

Tiling / Installation

Non-vitreous tiles and non-vitreous tiles with a ceramicplus finish

EN 14411 Group B III - dry-pressed ceramic tiles and slabs with high water absorption $E > 10\%$

Installation

Usually laid according to the thin-bed method in compliance with DIN 18 157 with a C1 adhesive used in accordance with DIN EN 12004.

Joints

In order to compensate for the tolerances resulting from the manufacturing process, we recommend including corresponding joints when laying the tiles, depending on the size of the tiles and the desired appearance. Information on joint widths is to be found in DIN 18 157 part 1 - 3 – edge length up to 150 mm, joint width of 1.5 - 5 mm, 2 - 8 mm for tiles wider than 150 mm. In general, the joint width is the result of the difference between the nominal size and the work size.

Villeroy & Boch recommends a minimum joint width

of approx. 3 mm.

In addition to compensating for the above-mentioned tolerances, the joint also prevents water and dirt from penetrating into the tile covering. A cement-based joint prevents the penetration of bacteria, mould, etc.; the alkaline cement-based environment impedes growth in the joint.

The joint is part of the covering, which is why the nominal tile dimension (including joint) is the basis for calculating the material requirement.

Cutting

Dry cutting is generally possible by scoring with a Widia wheel, applying even pressure. We recommend running and slightly blunting new cutting wheels prior to actual use by carrying out a number of test cuts. Should splintering occur, so-called fine cutting wheels are available from dealers for dry cutting purposes. Special diamond-tipped wet tile cutters are recommended to ensure a clean cut in

critical cutting work.

Visible cutting edges should be broken. As there are no standards regulating the subsequent processing of ceramic tiles, specialist companies are responsible for determining the cutting properties of the tile before laying.

Cut-outs

To create cutouts, a small cutout grinder and a special tile diamond-cutting disk should be used to make a cross-cut on the reverse. The centre of the tile is carefully knocked out using the tip of a tile hammer.

When the hole is large enough, we recommend that the rest be removed with a pair of parrot nippers. The water-jet technique is recommended for complex cut-out work

Drilling

Possible using carbide drills in dry state. To this end, a hardened pointed punch is used to pick away a little material at the centre point of the hole and a carbide drill or a glass ceramics drill is then used.

Exact drill holes can be produced in all substrates using a hollow drill with a diamond bit in dry and

wet drilling processes.

When drilling in particular, care must be taken to ensure that the tile is laid professionally on a non-elastic base without any cavities, otherwise tiles could break or crack.

Tiling / Installation

vilbostone - porcelain stoneware and glazed vitreous and porcelain stoneware tiles

EN 14411 Group B Ia - Dry-pressed ceramic tiles and slabs with low water absorption E 0.5%

EN 14411 Group B Ib - Dry-pressed ceramic tiles and slabs with low water absorption 0.5% < E 3%

Laying

The tiles are usually laid according to the thin-bed method in compliance with DIN 18 157 with plastic-modified C2 adhesives used in accordance with DIN EN 12004.

When tiling outdoors, a suitable method of laying should be chosen to avoid cavities forming, e.g. the

combined method (buttering – floating method) with a plastic-modified C2 adhesive used in accordance with DIN EN 12004 or using special porcelain stoneware adhesives / flow-bed adhesives in the simple floating method.

Joints

In order to compensate for the tolerances resulting from the manufacturing process, we recommend including corresponding joints when laying the tiles, depending on the size of the tiles and the desired appearance. Information on joint widths is to be found in DIN 18 157 part 1 - 3 – edge length up to 150 mm, joint width of 1.5 - 5 mm, 2 - 8 mm for tiles wider than 150 mm. In general, the joint width is the result of the difference between the nominal size and the work size.

Villeroy & Boch recommends a minimum joint width of approx. 3 mm.

In addition to compensating for the above-mentioned tolerances, the joint also prevents water and dirt from penetrating into the tile covering. A cement-based joint prevents the penetration of bacteria, mould, etc.;

the alkaline cement-based environment impedes growth in the joint. If there are any slight differences in height in the tile covering, the joint minimises the risk of the edges or corners chipping during use (e.g. when moving heavy suitcases with wheels or other heavy loads over the covering).

