Building boards – Interior

Technical Data Sheet

CODEMARK®
Australia
Certificate CM20134

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100 % waterproof wedi Building board

General product description

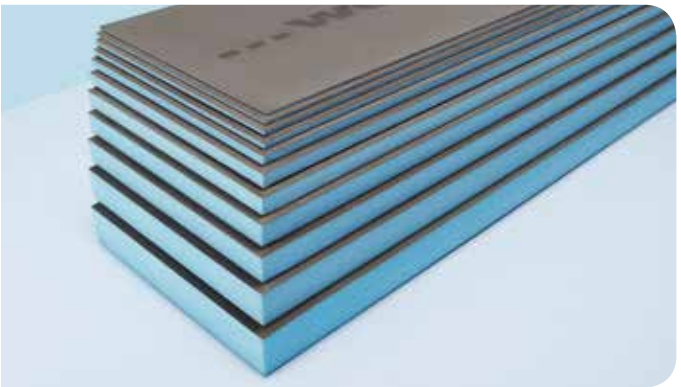
The wedi building board has a blue core made from rigid extruded polystyrene foam. The rigid foam is reinforced with glass fibre (with alkali-resistant finish) on both sides and coated with a polymer-modified cement.

Applications

With its special properties, the wedi building board has a wide variety of applications:

- Carrier element for laying tiles, slabs and natural stone floor coverings using the thin-bed method
- Adhesive surface for applying plaster, tile adhesive and other materials
- Moisture protection
- Effective heat insulation
- Design element
- Composite sealing with tile and slab coverings of load class A and B (directly loaded walls and floors in rooms in which tap or cleaning water is used very frequently or for long periods, walls and floors of indoor and outdoor pools that are filled with water with the properties of drinking water). More info available at www.wedi.eu

wedi building boards are approved for indoor use in rooms at normal temperature. Contact your wedi application specialist for advice on special applications (swimming pools, freezer facilities, outdoor areas etc.). wedi building boards are approved for use on floors in rooms with an ordinary residential load.



Product properties

All wedi building boards can be applied to almost any surface. They are waterproof, heat insulating, versatile, lightweight and dimensionally stable, and they can be cut, shaped and installed quickly.

Surface requirements, laying

Information on the processing and surface requirements can be found in the „General guidelines for use of wedi building boards, wall and floor applications“.

Form of delivery and storage

- Boards on pallets
- In principle, wedi building boards should be stored flat irrespective of their thickness. They should be protected against direct sunlight and moisture.

Technical Data of Building Board

Waterproofness of Assembled System Australia	CodeMark CM20134
Waterproofness of Assembled System New Zealand	CodeMark CM20221
Tensile Strenght (Thinset Mortar to wedi Coating to Foam (ASTM C297)	0.45 N/mm²
Shear Strenght (ANSI A118.10-1999)	28 day Shear Stregnth: 0.65 N/mm² 84 day Shear Strenght: 0.68 N/mm² 100 day Shear Strength: 0.67 N/mm²
Capillarity	0
Flexural Strength (ASTM C947)	4.32 N/mm²
Robinson Floor Tester (ASTM C627)	Heavy duty commercial use, passed *
Temperature Limits	-50 C to + 80 C
Long-term compressive strength (50 years) ≤ 2% compression EN 1606	0.08 N/mm²
Compressive resistance or compressive strength at 10% compression EN 826	0.25 N/mm²
Dynamic Impact Test (10 mm board attached to 450 mm timber studs NCC 1 Spec C1.8)	Passes
Max. hanging load when wedi is used on the ceiling	88kg/m² *
Max. hanging load when wedi is used on Timber Wall Studs	113kg/m² *
Fungus & Bacteria Resistance (ASTM G21)	No Growth, Passes
Drain Assembly Kit, WaterMark	Passes
Weight for Building Board (2500 × 1200 × 10 mm)	10.1 kg

* Consult with wedi on proper substrate preparation, tile and setting material choice to design for performance

** When fastened with wedi hardware/washers in accordance with wedi guidelines

Thermal insulation values of the Building Board

Nominal Thickness	R-Value	U-Value W/m² x K
4	0,68	1,47
6	1,03	0,97
10	1,72	0,58
20	3,44	0,29
50	8,6	0,12

1) When determining the U-value, only wedi building board and heat transmission resistance $1/\alpha_i$ and $1/\alpha_a$ for external walls are taken into account. In specific applications, the existing masonry and other layers must also be included.

Surface design

Ceramic coverings

Ceramic coverings offer various possibilities for wall and floor design. Depending on the intended use and personal taste, there is a wide variety of tiles and boards with different shapes, colours and materials. Here, the wedi building board is the perfect carrier element for ceramic coverings as the tile can be installed directly to the board surface without any additional steps needed.

