



LAYING WALL AND FLOOR SURFACES

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1. PRELIMINARY STEPS

HYGIENE AND SAFETY MEASURES

When rectified pieces are handled, all necessary safety precautions should be taken. For this purpose, use:



Protective gloves



Safety goggles



Mask



Vacuum cleaner

PRIOR CONSIDERATIONS

Environmental conditions

Application temperature of cement-based adhesive: +5°C to +35°C.

Cement-based adhesive should not be used when there is a risk of frost or ice or during very hot weather.

Cement-based adhesive should not be used on rainy days either.

When floors are tiled, different types of joints should be taken into account.

Joints planned by the project engineer or architect:

- Structural joints, detailed in the building plans. They absorb movements by the building. These joints should be left in place and never covered over with pieces.
- Perimeter joints. They isolate the paved floor from other surfaces, such as the meeting point between two walls or the wall and floor, changes of plane, or meeting points with other types of materials. These joints should have a minimum width of 5 mm / 0.20" and they should be continuous. They help to offset any accumulated stress that might otherwise push up the pieces. They can be filled with a compressible material like expanded polystyrene or silicon or be concealed by a skirting.
- Movement, expansion or intermediate joints. They absorb movements due to changes in the temperature of the pieces, adhesive or substrate, preventing expansion or contraction movements. More joints will be needed for surfaces that might be subject to big changes in temperature or vibrations.

In floors subject to heavy or hard-wheeled traffic or over which heavy loads might be dragged, the layout of the joints should be planned so as to avoid them in transit areas. If this is not possible, metal-edged profiles should be used to conceal them. These joints must run through the depth of the piece, bonding adhesive and mortar screed and they should have a width of no less 5 mm / 0.20". They can be covered with profiles or filled with elastic material or grouting, providing that at least one month has elapsed since the mortar screed was laid.

1. PRELIMINARY STEPS

Joints around the pieces:

They should have a minimum width of 2 mm / 0.08". These joints absorb possible settlement movements and compensate for deviation tolerances in the length and width of the pieces.

THE REQUIRED MATERIALS

- Spirit level.
- Straight edge at least 2 metres / 78.74" long.
- Primer and a roller. A coat of primer improves the cement-based adhesive's bonding capacity, particularly on non-porous surfaces.

Manufacturer	Product
Mapei	ECO PRIM GRIP
Kerakoll	KERAGRIP ECO

- Class C2 cement-based adhesive. Adhesives of this kind contain a high percentage of polymeric resins. Their main advantage is their high elasticity and strong bonding capacity. An appropriate adhesive for the type of piece and envisaged substrate must be used. Always follow the adhesive manufacturer's instructions.
- A piece levelling system for slimline pieces. When the cement-based adhesive sets, a certain lippage or unevenness in the pieces can occur. To ensure optimum end results, particularly with big formats, a piece levelling system must be used (such as the Rubi or Raimondi or Tuscan levelling systems).
- Spacers. Pieces should never be laid abutted, without a joint. The piece joints should never be less than 2 mm / 0.08" in width. The resulting gap should be filled with suitable grouting of a colour similar to the pieces. Always follow the grouting manufacturer's instructions.
- 2 notched trowels, one 10mm / 0.39"-12mm / 0.47" trowel for the substrate and another 3mm / 0.12" one for the pieces.
- In the case of large formats, an aluminium carrying frame with suction pads for handling the pieces.
- A continuous rim diamond piece saw (such as Super-Fine by Würth) for any necessary piece cuts when tiling complicated areas like light boxes, ventilation grills etc.

Never use a rubber mallet to tap the pieces into place. Use a rubber trowel.

2. LAYING THE PIECES ON WALLS

PREPARING THE WORKSITE

Find a place to work with enough room to move the pieces unhindered. Make sure that you have a flat solid bench to work on, either the same size or longer than the piece to be cut. Check that the work surface is level.



PREPARING THE SUBSTRATE AND HANDLING THE PIECES

Any remains of other materials, such as cement or plaster, should be removed. The substrate must be free from dust, grease and moisture. It must also be solid and crack-free. Check that it is flat.

In the case of large formats, wet the piece and suction pads on the carrying frame with a sponge and water to ensure a firmer grip, especially when the pieces have relief textures. Centre the carrying frame on the piece and press the suction cups down with your foot so that they stick firmly to it.



2. LAYING THE PIECES ON WALLS

APPLYING THE CEMENT-BASED ADHESIVE

The cement-based adhesive must be spread using the floating and buttering method over the substrate and underside of the piece.

Use a 3mm / 0.12" notched trowel to cover the entire underside of the piece evenly with cement-based adhesive, including the corners and edges.

Mark out the area where the piece will be laid on the wall to economize on the cement-based adhesive that is used. Use a 10mm / 0.39'-12mm / 0.47" notched trowel to spread the cement-based adhesive evenly over the substrate.

On the substrate and underside of the piece, apply the cement-based adhesive perpendicular to the long side of the piece so that any air below it can escape. Make sure that the coat of adhesive is always the same thickness.



2. LAYING THE PIECES ON WALLS

LAYING THE PIECES

Once the cement-based adhesive has been applied, work can proceed on laying the pieces, remembering that a joint of at least 2 mm / 0.08" must be left between each piece. This distance can be ensured by using spacers. To lay large-format pieces, use a carrying frame handled by two workmen.

Levellers and spacers should be inserted between the pieces, pressing down on the former with the gun supplied with the levelling set. Several different levelling systems are available, such as Raimondi, Tile Level by Rubí, the Tuscan Levelling System or Planfix Italmond. The number of levellers used on each side of the pieces will depend on the piece format. Thanks to this kind of product, it is quicker and easier to lay pieces and all the pieces will be absolutely level.

