

TIMBER CONSTRUCTION

CONSTRUCTIVE
SOLUTIONS FOR
SUSTAINABLE BUILDING



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MAKE
YOUR
VISIONS
WORK.

MADE IN GERMANY

**MAKE
YOUR
VISIONS
WORK.**



**WOOD-BASED MATERIALS
THAT OPEN UP NEW PERSPECTIVES.**

Every step counts on the way to the finished project. That's because designs are only really convincing when they can be consistently brought to life. You are laying the right foundations by opting for Pfleiderer. Our extensive product range ensures that all aesthetic, functional and structural requirements can be combined with one another, enabling your visions to be turned into practical solutions of real quality.

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**QUALITY MEETS
SUSTAINABILITY**

PFLEIDERER WOOD-BASED MATERIALS IN TIMBER CONSTRUCTION.

Wood is in demand more than ever before in the construction industry. No wonder, because wood-based materials can reconcile requirements relating to sustainability and structural requirements in a unique way. When it comes to buildings that promote healthy living while saving resources, Pfleiderer sets new standards. Our products help to create a healthy living environment and play their part in climate protection by actively binding CO₂. High quality and extensive product approvals ensure that future-oriented concepts can be reliably turned into reality in residential and commercial building projects.

**HEALTHIER
EASIER ON RESOURCES
MORE CONSTRUCTIVE**

HEALTHIER

CREATING LIVING SPACES: CONCEPTS FOR HEALTHIER LIVING.

Anyone who thinks of building with wood rightly expects an environmentally friendly and appropriate material even after it has been processed. At Pfleiderer, this begins with the selection of the raw materials: for recycled wood – from which up to 85 % of our products are made – we only use grades A I and A II, which are incorporated into our production processes as pre- and post-consumer material. For by-products from sawmills, we rely almost solely on sustainably grown spruce wood with low VOC emissions. And even our bonding agents are becoming ever greener: LivingBoard, for example, has been bonded using 100 % formaldehyde-free glue for over 40 years. This is how we make sure that our products meet the highest standards for healthy living.

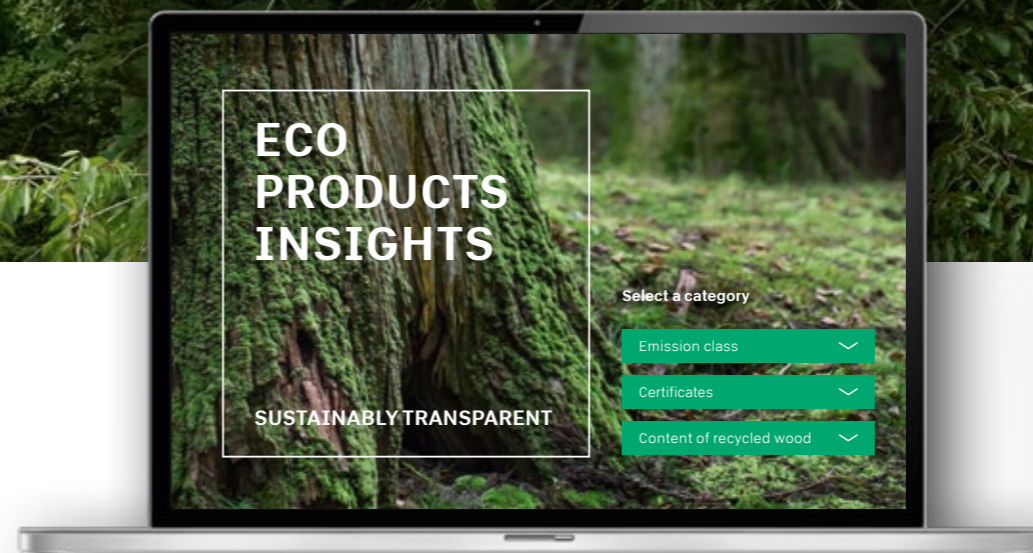
EASIER ON RESOURCES

A GREENER APPROACH TO BUILDING: IDEAS FOR ACTIVE CLIMATE PROTECTION.

A growing number of construction projects focus on sustainability nowadays. Pfleiderer wood-based materials can play an important role here. In order to make sure that the production process is as climate-friendly as possible, Pfleiderer is fully committed to cascading and using a high percentage of recycled wood. This ensures that the wood is kept within the cycle for as long as possible and the CO₂ stored in the wood is bound over a long time and actively helps to protect the climate. The result is a uniquely sustainable product portfolio that meets environmental and structural requirements to the greatest possible extent.

Naturally transparent.

To make sure you can quickly and easily find the right product for your timber construction challenges, we have developed Eco Product Insights. Simply define requirements relating to the emissions class, recycled wood percentage or certification and get all relevant products from our range.