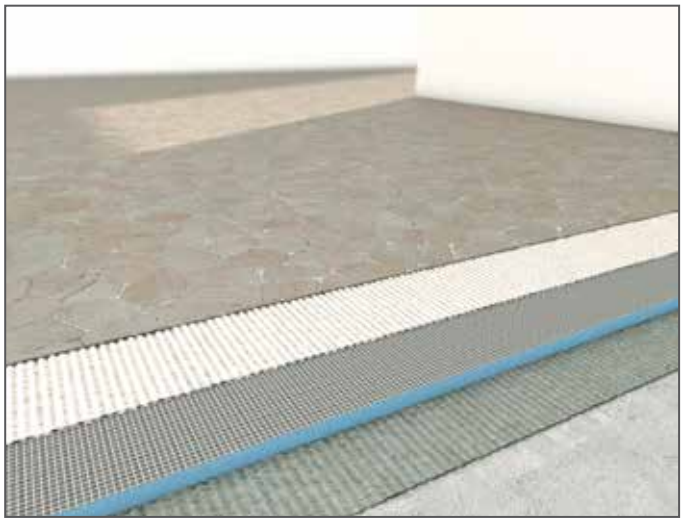
Plasters and fillers

Today, plasters are not only used for creation of a plain surface for tiling, painting or wallpapering, but they also represent a visual design element. Also here, the wedi building board is the perfect substructure.

Important information:
Contact the wedi application specialist for advice on areas with shock loads. Plasters containing gypsum require priming of the building board.

Natural stone coverings

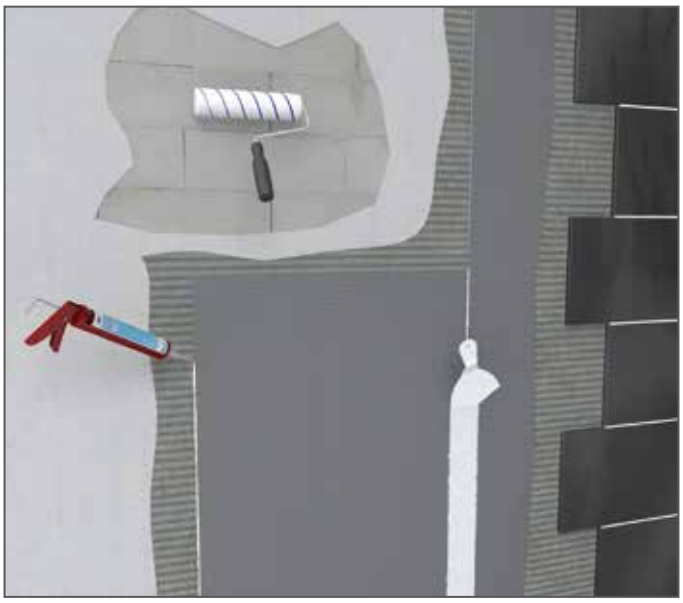
Natural stone coverings have a very particular flair. They are made from natural stones and maintain their visual appearance as they are neither ground nor polished. This results in special characteristics such as the irregular colouration or pattern. wedi building boards are an ideal carrier element and allow for easy and fast installation.



Laminates/ready-to-lay parquets

Laminates and ready-to-lay parquets are an alternative to ceramic floor coverings. Laminate is a comparatively low-priced material that is only coated with a decorative layer; parquet is a wooden flooring that – depending on quality – may be very durable. Both floor coverings are available in many different wood designs and colours as well as various qualities. Also here, the wedi building board is the perfect carrier element. Where the laminate is laid as a floating floor.

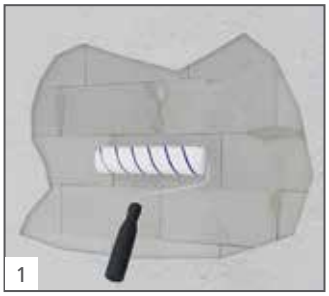
Sustainable surfaces



When people refurbish old bathrooms which are in need of renovation, they often have to consider what to do with the old wall coverings, e.g. walls tiled to half height. wedi building boards offer simple solutions to this. The building boards most commonly used are the thicknesses 4 mm or 6 mm because they can be applied flush to adjacent tilework, leaving the tradesman with a clean, level surface to work with.

wedi system components:

- wedi building board
- wedi joint sealant

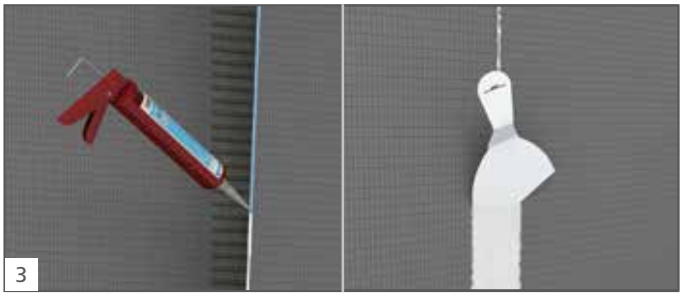


1

Clean the surfaces underneath before starting processing and, if applicable, apply a primer and level any present cavities.

