



INSTALLATION INSTRUCTIONS



terra a tiles

Installation Instructions



Coverage when laid incl. 3 mm joints = 442 mm equating to 0.19536 m²





General points:

Areas of application

As a general principle, the use or installation of construction products is governed in certain cases by technical standards and guidelines prescribed by law. Construction products must be approved by the building authorities for many areas of application. **terra** $a \ge$ tiles have not yet been approved as such.

Where can terra a be used? (approval not required)

On end-to-end load-bearing foundations such as flooring, e.g. on terraces, garden paths, as a swimming pool surround, carport base, on concrete balconies, etc.

Where must terra a not be used? (approval required!)

terra $a \ge m$ ay not be used as a self-supporting floor covering (i.e. without end-to-end load-bearing foundations), e.g. as a base for a balcony, bridge, landing stage, gangplank (ramp) or for an elevated terrace with a drop of over 1 m.

Possible solution for the above cases:

A load-bearing foundation (sufficiently assessed in terms of its structural integrity) must be built to support the **terra** covering, e.g. a steel area grating (see illustration on last page).

Should you have any questions about this possible solution or other options, please do not hesitate to contact us for advice.

Laying variations

The tiles can be laid in a variety of ways: chessboard-style or with the ridges aligned, offset or a combination of the two. Where they are laid in an offset pattern, the tiles at the edge must be halved in every second row.

Cutting terra_a

Use conventional carpentry/joinery tools. For machine sawing we recommend carbide-tipped saw blades with a high teeth-per-inch rating and a tooth pitch of 10–15. Tooth formation: alternate top bevel or hollow tooth, flat top Cut edges must be deburred.

Screws

Use stainless steel screws only. For pre-drilled screw holes in clip batten: terra∄a ≥ button head screws 4.0 x 30 mm Secured from above: terra∄a ≥ flat-head screws 4.0 x 50 mm These screws can be obtained from WERZALIT.

Ventilation

Underside

The sub-framework must be ventilated end-to-end in the direction of the bars. For this a gap of at least 20 mm on each side is required. This applies in particular when connecting to soil or turf. For example, a good way to stop soil slippage is an all-round enclosed edge. The space between the bars must not be filled in.



Expansion joints

Fluctuations in temperature and moisture levels cause the terra $a \ge 1$ tiles to expand and contract in every direction. This must be factored in when laying the tiles by using expansion joints.

When laying between walls or other demarcations, an expansion joint of at least 3 mm per running metre (resp. a ventilation gap of at least 20 mm) should be maintained on each side.

Maintenance

If necessary, the floor can be scrubbed down with water. If using high pressure cleaners, rotary nozzles must not be used. The slits in the joints must be cleaned, depending on the extent of the soiling, and the simplest way is by means of a water jet.

Changes in colour

terra[a] tiles are dye penetrated and fade naturally in the course of time, without losing the basic character of their colour. As these are wood-based products, colour variations over time, caused by UV rays and moisture, are natural and to be expected. In particular, depending on atmospheric conditions, there can be a change in colour in the first weeks and months, which does not indicate defect.



Preparing the foundation - creating a gradient

A load-bearing consolidated foundation is essential. A gradient of at least 1% away from the house is absolutely essential. It is beneficial - but not absolutely essential - to lay the tile surfaces at an incline, as the tiles are laid with partly open joints and the water can run off via the joints. On unconsolidated soil:

Excavate a bed at least 20 cm deep, fill with a 15 cm layer of ballast or natural concrete, arrange gradient away from the house of at least 1%. Cover with a 5 cm layer of chippings and spread out evenly. To support the sub-framework bars we recommend laying concrete slabs, e.g. 20x20x5 cm. It is essential to provide drainage for the foundation, in order to prevent moisture build-up.

On adequately consolidated soil:

Remove vegetation, level off the surface and establish a gradient away from the house of at least 1%. Then cover with a film layer (construction sheeting) to protect against rising damp and divert the water and tuck in at the edges. We also recommend that a drainage system should be installed here as well. **On a firm and level floor covering, e.g. concrete slabs**

(1)

Even with this type of foundation, a gradient of at least 1% is required to provide adequate drainage.

Laying procedure

(1)

Sub-framework

In principle, the sub-framework must be floating (not fixed to the foundation). Always lay the sub-framework bars flat (bar width 71.5 mm).