Discover it now:
pfleiderer.com/eco-product-insights



MORE CONSTRUCTIVE

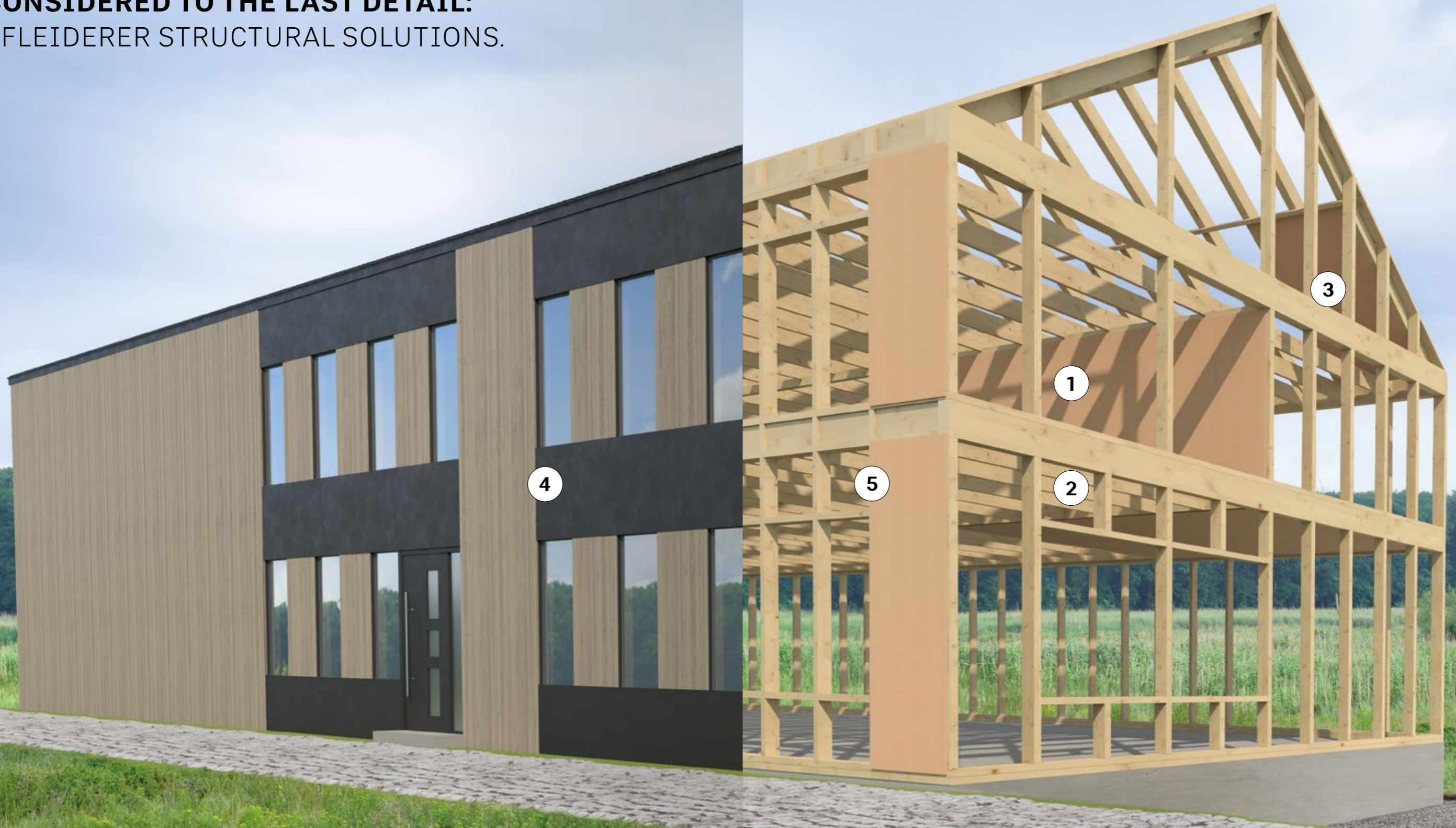
DELIVER RESULTS: BENEFITS THAT CAN BE BUILT ON.

A building's merits largely depend on the quality of the building materials used. The same also applies to timber construction. Needless to say, Pfleiderer wood-based materials meet all the required standards and approvals – and are often the better structural choice compared to standard OSB. Thanks to 33 % lower thickness swelling, for example, 80 % higher bending strength perpendicular to production direction, and 5 % higher airborne sound insulation.

Fully focused on solutions.

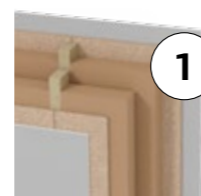
Our partners can also depend on us when it comes to working with the products: it is possible to work on our materials using conventional woodworking tools. Our boards have the same mechanical properties irrespective of the direction of use. And the most important board categories (P5) are also available as floor panels with symmetrical tongue and groove profile to enable fast working.