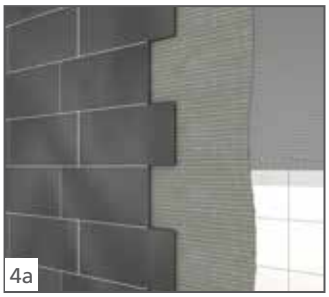
2

Fix the building boards, applying tile cement all over and align.



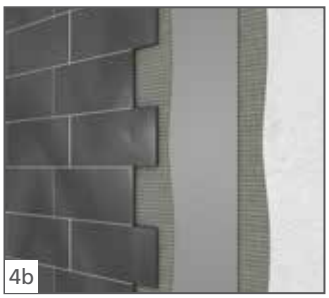
3

In Wet areas use the wedi Joint sealant in between two joints to connect two boards together. In wet areas, use a second beat of the joint sealant on top of the seam so that a minimum of 20 mm of the sealant is showing on both sides of the seam.



4a

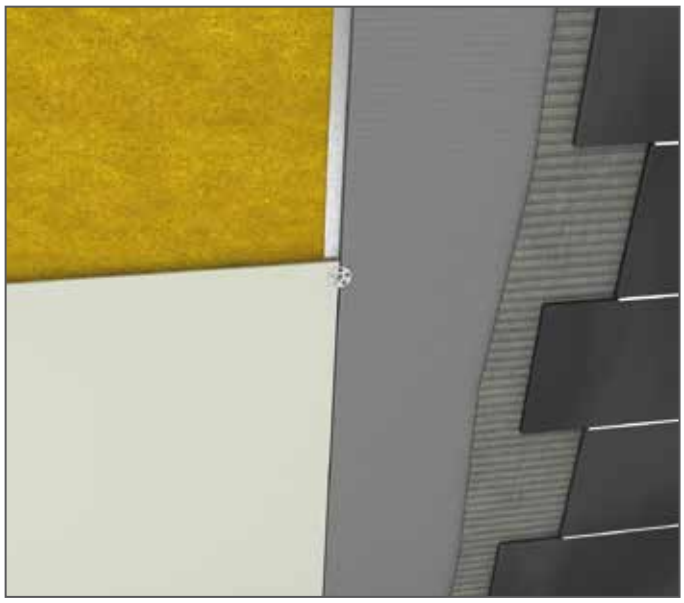
Whether the building boards are only used on top of the old tiles or …



4b

… are used on the whole surface, they can then be tiled on or plastered as normal.

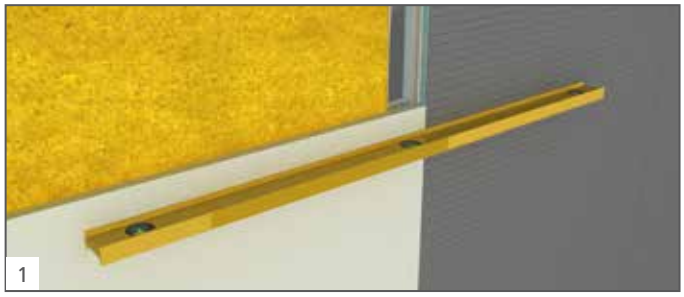
Flush transitions to plasterboard



wedi building boards with a thickness of 10 mm are a flush transition and very reasonable continuation of adjacent plasterboard surfaces in the splash water and wet areas of humid rooms. Contrary to common plasterboards, wedi building boards 10 mm are impermeable to water and thermally-insulating, and do not require any additional waterproof coating. wedi building boards prevent the unpleasant feeling of cold walls in the shower area and reduce the build up of steam and condensation.

wedi system components:

- wedi building board
- wedi fastener system

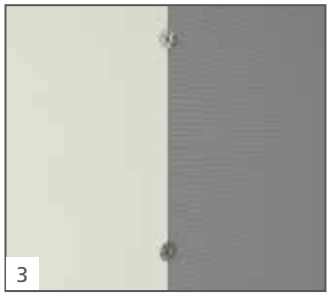


1

After cleaning the wall, align the wedi building board flush up to the plasterboard using a spirit level.

