floor, floating slab, bed of flat roof waterproofing protection, or screed.

Limitations are stipulated in the case of heated flooring.

• Evenness

The evenness allowance must be less than 7 mm under a 2 m rule and 2mm under a 20 cm rule.

• Slope (in the case of exterior paving)

The support should have sufficient slope to allow water to drain off (slope ≥ 1.5%).
A peripheral drainage must be done.

• Cleanliness

The support must be free of all deposits, waste, paint, particles of plaster, and cleared of all residual substances.

• Humidity

Generally speaking, the support must be dry through its entire thickness.

• Temperature

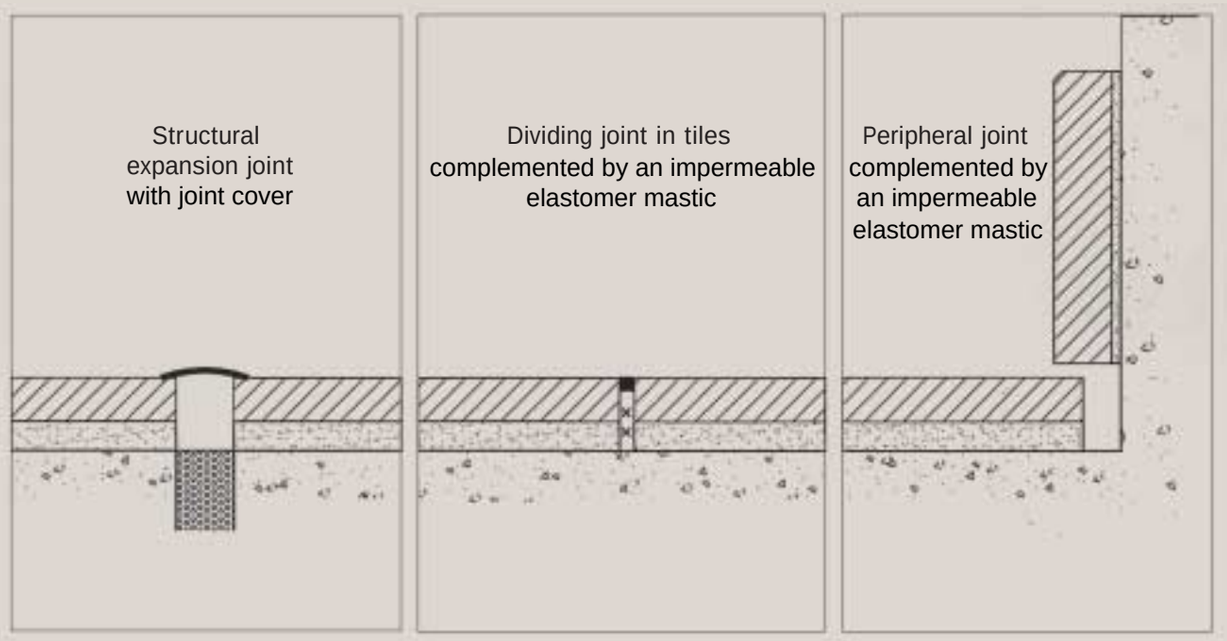
Laying should be not be carried out on a support which is too cold or too hot (the temperature should be between 5 and 30°C).

In the case of heated floor, the system must not be in operation.

• Age of the support

Direct laying should not be carried out on a concrete floor that was poured in the last two months. The intermediate beds must also be perfectly dry.

Farmer's Market – New Port Beach. Architect: RTKL – Los Angeles, USA.



Choice of adhesive mortar

Tiles are laid using adhesive mortar which does not stain stone and which has been granted a favourable Technical Notice.

Joints

• Structural expansion joints

Structural expansion joints must have the same width in the bed, the fixing mortar and the flooring.

• Dividing joints

Joints made in the thickness of the stone and fixing mortar and filled with a pliable and rot-proof material (preformed plastic, elastomer mastic).

- Interior floors:
  Flexible 3 to 5 mm joints limiting surface areas to 60 m² and lengths to 8 m in corridors
- Exterior floors:
  Flexible joints at least 10 mm wide limiting surfaces areas to less than 25 m² and lengths to less than 6 m, complemented by an impermeable elastomer mastic.

• Peripheral joints

Joints of at least 3 mm in width and filled with a pliable and rot-proof material.

For surface areas greater than 7 m², a peripheral joint must be installed between the last row of tiles and the vertical face of walls, columns and other structural obstacles.

• Running joints

Joints filled with grout or strongly-dosed cement mortar, or prefabricated ready-to-use mortars.

- Interior floors: jointless installation is prohibited.
  Joints at least 1 mm for marble.
  Running joints, 2 to 3 mm.
- Exterior floors:
  Joints at least 5 mm wide.