

PRE-INSTALLATION GUIDELINES.

WHAT YOU WILL DO BEFORE INSTALLATION.?

- <u>BEFORE FIXING SIMPOLO TILES, LAY THEM OUT IN DESIRED PATTERN & MAKESURE THAT THEY GIVE</u> <u>ACCEPTABLE BLEND OF COLOUR.</u>
- MOREOVER, PLEASE NOT THAT CERTAIN AMOUNT OF SHADE VARIATION & SIZE VARATION INHERENT IN MANUFACTURE OF A FULLY VITRIFIED TILES

- Check the laying substrate has no cracks, it is homogeneous and mature, totally clean and flat.
- Maximum deviation from flatness of 1mm per 2 meters length measured.
- Inspect the tile before laying
- Moisture of substrate must be $\leq 4\%$
- Clean the substrate to have a dust free surface.

What is Buckled or Popped Up or Tented Tiles?

- When your floor tiles lift from their originally installed position and start pushing other tiles against one another, it creates a 'tent-like' bump in your floor.
- This tile defect is known as buckled tiles.
- This defect is also known as pop up tiles or tile tenting. Buckled tiles defect might appear in all types of tiles, i.e. ceramic tiles, vitrified tiles and porcelain tiles, etc.
- if proper care is not taken while laying the same. The perfectly flat tiled floor may buckle up in the different seasons due to temperature variations, improper installation of tiles and various other factors

Reasons for Buckled Tiles or Pop Up Tiles Defect

01. Improper Cleaning



- It is always advisable to clean your tiles properly before its installation.
- As a consequences, the improper cleaning of the floor does not support the uniform bonding layer.
- Eventually, It might result in the form of popped up tiles.

02. Floor Expansion



- Tile is a permeable material, hence after some time, it may swell with high moisture absorption.
- Due to expansion, the pressure may cause the tiles to pop up and therefore the tiles may develop tent, i.e. say buckle.

03. Uneven Subfloor



- Uneven subfloor is also one of the reasons for buckled tiles or popped up tiles.
- The uneven subfloor will not have uniform bonding with **adhesive** or mortar with tiles and the subfloor.
- This will lead to tile tenting making the tiles appear uneven and unpresentable.

04. Improper Set Tiles



- Large or over sized tiles require a certain troweling technique to ensure that they achieve a strong bond with the adhesive.
- All tiles need a gentle whack with a wooden object when being installed to set them in the adhesive.

05. Not Using Adhesive



The tiles which have been installed without adhesives may also cause buckling of tiles.

06. No or Incorrect Movement Joints

• "Incorrect installation of movement joints also leads to the buckled tiles." The tiles will also buckle in absence of joints between tiles.

- 7. Using Poor Quality Bonding Agent
- When the tiles those are fixed with the bonding agent to the floor, the underlying substance may not form a secure bond.
- Due to slight changes in the environmental conditions like a change in temperature or humidity, the bond will lose its grip and the defect of buckled tiles may appear.

08. Using Poor Quality Tile Adhesive

- If the area of the floor is directly exposed to sunlight and if poor quality adhesives are used, then there are chances of tile tenting or popping up of tiles.
- The direct sunlight will lead to expansion of the tiles. Hence, if adhesives are not strong, the tile might pop up and buckle.

09. Improper Bonding Material



• Use a strong and high quality bonding material. If a dry powder bonding agent is used, you should check whether it is properly mixed or not?

Straight = Correct

Swirls = Error

Spots = Error



LAYING INSTALLATION FOR FLOOR

LAYING SYSTEM

1. Plaster the surface of the floor where the tiles will be laid with smooth finish and complete the plastering and curing at least two weeks prior to laying.

2. Before fixing SIMPOLO tiles, lay them out in the desired pattern and make sure that they give an acceptable blend of colour. Please note that certain amount of shade variation & Size variation is inherent in the manufacture of a fully vitrified ceramic tiles.

THE COMPANY WILL BEAR NO LIABILITY AFTER THE TILES ARE FIXED.

3. The company bears no responsibility towards the tiles exposed to any outside process like transfers, printing, firing etc.