2

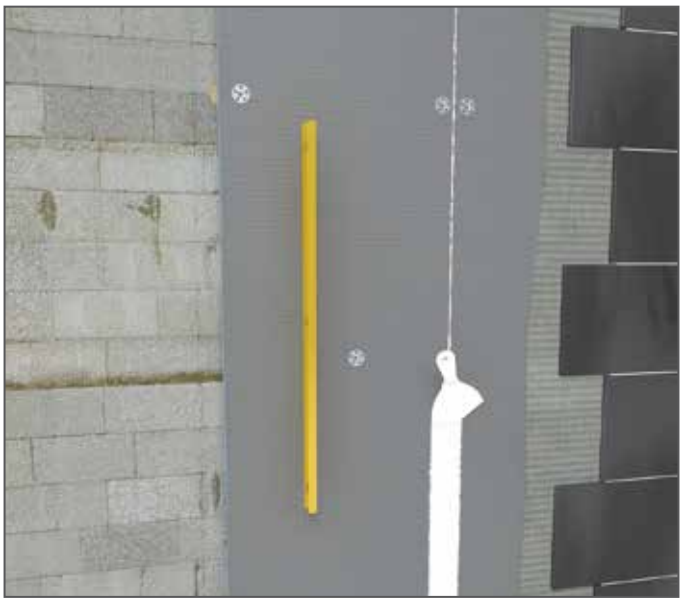
Fix the aligned wedi building board using wedi Tools washers and wood screws.



3

The tiling or plastering can then be carried out.

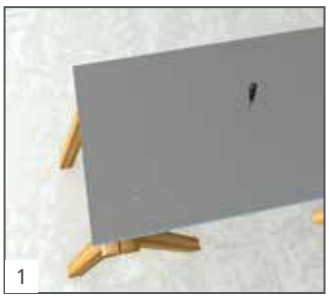
Uneven substrates



wedi building boards with a thickness of 20 mm or more are used on walls which are extremely uneven. Regardless of how old and dilapidated the old substrate is, you can create clean, even walls which offer lasting protection against moisture and insulate the room too.

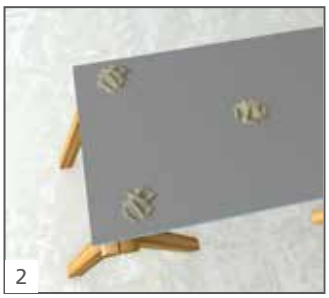
wedi system components:

- wedi building board
- wedi Tools washers
- wedi joint sealant
- wedi Tools metal or plastic dowel



1

Use a screwdriver to punch 8 holes (around 5 per sqm for ceramic tiles, increase to 8 per sqm for natural stone) in the wedi building board.



2

Then apply dabs of flexible medium-bed mortar over hole markings.

3

Position the building board on the wall; tap it with a rubber hammer and align it. Then ,using a number 8 drill bit, drill through the board and the blobs of adhesive into the substrate behind.

4

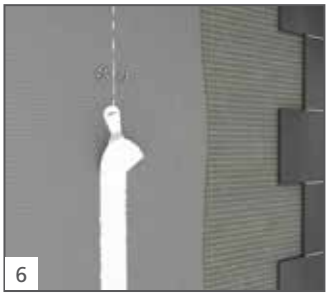
Push wedi Tools dowels through the blobs of adhesive and into the pre-drilled holes but do not hammer them in until the blobs of adhesive have hardened.

5a

The minimum dowel penetration depth in the load-bearing surface is 35 mm.

5b

If the surface shows signs of excessive unevenness, the remaining parts of the building board can be used as lining.

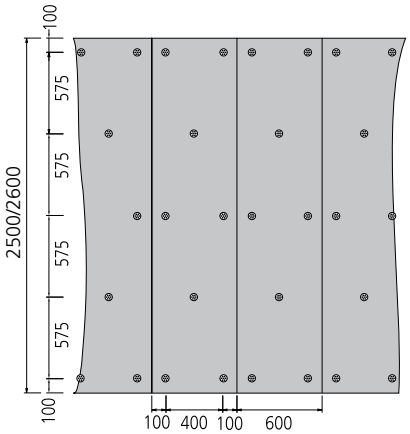


6

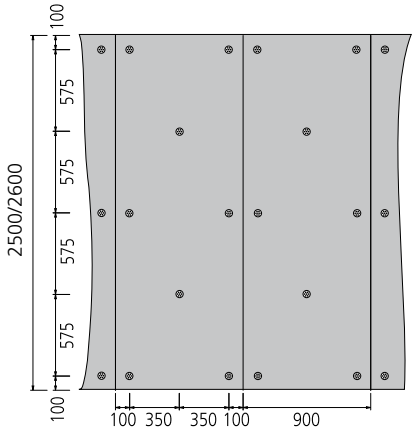
In wet areas cover the seams with the wedi Joint Sealant of a minimum of 20 mm on both sides of the seam.