After laying the pieces, tap them to remove any air bubbles in the cement-based adhesive.

Finally, with the aid of a spirit level, check that the pieces are level and leave them to dry as per the manufacturer's instructions.



2. LAYING THE PIECES ON WALLS

GROUTING THE PIECES

Once the indicated drying time has elapsed, make sure that the joints are clean before grouting them with a suitable product in a similar colour to the pieces.



CLEANING THE SURFACE

Comply with the necessary drying times indicated by the manufacturer before proceeding to clean off any grout residues, using a damp sponge.



3. LAYING THE PIECES ON FLOORS

PREPARING THE WORKSITE

Find a place to work with enough room to move the pieces unhindered. Make sure that you have a flat solid bench to work on, either the same size or longer than the piece to be cut. Check that the work surface is level.



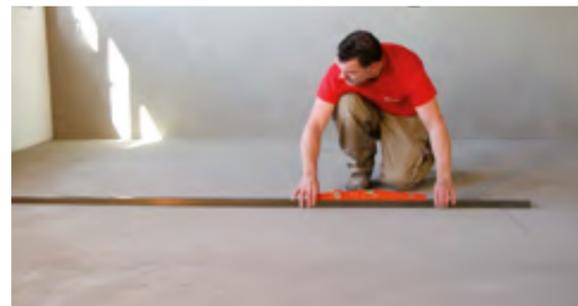
PREPARING THE SUBSTRATE WHERE THE PIECES ARE TO BE LAID

There are many different kinds of substrates: concrete, conventional partition walls, existing tiled surfaces, natural stone, wood etc. Specific recommendations and a particular type of adhesive will apply in each case.

The substrate should be stable and flat, with no cracks. Any dust, lime, cement or dirt remains should be removed and the substrate should not be at all damp.

The flatness of the substrate should be checked, using a spirit level or similar. If necessary, use a suitable levelling product to level it.

The substrate should be given a coat of primer with a roller, whether it is a newly made or existing one.



3. LAYING THE PIECES ON FLOORS

HANDLING THE PIECES

In the case of large formats, wet the piece and suction pads on the carrying frame with a sponge and water to ensure a firmer grip, especially when the pieces have relief textures. Centre the carrying frame on the piece and press the suction cups down with your foot so that they stick firmly to it.



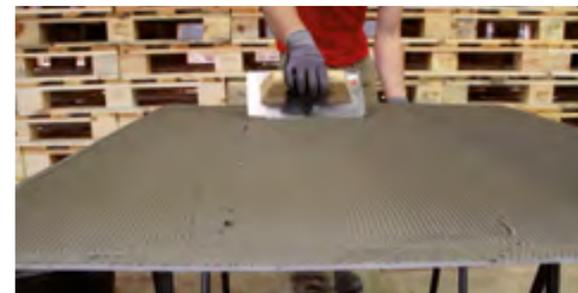
APPLYING THE CEMENT-BASED ADHESIVE

The floating and buttering method must be used, covering both the substrate and the underside of the pieces with the adhesive.

Spread the cement-based adhesive over the entire underside of the pieces, using a 3 mm / 0.12" notched trowel, making sure that the corners and edges are covered.

Mark out the area of the floor where the piece will be laid to economize on the cement-based adhesive that is used. Use a 10 / 12 mm (0.39" / 0.47") notched trowel to spread the cement-based adhesive evenly over the substrate.

On the substrate and underside of the piece, apply the cement-based adhesive perpendicular to the long side of the piece so that any air below it can escape. Once the pieces have been laid, the final thickness of the adhesive should be about 3 / 4 mm (0.12" / 0.16").



3. LAYING THE PIECES ON FLOORS

LAYING THE PIECES

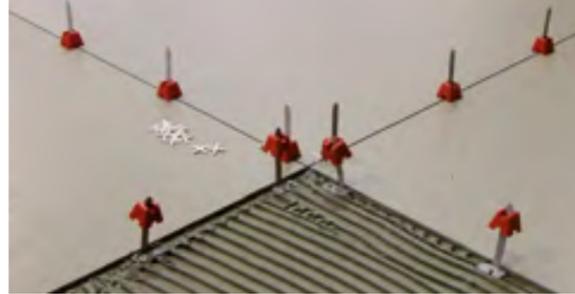
Once the cement-based adhesive has been applied, work can begin on laying the pieces, remembering that a joint of at least 2 mm / 0.08" must be left between each piece. This distance can be ensured by using spacers. To lay large-format pieces, use a carrying frame handled by two workmen.

After the drying time is over, remove the piece levellers with the aid of the sun supplied with the levelling set.

Levellers and spacers should be inserted between the pieces, pressing down on the former with the gun supplied with the levelling set. Several different levelling systems are available, such as Raimondi, Tile Level by Rubí, the Tuscan Levelling System or Planfix Italmont. The number of levellers used on each side of the pieces will depend on the piece format. Thanks to this kind of product, it is quicker and easier to lay the product and all the pieces will be absolutely level.

After laying the pieces, tap them to remove any air bubbles in the cement-based adhesive.

Finally, with the aid of a spirit level, check that the pieces are level and leave them to dry as per the manufacturer's instructions. Do not tread on the pieces while they are drying.



3. LAYING THE PIECES ON FLOORS

GROUTING THE PIECES

After the pieces have been left to dry, as per the stipulated drying time, make sure that the piece joints are clean before grouting them with a suitable product in the same colour as the pieces.

IMPORTANT

When grouting **polished product**, do not use grouts coloured with "lamp black", since the pulverized coal used to formulate them will penetrate the surface pores, making it very hard to remove.

CLEANING

For more information on cleaning INALCO materials, see our cleaning guide at www.inalco.es



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