4. For fixing SIMPOLO, we recommend the use of tile fixing adhesives for best results. Also follow the fixing instructions provided along with the adhesives.

5. For fixing SIMPOLO tiles on the floor, using sand and cement, follow the instructions given below.

a) Use cement and sand mortar in the ratio of 1:4. Add some water to create a consistent paste.

b) Once the mixing has completed do not add any further water and use the same within one hour.

c) Apply a 20-30 mm, layer of bedding material over an area of 1 square meter at a time on the surface of the area. Apply a fine slurry to the back of the tile to ensure proper and full bedding. Press gently for even adherence at the back of the tile.

DO NOT USE AN IRON HAMMER OR SOME HEAVY MATERIAL TO PRESS THE TILE.





IRON HAMMER

RUBBER HAMMER

6. For fixing SIMPOLO tiles on Dado, we recommend the use of tile fixing adhesive with proper troweling method for 100 per cent coverage behind the tiles and for peerless bonding. Please follow manufacturer's instructions for the same. We do not recommend the use of sand and cement for fixing on Dado.

7. Make and lay out the tiles from the centre of the area to be laid so that cut tiles, if any, will be on the outer edges towards the walls.

8. The work size which we try to maintain for better technical performance on average. It is advisable to maintain a gap of 1 TO 2 mm between every two tiles to allow for possible expansion as per BIS/EN tolerance norms.

9. Complete the laying process by pressing the cut SIMPOLO tiles firmly into place along the walls/floors



10. Allow 3-4 days for bed curing. After this period fill the joints with grouts. Usage of grout sealant is recommended for keeping the grout free of dust.

11. Fifteen minutes after finishing the grouting process, wipe off excess grout with a damp sponge and polish the tiles with a soft and dry cloth





Infinite Pattern

- Uniform colors or designs with a consistent or almost consistent composition and structure that, when used for cladding such as floors, walls or façades, allow for random placement of slabs, providing a beautifully consistent look.
- Please note that cuttings are subject to shade variations. Recommended for cladding large surfaces.

Singular Pattern

 Designs with color ranges of greater complexity and a very strong orientation, which result in patterns with a lot of character and variation in smaller cuts or continuous layouts. We recommend consulting our technical team for use on large surfaces.

- ✓ The substrate on which Simpolo Slab is to be laid must be suitable to support the loads and meet the requirements of its intended use.
- \checkmark It must be dry, stable and have compressive strength.
- ✓ It must be free of unevenness or slope (maximum 3 mm measured with a 2 m metal ruler). Otherwise, it must be properly smoothed over or treated with a self- levelling layer.
- ✓ It shall be free of dust, grease, oil, glaze, release agents, curing liquids or any other product that could impair adhesion.
- ✓ If necessary, it must be cleaned beforehand (milling, vacuuming, descaling, etc.).



• Laying of pieces must always be done considering the characteristics of the adhesive: open time, lifetime, maximum application thickness, etc., as well as the manufacturer's instructions.

• Preliminary check of the substrate

Before any work is carried out, it must be checked that:

1. The substrate is clean.

2. The substrate is dry.

3. The substrate is level.



DOUBLE GLUING

- installation is carried out according to the technique of 'double gluing' (adhesive on the back of the piece and on the substrate), which ensures perfect adherence and prevents gaps from forming.
- Never apply the adhesive by 'sticking' or 'pinching'.
- This technique has several advantages:

 \rightarrow It allows for a greater distribution of stress by ensuring the maximum possible contact surface (> 90 %) between the substrate and the adhesive and the adhesive and the piece.

 \rightarrow It avoids the formation of efflorescence by preventing the eventual stagnation of rainwater on the surface of the tile.

 \rightarrow For this reason, in outdoor flooring, the possibility of frost formation and breakage due to this effect is avoided.



Application with trowel on piece.



