

4 Installation of Homogeneous vinyl tiles



This section is intended for the contract ranges of Polyflor tiles and not the Luxury Vinyl Tile ranges, which are detailed in their own specific technical manual.

On receipt of tiles, check that colours correspond to those ordered, that quantities are correct and there is no obvious damage. In particular, check that tiles are from one batch, if that was requested on the order. On arrival at site, the tiles should be stored, together with the adhesive, at a minimum temperature of 18°C for at least 24 hours prior to laying.

Inflammable adhesives require special storage conditions. Contact the adhesive manufacturer or see current literature for details.

Under normal conditions (outside temperature above 12°C) the tiles should be off-loaded from the pallet and stacked no more than five boxes high during the conditioning period. The stacks should be arranged to allow the air to circulate around stack on all sides. In cold weather (outside temperature below 12°C) the boxes should be opened and the tiles spread out in the area where they are to be installed. This will permit the tiles to acclimatise more

quickly and is especially important with high vinyl content products such as Polyflor Prestige PUR and Polyflor Mystique PUR.

To achieve best results, site conditions should be as described in BS 8203. A working temperature of between 18°C and 26°C is required for 24 hours prior to, and during, the laying period and for 24 hours afterwards. Conditioning areas and laying areas should be of similar temperature, to prevent thermally induced dimensional changes. In installations where underfloor heating is used, this should be switched off from 48 hours prior to installation until 48 hours afterwards. It should then be brought slowly back up to the working temperature, a maximum of 27°C. Adhesives capable of withstanding temperatures up to 27°C should be used. Where direct sunlight, sometimes in conjunction with underfloor heating, creates high surface temperatures on the floor, an approved epoxy or polyurethane adhesive should be used.

The work area should now be prepared to receive the vinyl tiles. Ensure all other trades have completed their work and removed all their equipment and materials. Remove all debris and sweep or vacuum the whole floor area. Check the condition of the subfloor and make good as necessary. Stone or power grind any cementitious subfloor to remove any "nibs" or ridges. Remove any surface contaminants that may affect adhesion. Sweep or vacuum again, prior to laying. If required, check moisture content of the subfloor and record the results and method used. Good lighting is essential.

It is important to note that commencement of work is deemed by many as acceptance of the site conditions as suitable for laying floorcoverings.

4.1 LAYOUT OF VINYL TILES

Although many floor layers regard vinyl tiles as being easier to lay than vinyl sheet, the layout of the tiles can be critical to the success of the installation. The regular form of tiles, especially when laid in contrasting colours, can accentuate deviations in the building line, emphasising the need for detailed planning of the layout. Many floor layers start in the main doorway, believing that the initial impression when entering a room is most important. However, working from the centre of the room and loose laying tiles to check the layout will make the final appearance correct from any viewpoint. This is especially important where a geometric design is incorporated into the floor.

4.2 MEASURING AND MARKING OUT

- A.** Measure the room to be laid in both directions, including any alcoves etc.
- B.** Mark a chalk centreline A-B, ensuring that it is square to the wall with the doorway.
- C.** Loose lay tiles away from the centreline A-B and check that no small strips will have to be laid at the perimeter of the room. If small strips do result, move the centreline in either direction, keeping it parallel to the line A-B, so that the perimeter tiles will only require a small piece cutting off.
- D.** Mark a chalk centreline C-D, ensuring that it is square to the line A-B. Check squareness with a large square, trammels or geometrically.
- E.** Loose lay tiles away from the centrelines C-D and check that no small strips will have to be

laid. Adjust centreline C-D as described for A-B. In Figure 11, by moving the centreline C-D towards the door, tile 6 would only require a small amount to be trimmed off, as would tile 8 on the opposite wall.

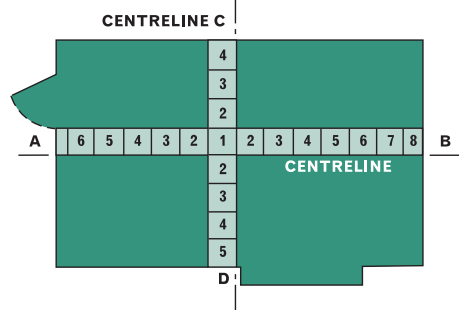


Figure 11 Laying out vinyl tiles

4.3 SPREADING THE ADHESIVE

If the subfloor is porous, it should be primed using a primer compatible with the adhesive, as recommended by the adhesive manufacturer.

The amount of adhesive that can be spread at any one time depends upon the prevailing site conditions, such as temperature, humidity and throughflow of air - all of which affect the open time of the adhesive.

Adhesive manufacturers provide details of the open time, and their instructions should be followed. Ideally, the floor area should be divided into workable sections, leaving the perimeter tile areas unadhered until the main body of the floor has been laid.

As an alternative to wet set adhesive, a pressure sensitive acrylic adhesive can be used. Although initially more expensive, half a large room can be spread at one time and the excellent "tack" of the adhesive makes it ideal for tiles. Installations that involve a large

amount of fitting also tend to be cleaner, since the tiles are laid into dry adhesive. There is an added benefit with this adhesive in the fact that once the adhesive has dried, the marking out on the floor can be seen through the adhesive film.