Please note:
The blobs of mortar must not exceed the max. layer thickness of the mortar.
Detailed information on sealing is available in the wedi brochure „Sealing and decoupling“.

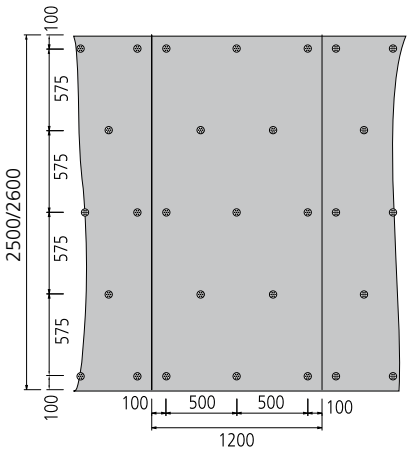
Arrangement of dowels and screws



Application: BA 20 on clots of mortar with dowelling.



Application: Laying using dowels and clots of mortar from 20 mm of a BA XL.

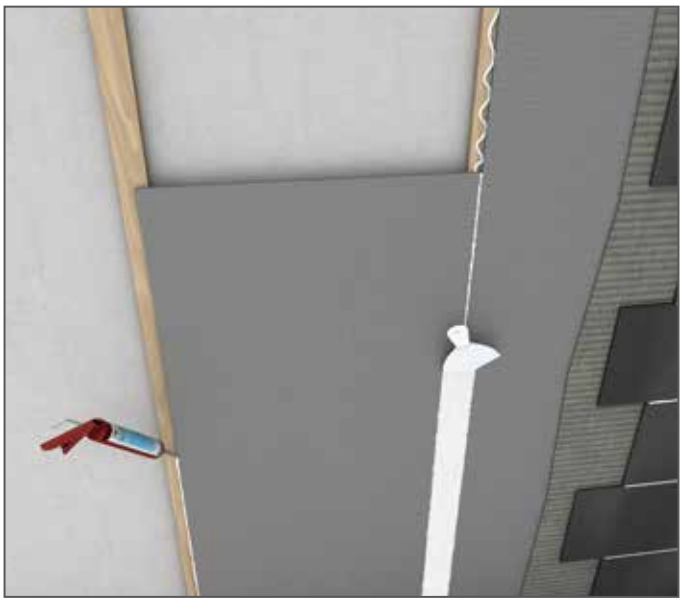


Application: Laying using dowels and clots of mortar from 20 mm without BA XXL.

Please note:
The building boards can also be installed in a horizontal orientation.
Here, placement of dowels is identical.

BA = wedi building board

Wooden and metal frameworks



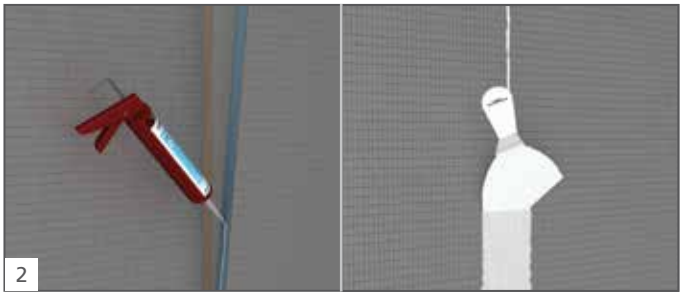
wedi building boards can also be used with wooden and metal frameworks. In such casese, wedi building boards with thickness of 10 mm or more are used for timber stud spacing of maximum 450 mm. When the Timber Stud spacing is 600 mm apart, you have to use a wedi building board with a minimum thickness of 20 mm.

wedi system components:

- wedi building board
- wedi building board XL/XXL
- wedi Joint Sealant
- wedi Tools washers

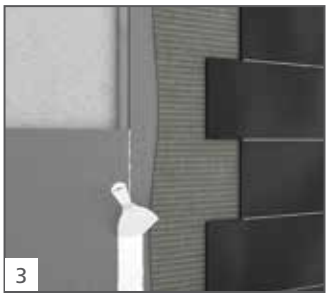
1

Tightly screw the building board to the wood or metal stud frame using wood or drywall screws and wedi Tools insulating board discs.



2

In wet areas, apply the wedi Joint Sealant in between two joints. Then firmly press the boards to each other leaving no gap. At the end, apply a second beat of the wedi Joint Sealant on top of a minimum of 20 mm on each seam and on top of all the fixings.