Lay the WERZALIT sub-framework bars on the supporting plates in the direction of the slope. For stabilisation of the bars against slippage during assembly, they are to be bolted together with 2 crossbars (e.g. roof battens).

Bar centre distance:

For normal loads exactly 442 mm

For carport bases, additional intermediate bars must also be laid, always in the middle.

Recommendation:

In order to maintain a precise distance between the bars, we recommend laying distancing bars of 370.5 mm in length between each of the bars until they are secured under one another with the cross battens.

Support distance (sub-structure plates) max. 500 mm For heavy loads (carport bases) max. 250 mm

Applies generally to all types of installation

Secure the first tile – see following points. The next tile is then inclined at a slight angle (the 2 clip bars are pushed under the edge of the previous tile when doing this), is pressed down and secured to the bar with 3 countersunk screws.

From the second row on, every tile must be inclined at a slight angle in such a way that it is made to fit onto the clip bars of the previous row when pressed down. The tile is tapped home into the clip bar using a wooden bolster and is secured with 3 screws.

The screws should be secured with finger-tight pressure only.

To secure the tile/starting profile partly visibly, it must be pre-drilled with a 4 mm \emptyset and the screw head is countersunk.

2

Laying without edge profiles

In order to obtain a smooth and enclosed lateral edge to the tiles, a strip of 33 mm must be cut off each edge plate (on the corner plates this applies to 2 sides). The first and last bar centre distance must be 365 mm. The edge tiles are laid out along a plumb line. First, a corner tile is visibly screwed on at the outer corner and secured with 3 countersunk screws through the pre-drilled holes in the clip bars. The next tile is inclined at a slight angle to the previous tile, is pressed down and then secured with 3 screws. This continues as the surface is laid out row by row.

Bstallation with a surrounding edge of starting profiles

terra $a \ge a$ starting profiles are used for this purpose. In this case, one additional sub-framework bar must be laid on the long side of the bar at the edge each time: Bar centre distance = 100 mm, and then 442 mm again.

A longitudinal butt is screwed crossways onto the sub-framework. Distance to the proposed external edge of the edge profiles = 127 mm.

The first corner tile is positioned on the longitudinal butt and is secured once visibly at the outer corner and with 3 countersunk screws through the pre-drilled holes in the clip bars.

The next tile is inclined at a slight angle to the first tile, is pressed down and secured again with 3 screws. Continue as described in the paragrap **"Applies generally to all types of installation".** In this way, one row after another is secured.



terra a tiles

(4) Edge profiles

After laying the entire area, all the starting profiles are cut to the required length, for which it is essential to maintain an expansion joint of 3 mm per running metre on each side. The profiles are then tapped home into the tile retaining clip one after the other and visibly screwed to each bar at the edge.



5

Recommended solution for load-bearing foundation Example: Balcony with timber supporting beams.

Install hot-dip galvanised steel strip grating between the beams. The grating must be structurally designed to bear loads of 5 KN/m2. Industrial manufacturers supply the grating complete with specifications on the permissible load. Example:

Meiser UK Ltd 1B Poplar Road Broadmeadow Industrial Estate Dumbarton G82 2RD Scotland Tel. +44 (0) 1389 765 000 Fax +44 (0) 1389 761 166 info@meiser.co.uk

In the illustration, the grating is installed and clamped between the beams by screwing 40/40/5 steel support brackets onto the sides of the beams. The bracket must be screwed onto the beams with (stainless steel) hexagon wood screws. Example based on a beam spacing of approx. 700 mm:

- Screws 8 x 70; Spacing of screws max. 250 mm
- Screws 10 x 80; Spacing of screws max. 350 mm.

Thread up to head, the screw holes must be pre-drilled.

Top edge of the beam must be flush with top edge of grating. The water run-off layer is laid on this support and the sub-framework bar is laid in turn on top of the water run-off layer.

Warning

terra[a] tiles are water-permeable around the joints, therefore it is essential to install an end-to-end water run-off layer, e.g. a sump pan or suitable underlay, below the level of the bars.

Any questions?

Our $\ensuremath{\mathsf{Project}}$ support department will be happy to help with any further queries.



Sub-framework bar terraZa tile



We reserve the right to make changes within the framework of technical advances.

werzalit

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