

SLABS TECHNICAL INFO



1_Packaging

2_Moving packages

3_Moving large tiles on site

4_Working on large tiles

5_Preparing the surface and applying adhesive

6_Installation

7_Grouting

8_Cleaning

9_General recommendations

1_PACKAGING

Special packaging has been developed to store and transport large tiles safely. Large tiles, whether all the same size or in different sizes, are loaded into crates. All packages are dispatched full or according to individual order requests.

IT IS RECOMMENDED TO MOVE THE CRATES ONE AT A TIME.

Crate for 120x280cm

Cm 291,6 x 144,6 h 34,4 • Kg per tile 48,3 • tile per crate 20 • Sqm per crate 67,12 • Kg per full crate 1056 • Stockability max 10 pallets in warehouse

Crate for 120x260cm

Cm 275 x 136 h 28 • Kg per tile 44 • tile per crate 20 • Sqm per crate 62,40 • Kg per full crate 880 • Stockability max 10 pallets in warehouse

Crate for 120x120cm

Cm 130 x 130 x h 58 • Kg per tile 20,30 • tile per crate 50 • Sqm per crate 72 • Kg per full crate 1015 • Stockability max 4 pallets in warehouse

Crate for 60x120cm

Cm 129 x 69 x h 58 • Kg per tile 10,15 • tile per crate 48 • Sqm per crate 35,56 • Kg per full crate 522 • Stockability max 4 pallets in warehouse

2_MOVING PACKAGES

Long side

This is the best option. Use forks at least 1.4 m long, set to the width that provides the best possible support for the package.

Short side

Use forks at least 2.1 m long, set to the width that provides the best possible support for the package.

LOADING TRUCKS AND CONTAINERS

To load packages into a container, you can either use a fork lift or load from the ground using ramps of suitable height.

Use straps, ties and airbags to keep the material secure during transport. When loading, always make sure that weight is distributed evenly to avoid displacement during transport. Loading calculations must always take account of transport weight limits.

ARRANGEMENT FOR LOADING ON CONTAINERS

SIZE 120x280cm

Container 20': 12 crates

Container 40': 24 crates - Pay attention to maximum gross weight.

SIZE 120x260cm

Container 20': 12 crates

Container 40': 24 crates - Pay attention to maximum gross weight.

SIZE 120x120cm

Container 20': 12 crates

Container 40': 27 crates - Pay attention to maximum gross weight.

SIZE 60x120cm

Container 20': 24 crates

Container 40': 54 crates - Pay attention to maximum gross weight.

3_MOVING LARGE TILES ON SITE

ON-SITE EQUIPMENT

It is important to use suitable equipment to move large tiles on site.

Suction cups

Use vacuum pump suction cups on non-smooth or textured surfaces to ensure a firm grip during manual movement (120x120cm).

Use non-marking rubber suction cups on light coloured surfaces.

Suction cup bars or lifting frames with cross-bars

Applying this type of lifting device to large tiles improves rigidity and permits completely safe transport on tile trolleys (120x280cm).

Reinforced trolley

We recommend the use of reinforced trolleys to move tiles around large sites and to move tiles in which holes, cutouts or cuts have been made to permit the passage of electrical cables or water pipes.

Work bench with aluminium profiles

Use a work bench with aluminium profiles to support the tiles you need to work on practically and safely. Install the work bench on a stable and even surface. Suitable for 60x120, 120x120, 120x260, 120x280cm.

MOVING TILES BY HAND ON SITE

To ensure operator safety, always move large tiles one at a time. At least two people are needed to move each tile, and more may be needed depending on the weight of the tile.

Manual tile lifting kits include single suction cups for 120x120cm tiles or suction cup frames for tiles of 120x280cm and above.

Single suction cups

Use suction cups with individual handles only to lay a small number of tiles in ground level areas that are easily accessible and provide plenty of room for manoeuvre. Attach the suction cup to the centre of the tile to ensure good balance when moving it.