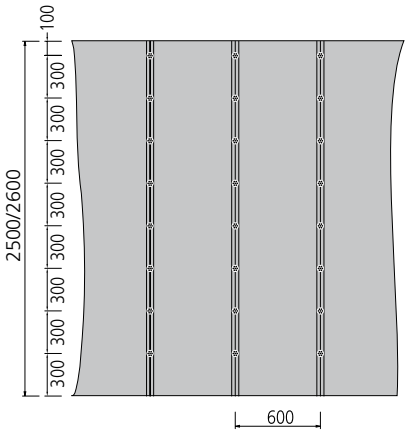


3

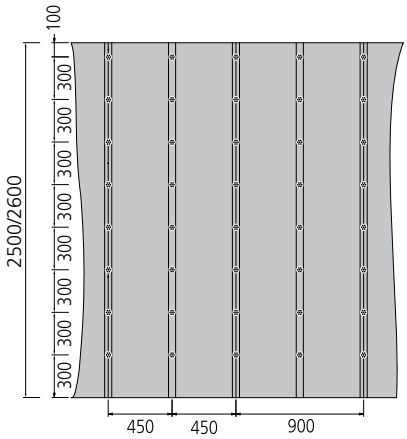
The tiling or plastering can then be carried out.

Please note:
For connection to plasterboards, the wedi product range also includes building boards with dimensions of 12.5 x 62.5 cm. Detailed information on sealing is available in the wedi brochure „Sealing and decoupling“.

Arrangement of wedi Fasteners



Application: Stud frame distance 600 mm from 20 mm.
Dimensions: 2500 x 600 mm and 2500 x 1200 mm

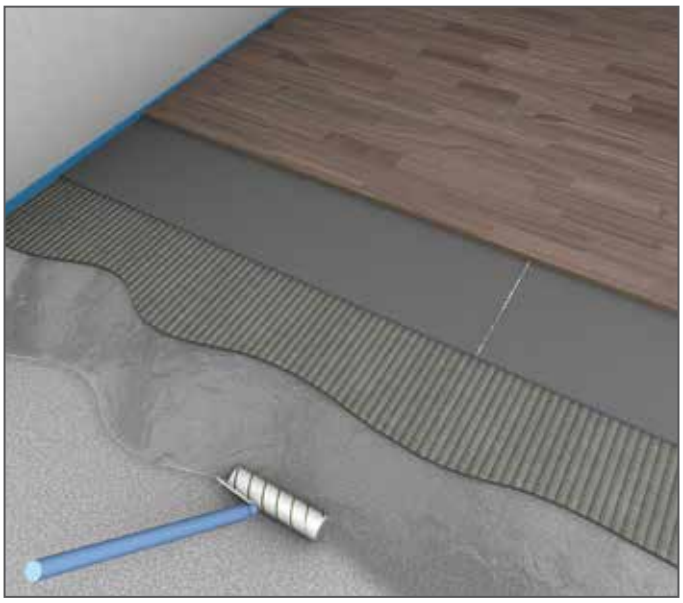


Application: Stud frame distance for max. 450 mm for building boards from 10 mm. Dimensions: 2500 x 900 mm

Please note:
The building boards can also be installed in a horizontal orientation.
Here, placement of wedi fixing is identical.

BA = wedi building board

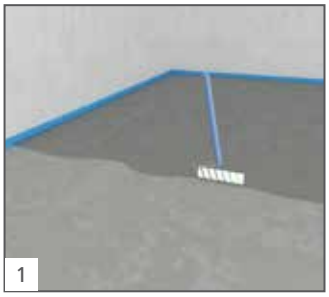
Installation on mineral substrates



The substrate should be able to withstand the load and be cleaned of any mortar residue and dirt before you start to lay the wedi building boards. If necessary, treat the surface with primer. Eliminate unevenness. Newly created substrates should be adequately dried to ensure that the shrinkage process due to water-loss is completed before the wedi building board is fitted.

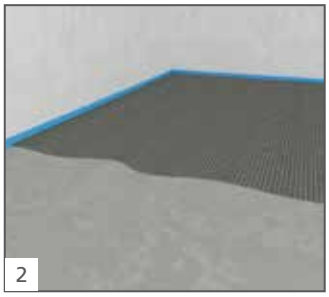
wedi system components:

- wedi building board, all thicknesses
- wedi joint sealant
- wedi Tools washers



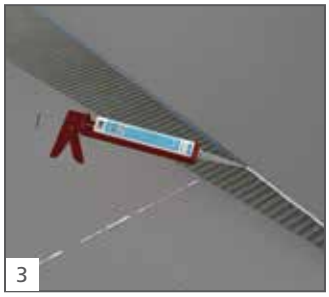
1

If necessary, prime the cement subsurface in advance and apply a perimeter isolation strip.