4.4 ADHERING THE MAIN FIELD OF TILES

The decoration of tiles on some product ranges is randomly distributed and in marbled styles can be heavier on some tiles than others. To prevent "heavy" and "light" areas, the tiles should be unboxed and, if required, "shuffled" whilst waiting for the adhesive to "go off".

Once the adhesive is ready to accept the tiles, place the first tile at the starting point, which is the intersection of the two centrelines. Press well down in the centre of the tile and then run a thumb around the edge, ensuring that all air is expelled.

Place the next tile in position, alternating the direction of marbling and colour if necessary, and proceed down the centreline, laying two tiles wide i.e. one tile either side of the centreline. It is essential to keep the tiles exactly on the centreline.

Note: Non-directional tiles do not need "shuffling", nor do they require laying in alternating directions.

Repeat the sequence along the centreline, at right angles to the first. Then, working from the completed centrelines, finish the section, taking care that tile bond is maintained throughout. Any excess adhesive should be removed as work proceeds. When a section has been laid, except for the perimeter, it should be thoroughly rolled in both directions with a 68kg articulated floor roller. Repeat for each

section until the main field of tiles has been laid.

4.5 CUTTING THE PERIMETER TILES

Three techniques are commonly used for cutting perimeter tiles. The choice is mainly dependent upon the runout of the wall.

4.5.1 Overlapping Method

Used when there is little or no run out of the abutting wall.

A. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the decoration runs the correct way.



Figure 12 Measuring using an overlapping tile

B. Place another full tile on top of the tile to be cut with its "top edge" against the wall or set-in coved skirting (Figure 12).

C. Scribe a line onto the tile to be cut, using the "bottom edge" of the top tile as a guide.

D. Cut the tile to the scribed line, loose lay into position and check the fit. Repeat along the whole wall.

4.5.2 Scriber Method

Used when the wall run out is quite severe or when the wall profile cannot be picked up using a straight edge.

A. Place the tile to be cut exactly over the last tile laid, ensuring the colour is correct and the

decoration runs the correct way.

B. Set the bar scriber to the size of tile being laid.

C. Trace the profile of the wall onto the tile to be cut, ensuring the bar scriber is kept upright and square to the edge of the tile.

D. Cut the tile to the scribed line, loose lay into position and check the fit. Repeat along the whole wall.

Note: Both the Overlapping and Scriber Methods can be used to fit around projections such as door frames. Similarly, a template can be made or templating guide containing movable pins used for awkward shapes.

4.6 ADHERING THE PERIMETER TILES

Once a wall edge has been fitted and loose laid, turn all the tiles inward so as not to lose their position. Spread the adhesive right up to the edges. When the adhesive has lost sufficient moisture, lay the perimeter tiles. Wipe up excess adhesive as work progresses. Roll well with a 68kg articulated roller. Use a small hand roller in areas that are inaccessible. Repeat the process for all four walls. Finally, the whole floor should be given a second rolling, approximately one to four hours later.

4.7 INSTALLING TILES IN LARGE AREAS

Maintaining a clearly defined straight line over long distances can be difficult and often leads to inaccuracies. To eliminate this problem, an alternative technique is used when laying tiles in large areas:

A. Establish the central starting point, as described previously, minimising small cuts on perimeter tiles.

B. Lay the first pyramid of tiles from the centrelines, using the sequence shown in

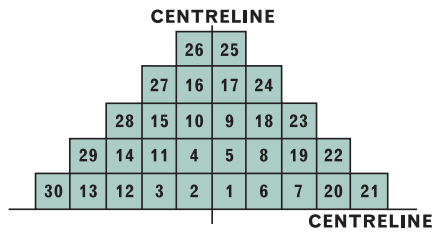


Figure 13 Pyramid layout

Figure 13. Ensure a close bond is maintained at all times.

C. Repeat this sequence on the opposite side of the centreline shown as area 2 in Figure 14.

Continue working in larger and larger pyramids, as shown in Figure 14, until only the perimeter tiles require fitting.

Note: Construction of a pyramid should always start at the centre of the baseline, working in the same sequence as shown in Figure 13.

D. Fit the perimeter tiles as described in Section 4.5.

4.8 WELDING OF TILES

Polyflor recommend that all 608mm tile installations be heat welded, as undulations in the subfloor can cause the tiles to go out of bond, resulting in slight but unacceptable gaps. Heat welding is described in Welding Vinyl Flooring.

The use of a contrasting weld rod can be used to create simple design effects. To calculate how much weld rod is required for the installation, multiply the number of square metres laid by 3.3, to give you the number of linear metres of weld rod.

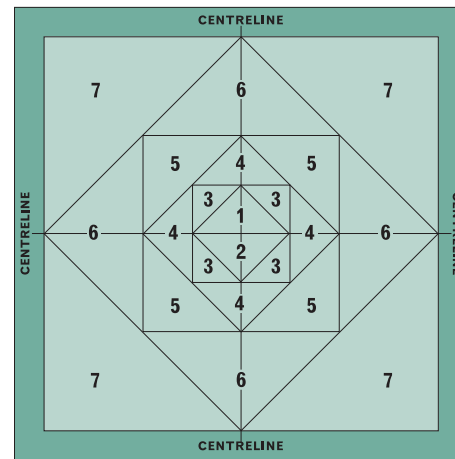


Figure 14 Floor layout