B. Combing with toothed trowel on the piece.

The application, both on the substrate and on the piece, would be according to the following diagrams:

TOOTHED TROWEL AND DIRECTION OF THE ADHESIVE LINES

- The combing should always be done with a toothed trowel to define its geometry according to the format of the piece, the substrate and the type of adhesive.
- This ensures adequate adhesive thickness and good distribution along the surface, including perimeters

Direction: in the case of long pieces (2:1 ratio or more), the adhesive line must be parallel to the long side in order to be able to move the piece with suction cups a few centimeters in the shorter direction of the piece and to ensure the 'flattening' of the adhesive lines with the sliding movement.



 Laying the piece At least two operators are needed to lay the piece, using tools such as the Easy Trans conveyors To allow air to be released and better contact between the piece and the substrate, reversible sliding movement must be employed and not 'hammering'.

- The process is as follows:
- I. Place it in its final position.
- II. Then move it perpendicular to the adhesive lines in proportior to the width of the trowel tooth. III.
- III. And put it back in place, keeping to the width of the markec joint.



A. Manually, for small formats

B. With a block between suction cups, for large formats

В

- The edges must always have a micro-bevel of at least 1 mm. In other more specific cases, such as on raised floors or raised access floors, larger rounded bevels and corners are recommended.
- They can be supplied ready-made or, in the case of cutting and adjusting them on site, this can be done by means of a polishing block.



• The following minimum joints between pieces must always be maintained:

- 2 mm for indoor flooring
- 3 mm for outdoor flooring
- 4 mm for raised flooring
- 5 mm for 20 mm



LEVELING SYSTEM



 Modern leveling systems consist of two pieces – a clip and a wedge. The clip is designed in the form of the letter "T".



There are many size of clips available in the market like 1 mm to 4 mm.



SCAN CODE FOR LEVELING VIDEO





• The horizontal plane should be under the tile. It is important to mention that the clip is located between two adjacent tiles.





- Then we insert a wedge in the clip to make sure it pushes two tiles down. Therefore, two tiles are located on the same level.
- The clips also make adjacent tiles located evenly, since clips are located between two tiles

- The skewed side of a wedge has "ribs" which assures locking of the piece so it does not move and as a result, tiles do not move. Therefore, we get a perfectly flat surface.
- The whole leveling system pushes tiles from above (via wedges) to make sure there are no level differences.
- Reusable caps from Pearl are a bit different, since they have a strap and a cap instead of a clip and a wedge. A strap performs the same function as a clip does. It has a horizontal plane that should be under two adjacent tiles.
- A cap is put on a strap and it "pushes" tiles from above. In any case, modern self leveling tile spacers do what they should – create a perfectly flat surface.





- When filling the joints, the appropriate grout and consistency should be chosen and applied according to the manufacturer's instructions.
- It is advisable to use a rubber trowel of the appropriate hardness to the width of the joint to extend the material diagonally to the direction of the joints.
- The final texture and curvature will be set on the joint using a pointing trowel or equivalent tool.
- In some cases, flexible stainless steel scrapers or extrusion guns can be used to apply the grout.



• Application with trowel

 Making the final texture and curvature



- <u>The remaining surface grout on the tile can also be cleaned</u> <u>at this time.</u>
- Due to polymer content, it is advisable to clean the surface immediately after the grouting.
- After installation, the surface usually has residues such as small traces of cement, limescale, silicone, epoxy, etc.
- It is therefore necessary to do a final cleaning, using a specific cleaning product (e.g. Deterred Pro by Fila or equivalent), which will leave the surface clean without damaging the grout.



- It is necessary to cover the flooring/tile surface as many agencies work after the installation of tile/slabs, while houses or buildings are under construction, the names of those agencies are as follows-:
- Electrification
- Plumbing
- Furniture Decor
- Cabling
- Painting
- Interior Decor

POP is the traditional product to protect the tile floor from scratches, impact, scars, dust, while the construction is still going on. As the flooring is done prior so it is expected during post fitting process a lot of dragging of equipment's, small scaffoldings, Some construction equipment will occurs on the tiles, this cause obvious damage to them.

- Tile protection Sheet which consist a multilayer imparting it more strength & making it tear & abrasion resistance. Its features completely seal the tiles from surface intervention.
- It superior flow covering guard the tile floor & protect our valuable flooring from any scratches or attrition.