Suction cup frames

Place the frame over the centre of the tile so that the ends of bars touch the walls of the crate. To stop the edges of the tile coming into contact with the floor, adjust the end hooks to leave a small gap between the tile and the floor.

4_WORKING ON LARGE TILES

Accurate cuts, shapes, cutouts and holes can be made by specialist tile workshops and processing centres using cutting discs, CNC

SLABS TECHNICAL INFO

systems, water jets and other professional equipment. Simple jobs can be completed on site, but special attention is needed during both movement and working.

A bench of suitable size, with aluminium support profiles is ideal for cutting and drilling jobs.

CNC MACHINING (OFF-SITE)

CNC machines can perform high-precision operations on large tiles, including the forming of sink surrounds.

WATER JET MACHINING (OFF-SITE)

Water jet machines can be used for various operations including cutting, shaping and hole formation, with accurately formed corners and edges and correct final chamfering.

EDGE FINISHING (OFF-SITE)

Automatic machines and special tools are required to finish edges. All kinds of edge should be finished using a cutter and an edge chamfering tool.

The minimum width of straight edges is 2 mm.

The minimum radius of rounded edges is 2 mm.

HOLES

Holes for accessories, taps, fittings and electrical cables must be at least 5 cm away from the edge of the tile. The minimum corner radius of internal cutouts must be 5 mm. Outside edges should always be chamfered for maximum strength.

Instructions:

1. Position the large tile on a stable, clean and flat work bench. Keep the finished surface facing up.
2. Start the work using a diamond disc mounted on an angle grinder or drill (normal mode, not hammer). Cut the tile at an angle of about 75°.
3. Gently oscillate the tool to complete the hole. Keep the cutting disc wet to avoid overheating. Use a diamond countersink to make holes that will remain visible.
4. On completion of work, clean the area thoroughly.

STRAIGHT CUTS

Use a cutting guide to align the cutting tool. Only use diamond cutting discs that are designed for porcelain tile and suitable for use on the machine in question. Discs must be water cooled and speed reduced at the beginning and end of the cut. Adjust rotation and feed speed to suit the dimensions of the disc and the nature of the cut. To obtain 'L' shapes, make straight cuts first and then drill a hole at the corner.

MANUAL STRAIGHT CUTS

Position the large tile you need to cut on a stable work bench of suitable size.

Use a cutting guide to align a tungsten carbide cutting tool over the line to be cut.

Instructions:

1. Lower the bar and cutting wheel on to the line to be cut.
2. Cut the ends of the tile for about 5 cm, working from the inside towards the outside.
3. Complete the cut without stopping and at constant speed and pressure.
4. Move the tile so that the line of the cut protrudes about 10-15 cm from the bench.
5. Break off one of the two ends with a pincers. Again using a pincers, apply gentle pressure to the other end to detach the entire section along the cutting line. Two people are needed for this job to avoid the cut section falling and breaking.
6. Remove the cutting guide and smooth the remaining sharp edge of the tile with a diamond pad or resin grinder.

MANUAL CURVED CUTS

Position the large tile you need to cut on a stable work bench of suitable size.

Use a cutting guide to align a tungsten carbide cutting tool over the line to be cut.

Instructions:

1. Mark out the cutting line with a pencil.
2. Use an angle grinder with a suitable cutting disc to cut the tile along the marked line.

RECTANGULAR CUTOUTS

'L' or 'C' shaped cutouts may be required:

- on the edge of a tile, near corners or columns
- in the centre of a tile, to fit accessories, taps, electrical equipment, sinks, hobs, etc. Cutouts must be positioned at least 5 cm from the edge of the tile and from other holes.

Instructions:

1. Position the large tile on a stable, clean and flat work bench. Keep the finished surface facing up.
2. Mark the outline of the cutout.
3. Use a drill in normal (not hammer) mode with a diamond bit or an angle grinder with a cutting disc of 6-8 mm in diameter. Proceed to make circular holes at the inside corners of the marked cutout. The cutting tool must be cooled continuously.
4. Complete the cutout using an angle grinder with a small diameter (max. 125 mm) diamond disc to cut along the straight edges.