2

Apply tile adhesive to the substrate.

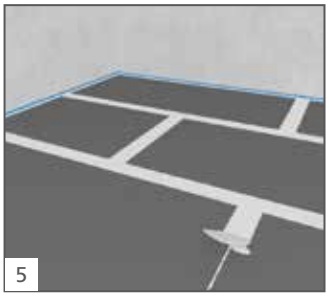


3

Apply wedi joint sealant to the building board joints, if a sealing layer should be created in addition.

4

Embed the building board into the adhesive.



5

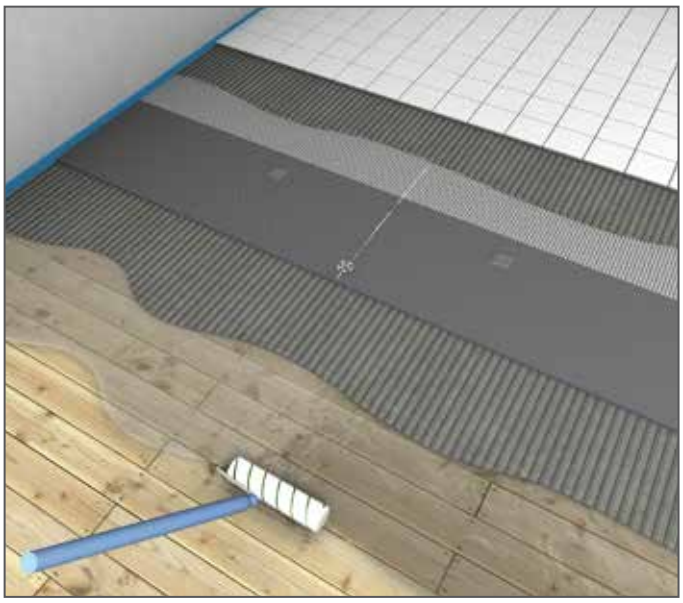
In a wet area, cover up the fasteners with the wedi joint sealant and use a beat of minimum 20 mm on both sides of the seam.

6

Laminate or pre-fabricated flooring can be installed as a floating floor.

Please note:
Detailed information on sealing is available in the wedi brochure „Sealing and decoupling“.

Wooden substrates (Particleboard and Timber)



To ensure that you enjoy all the benefits of the wedi building board when used on wooden substrates, the following conditions should be met: The substrate should be rigid (not vibrating or sprung), be able to withstand the load, be dry, free of dirt and damaging infestation. Any unevenness, opening or crack must be levelled out.

wedi system components:

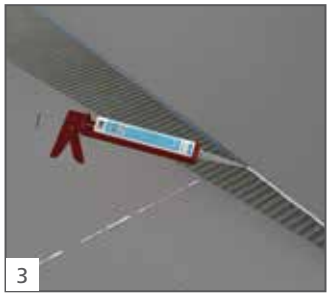
- wedi building board, all thicknesses
- wedi joint sealant
- wedi Tools washers

1

Prepare wooden floor with primer.

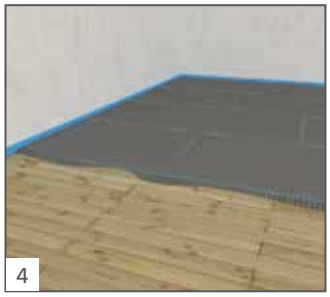
2

Apply tile adhesive to the wooden substrate. For particleboard, please use the accurate adhesive for such substrate.



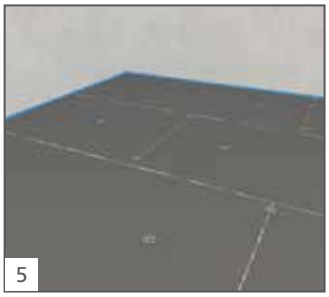
3

Apply wedi wedi joint sealant to the building board joints, if a sealing layer should be created in addition.



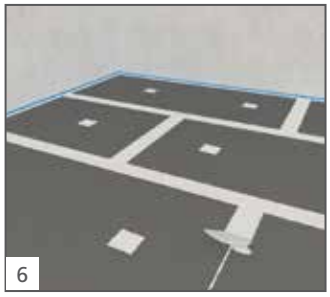
4

Place the building boards onto the adhesive ensuring board joints are staggered.



5

Additional use the wedi fastener system every 450 mm apart. When using particleboard, use the wedi fastener system every 300 mm apart.