Tile covering sheet



Installation of large format slabs


INSTALLATION METHOD

The following procedure describes how to install large format tiles correctly and is based on current standards and the consolidated experience matured by SIMPOLO over the years.





INSTALLATION METHOD

- First apply the adhesive onto the back of the slab with a 3mm-tile trowel. The
- pitch of at least 10 mm) to get better distribution of the adhesive.
- substrate (in straight lines parallel to the short side of the tile).

• Check the laying substrate has no cracks, it is homogeneous and mature, totally clean and flat. Maximum deviation from flatness of 1mm per 2 meters length measured.

recommended adhesive is C2TE S1 and it must be spread over in one direction only.

• To spread the adhesive on the substrate use a spreader with sloping notches (with a

• The adhesive should be applied in a straight line, with no circular movements, parallel to the short side of the tile to reduce the distance travelled by the air being pushed out.

• The adhesive must be spread in the same direction on the back of the tile and on the

- runners and cross-members or a frame with suction cups.
- of the slab parallel to help push the air out.
- bounce float made from rubber.
- under the tile is forced out.

• To make handling and installing the tiles easier and safer, it is recommended to use

• The tiles are installed by placing the ribs of adhesive on the substrate and on the back

• To ensure the tile is completely bonded and that all the air has come out, go over the surface of the tile with a vibro-plate or tap the surface by hand with a special anti-

• We suggest tapping the tile from the center working towards the edges in the same direction as the ribs of adhesive, that is, parallel to the short side, to ensure all the air

- are required.
- otherwise the soundness and durability of the bond could be affected.
- The grout line between each tile must be at least 3 mm wide and must be increased external) and the stresses expected when in service.

• The same technique is used to install both floor and wall tiles. When installing tiles on facades, the design engineer must assess whether additional mechanical safety fasteners

• Another essential requirement when installing large format tiles is that the adhesive must guarantee a high level of wetting of the back of the tiles so that gaps are not created,

according to the size and type of the tiles, the area of use (floor or wall tiles, internal or

• To maintain the correct gap between each tile and reduce out-of-flatness between adjacent tiles, it is recommended to use spacers between the tiles (around one spacer every 50 cm).

- Expansion joints shall be provided through the tile work from all construction or expansion joints in the substrate. Do not cover expansion joints with thin set mortar.
- If adhesive is skinned over (not sticky), remove and replace with fresh adhesive.
- While installing tile on the external walls and floors, we need to provide the joints by creating spaces between the tiles and fill them up with flexible grout (In the absence of spacer joints, the surface movements can push tiles away from the substrate causing de-bonding of tiles)



Dry, dusty concrete slabs or masonry should be dampened and excess water swept off. Installation may be made on a damp surface. New concrete slabs shall be damp cured and 28* days old before application.







Check the laying substrate has no cracks, it is homogeneous and mature, totally clean and flat. Maximum deviation from flatness of 1mm per 2 meters length measured.







Place clean, potable water into a clean mixing bowl. Add powder into the mixing bowl. Use approximately 5.5 - 6L of water for 20 kg of powder.





Mix with a slow speed mixer to a smooth, trowelable consistency. Allow adhesive to slake for 5 minutes. Adjust consistency if necessary. Remix and apply with the proper sized notched trowel.



First apply the adhesive onto the back of the slab with a 3mm-tile trowel. The recommended adhesive is C2TE S1 and it must be spread over in one direction only.





To spread the adhesive on the substrate use a spreader with sloping notches (with a pitch of at least 10 mm) to get better distribution of the adhesive.



To spread the adhesive on the back of the tiles, on the other hand, use a spreader with smaller notches (square notches of at least 3-4 mm) so that almost 100% of the

The adhesive must be spread in the same direction on the back of the tile and on the substrate (in straight lines parallel to the short side of the tile).





To make handling and installing the tiles easier and safer, it is recommended to use runners and cross-members or a frame with suction cups.





Using the appropriate sucker frame, position the slab on the adhesive bed, being careful to maintain a minimum joint of 3mm.