In special areas, such as rooms exposed to chemicals, industrial kitchens, swimming pools, etc. special purpose adhesives / grouting materials may be required. In such cases, it is best to contact the Deutsche Bauchemie organisation first.

The joint is part of the covering, which is why the nominal tile dimension (including joint) is the basis for calculating the material requirement.

Cutting

Dry cutting is generally possible by scoring with a Widia wheel, applying even pressure. We recommend running and slightly blunting new cutting wheels prior to actual use by carrying out a number of test cuts. Should splintering occur, so-called fine cutting wheels are available from dealers for dry cutting purposes. Special diamond-tipped wet tile cutters are recommended to ensure a clean cut in critical cutting work. Visible cutting edges should be broken.

As there are no standards regulating the subsequent processing of ceramic tiles, specialist companies are responsible for determining the cutting properties of the tile before laying.

Special features:

Glazed vitreous tiles are high-glaze products whose dry cutting properties may vary. Hard glazes possess varying stress curves. Consequently, when scoring the tile, particularly with a new Widia wheel, splintering of the glaze may occur; this can generally be avoided by changing the amount of pressure applied during cutting.

Tiling / Installation

vilbostone - porcelain stoneware and glazed vitreous and porcelain stoneware tiles

Cut-outs

To create cutouts, a small cutout grinder and a special tile diamond-cutting disk should be used to make a cross-cut on the reverse. The centre of the tile is carefully knocked out using the tip of a tile hammer. When the hole is large enough, we recommend that the rest be removed with a pair of parrot nippers.

So as not to have to knock out the centre of the tile, a tile cutter is used to cut the tile through the centre of the specified hole and the pieces of both parts are removed with the parrot nippers.

The water-jet technique is recommended for complex cut-out work.

Drilling

Exact drill holes can be produced in all substrates using a hollow drill with a diamond bit in dry and wet drilling processes.

When drilling in particular, care must be taken to ensure that the tile is laid professionally on a non-elastic base without any cavities, otherwise tiles could break or crack.

Drills recommended by Villeroy & Boch:

1. Wet drill (hollow drill with diamond bit) for permanent professional use

1.1 Marcris Diamantwerkzeuge

Karl-Benz-Straße 8 · 79761 Waldshut-Tiengen · Fon: 07741-96672-0 · Fax: 07741-96672-99

1.2 Karl Dahm & Partner

Ludwigstraße 5 · D-83358 Seebruck · Fon: 08667-8780 · Fax: 08667-878200

1.3 Seelbach Werkzeuge GmbH

Hauptstraße 20 · D-56477 Rennerod · Fon: 02664-9128-0 · Fax: 02664-9128-10

1.4 RUBI Deutschland GmbH

Sattlerstraße 2 · D-30916 Isernhagen-Kirchhorst · Fon: 02159-8144929 - www.rubi.com

2. Wet drill (hollow drill with diamond bit) for private use

2.1 Marcris Diamantwerkzeuge

Karl-Benz-Straße 8 · 79761 Waldshut-Tiengen · Fon: 07741-96672-0 · Fax: 07741-96672-99
approx. 30-60* holes/drill

2.2 Alpen-Maykestag GmbH

Hansaallee 201 · D-40549 Düsseldorf · Fon: 0211/537550-0 · Fax: 0211/593573

Up to approx. 10 holes / drill

3. Dry drill

3.1 Marcris Diamantwerkzeuge

Karl-Benz-Straße 8 · 79761 Waldshut-Tiengen · Fon: 07741-96672-0 · Fax: 07741-96672-99

3.2 Keil Werkzeugfabrik

Postfach 1158 · D-51751 Engelskirchen · Fon: 02263/807-0 · Fax: 02263/807-333

3.3 Berner Profi Point Berlin

Meeraner Straße 5-7 · D-12681 Berlin · Fon: 030/6310562 · Fax: 030/6310561

3.4 RUBI Deutschland GmbH

Sattlerstraße 2 · D-30916 Isernhagen-Kirchhorst · Fon: 02159-8144929 - www.rubi.com

* No. of holes depends on the drill, rpm, speed, amount of water and type of tile