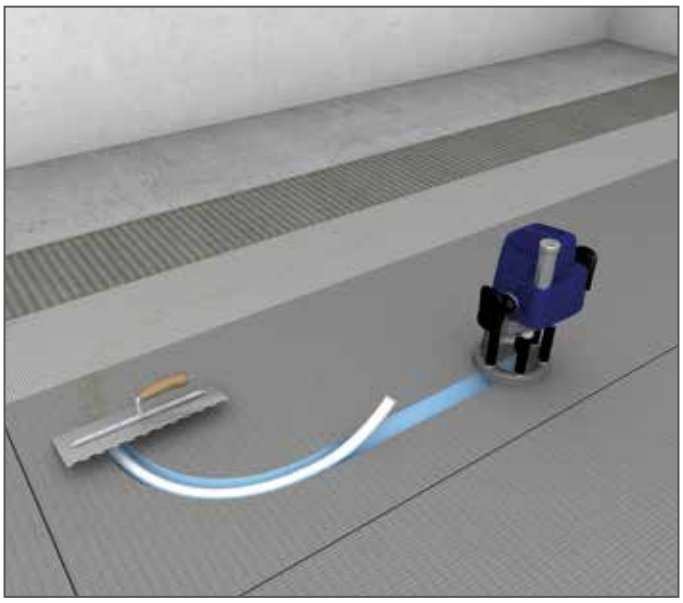
6

In a wet area, cover up the fasteners with the wedi joint sealant and use a beat of minimum 20 mm on both sides of the seam.

Please note:
Detailed information on sealing is available in the wedi brochure „Sealing and decoupling“.

For Particleboard: Please use the accurate Tile Adhesive. Ask a wedi Technical Sales Representative for further information.

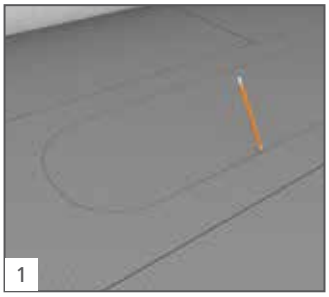
Wall and Floor Heating



wedi building boards are also ideally suited for use beneath underfloor heating systems. The building boards' good insulation properties keep the heat away from the ground and reflect it back up in to the room, irrespective of whether you have a hot-water heating system or an electrical design.

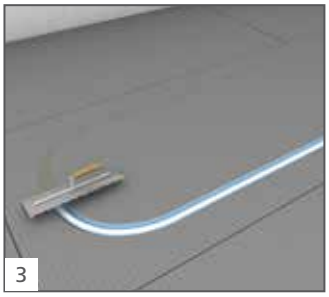
wedi system components:

- wedi building board
- wedi Tools self-adhesive reinforcement tape 600 mm

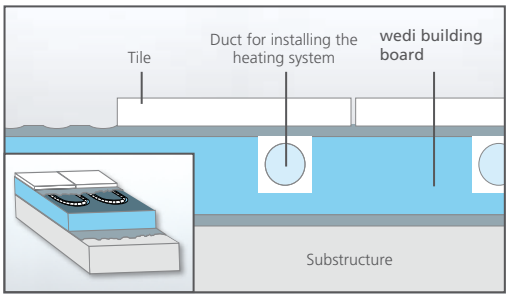


Draw ducts/grooves onto the wedi building board for installation of the heating system.

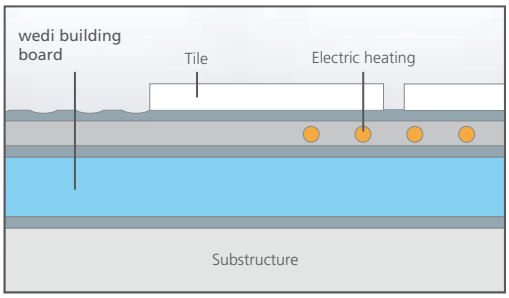
Cut grooves using the router. Cutting width should be the same as the pipe width; cutting depth should be at least 3 mm deeper.



Install tubing into the groove. Fill tile adhesive into the pipe duct.



For hot-water systems, ducts can be cut into the building board and other wedi elements quickly and easily. The building board serves as a combined form of heat insulation and a base for installation.



Electrical underfloor heating systems are easy to mount on the building board and downward heat loss is prevented, making the heating system noticeably more effective.

Note on electric resistor heating:

Electric underfloor heating systems can be installed as per manufacturer's instructions onto already installed and reinforced elements (e.g. wedi building boards, Fundo floor elements, Sanoasa benches, Sanoasa loungers). Here, only heating systems approved for such area should be used.

Did you know?

Great Quality Installation results depend on not only having great products to use – the Know-How and Experience in how to use them is key too. wedi trained and certified all Baeumler Quality Construction installers in my team and now they fully know and appreciate what they can achieve with wedi.

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Date: February 2019, Version 3

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