5_PREPARING THE SURFACE AND APPLYING ADHESIVE

Before applying adhesive, make sure that the back of the tile is perfectly clean and free from ceramic powder and engobe.

Make all necessary 45° corner tile cuts before applying adhesive.

To clean the tiles, use a sponge damped in a water and detergent solution.

The adhesive must cover the entire surface and be of uniform thickness.

To achieve this condition use the technique of double application.

Apply adhesive in straight lines parallel with the short side of the tile.

This permits air to escape more easily. Start by applying adhesive to the back of the tile using a square toothed spatula with teeth no smaller than 3 mm. Proceed parallel with the short side of the tile, taking care to cover the entire back of the tile, including the corners. Now apply adhesive to the substrate using a slant ridge spatula with teeth of at least 10 mm, proceeding in the same direction as for the back of the tile and taking care not to leave any area uncovered. Facing tiles should be applied with the aid of an additional mechanical support.

Use a class C2-S1/S2 adhesive on floors. For walls, use a class T adhesive with reduced vertical slip. Always choose the type of adhesive best suited to the substrate.

6_INSTALLATION

Before you start installing tiles, make sure that the lot is of sufficient quantity and of the right colour and thickness. Follow all the rules and precautions necessary for correct installation. Prepare the substrate, ensure the correct composition of mortars or adhesives, respect specified drying times, expansion joint positions and beating methods, etc.

Installing tiles with adhesives

Tiles must be installed by qualified persons using suitable equipment. Installation should always be performed under good lighting conditions.

The choice of adhesive depends on the type of tile (material and size), the substrate to be covered and the use to which the tile will be subject.

Check that the material has been correctly installed before the adhesive dries completely, so that minor corrections can be made if necessary.

Installing tiles with fresh mortar

The use of fresh, cement-based mortar or "thick-bed" mortar is not recommended for tile sizes with long sides of over 30 cm or for non-absorbent substrates.

Instructions:

1. Check that the substrate (screed) is hard enough, clean, free from cracks and smooth, with a maximum variation in level of 1 mm/2 metres.
2. First apply adhesive to the tile and substrate, then lift the tile and, with great care and using suitable moving equipment, lay it gently on the adhesive of the substrate. Once in place, the tile cannot be lifted again, and position adjustments are restricted to a maximum of 4-5 cm.
3. Use a manual or electric, anti-bounce tile beater to beat the tile, working from the centre outwards and in straight lines. This ensures maximum adhesion between the tile/adhesive/substrate and facilitates the elimination of air. Remove any adhesive forced out from the joints to keep them free for grouting.
4. Place spacers around the edges of contact with other tiles to form a joint of at least 2 mm.
5. Position the tiles one after another, moving them into place with a suitable manual tool and leaving a joint of at least 2 mm between them. Always lay floors first and then tile the walls. A gap of at least 3 mm should be left between the perimeter of the floor and the bottom of walls.
6. Use self-levelling spacers to ensure the accurate positioning of tiles. These should be removed when the adhesive is dry and before grouting. Insert wedges by pushing them towards the tile laid previously. Wedges can correct up to 1 mm of difference in height.
7. When the adhesive is completely set, remove the levelling wedges with a mallet.
8. After installation, and depending on the type of adhesive used, floor surfaces should not be walked on for 12-24 hours.

Technical joints

Structural expansion and movement joints are essential to the durability of an attractive tiled surface.

Ask a professional tiler for advice and/or help.

Structural expansion joints should be located over those found in the substrate and made using a suitable sealant or profile.

In outdoor floors, movement joints must be provided in areas of 9-12 sq.m. depending on the substrate and in high traffic indoor areas or on flexible substrates. Areas can be increased to 20-25 sq.m for indoor floors over a stable substrate.

In any case, always leave a gap of 3-5 mm between the perimeter of the floor and any walls, columns or corners and between tiled sections and sections covered in other materials.