Tap the slab with a rubber trowel for a complete fixing, ensuring the air is expelled. It is recommended to start from the center of the slabs and then move towards the edges.





Tap the slab with a rubber trowel for a complete fixing, ensuring the air is expelled. It is recommended to start from the center of the slabs and then move towards the edges.





Using the appropriate sucker frame, position the slab on the adhesive bed, being careful to maintain a minimum joint of 3mm.









Levelling wedges at each 50 centimetres of the slabs are recommended.





To make the installation task easier, use the special device gap closer for pulling over the slabs, available in the market.







To make this operation easier, a special positioning tool may be used to correct the width of the grout line between adjacent tiles and bring the tiles to the position required.







INSTALLATION ON WALL









IT IS RECOMMENDED TO USE A CLASS T ADHESIVE (WITH LIMITED VERTICAL SLIP) FOR THE WALL (EN 12004 STANDARD)











GROUTING

GROUT THE TILES WITH A SUITABLE GROUT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



GROUTING

WITH SANDED GROUT & UNSANDED GROUT

- Grout the tiles with a suitable grout in accordance with the manufacturer's instructions.
- Mix the grout in accordance with the manufacturer's instructions.
- Follow the recommendations for the powder-to-water ratio and ripening time to achieve optimal performance and quality.
- The 'open time' of the mixed grout must also be kept in mind. Once the open time has been exceeded the grout will begin to break down and will lose its adhesive strength. If exceeded, the grout may no longer be used.
- Water must not be added to grout that has become too dry, because doing so can have a severe negative impact on the quality and color.





TWO-COMPONENT ACID-RESISTANT EPOXY GROUT

WITH EXCELLENT RESISTANCE TO ACIDS AND EXCELLENT CLEANABILITY.

Preparing the joints

excess adhesive or mortar should be removed while still fresh.

most of its moisture.

TWO-COMPONENT, EPOXY-RESIN-BASED PRODUCT WITH SILICA SAND AND SPECIAL COMPONENTS,

- The joints must be dry, clean, free of dust and emptied at least 2/3 of the tile thickness. The
- Before grouting, make sure that the installation mortar or the adhesive has set and released
- Epoxy is not affected by the moisture on the surface; the joints should not be wet during work.

Preparing the mix

Pour the hardener (component B), into the container of component A and mix well until a smooth paste is obtained. For perfect mixing and avoiding overheating of the mixture, which could reduce working time, a low-speed electric mixer should be used. Use the paste within 45 minutes from mixing.

Applying the grout

Spread Epoxy with an appropriate rubber float, making sure the joints are completely filled. Use the same float, but on edge, to remove excess grout.

Finishing

After grouting with Epoxy, floors and walls should be cleaned immediately, before the product dries.

Wet the surface thoroughly and emulsify with an abrasive pad for cleaning joints (such as Scotch-Brite tile joint cleaning kit), making sure not to wash-out the joints. When cleaning walls, the cleaning pad should be fully soaked with water. The excess liquid can be removed with a hard cellulose sponge, and should be replaced when too full of resin. Use the same type of sponge for the final tooling of the grout.

It is very important that, once the finishing process has ended, no traces of Epoxy are left on the tile surface because it will be very difficult to remove. It is therefore necessary to frequently rinse the sponge with clean water during the cleaning process.





Attention: Use as little water as possible! If too much water is used during prerinsing, the grout lines can become saturated, reducing their quality and resulting in color variances. For sponging off the tiles SIMPOLO recommends the use of a wash boy (elongated pail with extraction rollers) with clean water and a sponge float. The water must be changed very frequently.





- Wet the sponge float in the wash boy and use the rollers to squeeze out the excess water. Slowly draw the sponge float diagonally across the tiles (this allows the sponge to pick up the residual grout).
- Rinse the sponge float in the wash boy after every sponging and squeeze out the excess water again.
- Repeat this process until the entire tiled surface is completely clean, and remember to change the water often.



CLEANING





To eliminate residues, use a water and tile cleaner buffer solution, following the amounts indicated on the product.




To remove additional residues, use a large toothed brush.