The manufacturer declines all responsibility for installations without adequate joints between tiles: the minimum acceptable joint between tiles is 2 mm.

7_GROUTING

Wait for the adhesive to set completely before grouting.

Instructions:

1. Make sure that the joints are clear and free from all traces of adhesive and/or powder. Residual material preventing filling of the joint to at least 2/3 the thickness of the tile must be removed.
2. Grout small areas at a time (4-5 sq.m.) especially when working with textured, non-slip or polished tiles. Use a suitable rubber spatula. Always test grout of a colour that contrasts with the tiles on a small, hidden area before grouting the rest of the surface.
3. Remove excess grout from the surface in diagonal strokes before the product dries, and remove all residues.
4. Clean the surface thoroughly with a sponge damped in clean water then wipe down the surface, including the joints with a damp cloth. Use a sponge and plenty of water to clean off epoxy grouts.

The reaction times and hardness of these products makes it impossible to remove residues once set. Always refer to the grout manufacturer's specifications to ensure that the product is suitable for the type of tile.

8_CLEANING

The entire tiled surface must be cleaned, including the tiles, joints, movement joints and profiles. Cleaning must continue until all traces of installation materials have been eliminated.

INITIAL CLEANING

Initial cleaning is of fundamental importance for all subsequent steps and for correct maintenance over time. Thorough initial cleaning helps floors remain attractive and protected for years to come, and only has to be performed once, before the floor is used.

Initial cleaning should be performed 4-5 days after completion of grouting, when the grout sealant is perfectly dry, but no later than 10 days after. Use an acid or alkaline detergent to suit the characteristics of the sealant. Always test detergents on an unused tile or on a small hidden area of the floor to ensure compatibility, especially in the case of lapped or polished tiles. Do not use cleaning products containing hydrofluoric acid (HF) or its derivatives.

After grouting and cleaning, the surface may still present a film of cement residue that cannot be removed using water alone. In such cases, the residue must be removed using an acid-based product, diluted according to the manufacturer's instructions.

Instructions:

1. Start by wetting the tile surface, especially the joints, which are not normally acid resistant.
2. Next, distribute the prepared acid solution over the surface and leave it react for a short time (2 minutes).
3. Do not allow the solution to dry on the floor. Remove it either manually or using a single-head scrubber-dryer fitted with a non-abrasive disc.
4. Rinse the surface thoroughly afterwards.

Use of a floor cleaner is particularly recommended for textured tiles and large surfaces. Manual methods can then be used to clean points inaccessible to the machine such as corners, along walls and wherever the machine cannot operate.

SLABS TECHNICAL INFO

ORDINARY CLEANING

The purpose of ordinary cleaning is to remove dirt and marks and to restore the surface's original appearance. Porcelain tiles do not require protective treatment: regular, thorough cleaning is sufficient to keep it in perfect condition. Clean tiled surfaces thoroughly using hot water, a soft cloth or sponge and neutral detergent if necessary. Industrial scrubber-dryers can be used to clean large floors, with inaccessible areas cleaned manually afterwards.

9_GENERAL RECOMMENDATIONS

Never rub surfaces with abrasive materials such as metal scrubbing pads or hard brushes as these might leave indelible scratches or marks.

Remove greasy or oily residues using a detergent containing organic solvents or with an alkaline detergent (pH>9), then rinse the area thoroughly.

Do not use soaps as they can leave a slippery film on the surface, especially if used with hard water.

Do not use products containing waxes or shine-enhancing rinse agents. Do not use abrasive detergents on smooth and/or polished surfaces.

In the case of matt materials, always test abrasive detergents on a small area of tile first.

Always test any non-neutral detergent on an unused tile or on a hidden area of the floor first.

WARNING:

For material that has already been laid, Terratinta Group Srl SB:

- does not accept any complaints for visible defects.
- does not accept liability for the quality of the tiled surface but only for the characteristics of the material supplied.
- once the material has been laid, it is wise to keep aside a few tiles for possible future repairs or to have a sample of the material in the event of complaints.