Rinse thoroughly with water.







How to Install/Set Plank Tile

1











Important

that the end of one does not meet the middle of another. This minimizes the effects of tile variations.





SURFACE PREPARATION

- Tile may be installed over most structurally sound substrates.
- Make sure surface is clean, smooth, dry and free of wax, soap scum and grease.
- Any damaged, loose or uneven areas must be repaired, patched and leveled.
- Remove any moldings, trim, appliances or anything that could interfere with installation.





LEVEL THE FLOOR TO PREVENT TILE DAMAGE

Preparing the subfloor with a self-leveling underlayment will help tile lay flat and prevent damage such as chipping and cracks.

> Activate Windo Go to Settings to act



LAYOUT

- Mark the center point of all four walls.
- Snap chalk lines between the center points of opposite walls. (Adjust if necessary.)
- Using tile spacers, lay out a row of loose tiles along the center lines in both directions. Leave space for uniform joints.
- TIP: If cuts leave tiles smaller than half of their original size, adjust the center line by snapping a new line a half tile closer to the wall. Repeat along other center line if necessary.





APPLYINGADHESIVE

STEP 3

Mix only enough adhesive or mortar to be used within 30 minutes.

Using the type of trowel recommended on the adhesive package, spread a 1/4 in. coat on the surface of one grid area, using the flat side of the trowel.

NOTE: Do not cover guidelines or a larger area than can be set in 15 minutes.

Use the notched side of trowel to comb adhesive into standing ridges by holding trowel at a 45° angle.

Remove excess adhesive, leaving a uniform, ridged setting bed.

For large format tiles, butter the backside of the tile to ensure proper fullcoverage. Use a medium bed mortar for tiles with a dimensional length greater than 15 inches on any one side.

NOTE: 90% mortar contact is recommended.







Straight = Correct

Swirls = Error

Spots = Error





USE A TROWEL DESIGNED FOR INSTALLING LARGE FORMAT TILE



BACK BUTTER EACH TILE TO GET FULL COVERAGE





USE A TROWEL DESIGNED FOR INSTALLING LARGE FORMAT TILE AND BACK BUTTER EACH TILE TO GET THIS FULL COVERAGE.



GOAL: 95% MORTAR COVERAGE

Next, ensure 95% mortar coverage under the tile to create a strong bond.

-



CUTTINGTILE

- Carefully measure tiles and mark with a pencil or felt-tip pen.
- Make straight or diagonal cuts with a tile cutter, curved cuts with a nipper (chipping away small pieces for best results), and fulllength curved cuts with a rod saw.
- Smooth out sharp-cut edges with a carborundum stone.



SETTING TILE



- Install tiles in the center, one grid at a time. Finish each grid before moving to the next. Start with the first tile in the corner of the grid and work outward. Set tiles one at a time using a slight twisting motion. NOTE: Don't slide tiles into place.
- Insert tile spacers, as each tile is set, or leave equal joints between tiles.
- Fit perimeter tiles in each grid last, leaving 1/4 in. gap between tile and wall.

- When finished, tap in all tiles with a rubber mallet or hammer and wood block, to ensure a good bond and level plane.
- Remove excess adhesive from joints with a putty knife, and from tile with a damp sponge.
- Do not walk on tiles until they are set (usually in 24 hours).

GROUTING JOINTS

- Using the instructions on the package, make enough grout to use in about 30 minutes.
- Remove tile spacers and spread grout on the tile surface, forcing down into joints with a rubber grout float or squeegee.
- Tilt the float at a 45° angle and remove excess grout from surface immediately with the edge of float.
- Tilt it at a 90° angle and scrape it diagonally across tiles.
- Wait 15–20 minutes for grout to set slightly, then use a damp sponge to clean grout residue from surface and smooth the
- grout joints, rinsing sponge often.
- Let dry until grout is hard and haze forms on tile surface, then polish with a soft cloth and wait 72 hours for heavy use.







AS A FINAL TOUCH, CHOOSE A STAIN-RESISTANT GROUT ENHANCE THE BEAUTY AND DURABILITY OF THE PLANK TILE.