**CONSIDERED TO THE LAST DETAIL:
PFLEIDERER STRUCTURAL SOLUTIONS.**

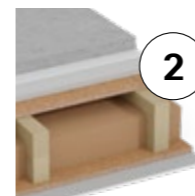


Construction Guide

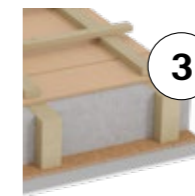
View all structural solutions easily online
at pfleiderer.com/construction-guide



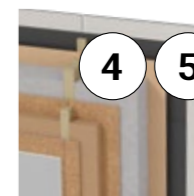
1 Interior wall
> p. 14



2 Ceiling
> p. 18



3 Roof
> p. 22



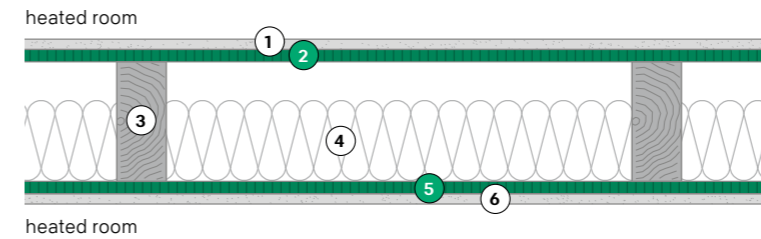
4 5 Façade and exterior wall
> p. 26

INTERIOR WALL

The following interior wall structures are examples of the wide range of design options available using Pfleiderer wood-based materials in timber construction.

Single-leaf interior wall

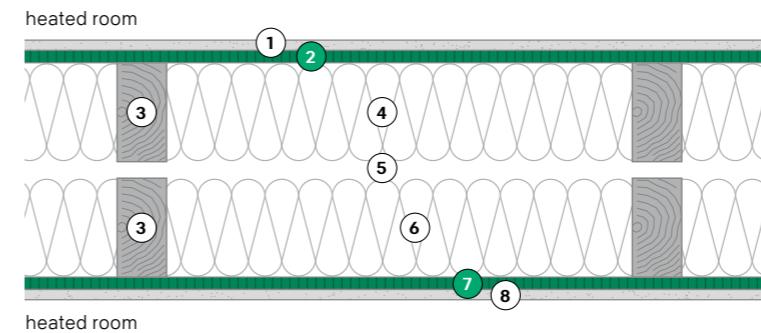
Single-leaf partition wall with a supporting structure consisting of studs with cavity insulation in the supporting structure with length-specific flow resistance $[r]$ of $5 \leq r \leq 35 \text{ kPa s/m}^2$. Planked on both sides, double planked.



- ① Plasterboard (12.5 mm)
- ② **LivingBoard P5 (16 mm)**
- ③ Solid timber, spruce (120 x 60 mm)
- ④ Wood fibre insulating board (100 mm)
- ⑤ **LivingBoard P5 (16 mm)**
- ⑥ Plasterboard (12.5 mm)

Double-leaf interior wall

Double-leaf partition wall with a supporting structure consisting of studs with cavity insulation in the supporting structure with length-specific flow resistance $[r]$ of $5 \leq r \leq 35 \text{ kPa s/m}^2$. Planked on the room side. No insulation between the leaves.



- ① Plasterboard (12.5 mm)
- ② **PremiumBoard MFP Living P5 (15 mm)**
- ③ Solid timber, spruce (120 x 60 mm)
- ④ Wood fibre insulating board (120 mm)
- ⑤ Air layer (20 mm)
- ⑥ Wood fibre insulating board (120 mm)
- ⑦ **PremiumBoard MFP Living P5 (15 mm)**
- ⑧ Plasterboard (12.5 mm)



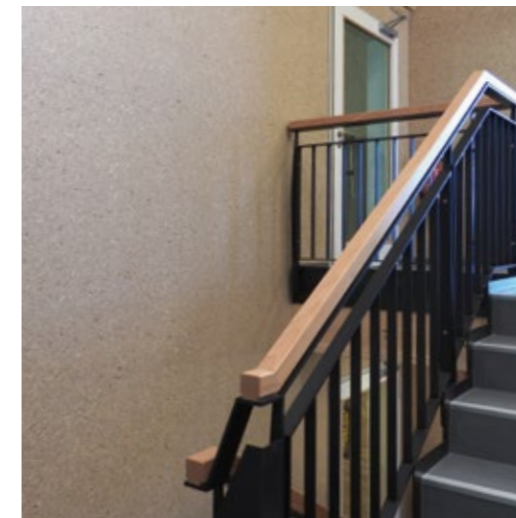
Construction Guide

For further details and the full range of DIN-standard components with Pfleiderer wood-based materials, simply use the Construction Guide: [pfleiderer.com/construction-guide](https://www.pfleiderer.com/construction-guide)

AIMING HIGH – NATURALLY: INTERIOR WALL DESIGN IN A CLIMBING GYM.

High standards are a must in the climbing gym of the German Alpine Club (DAV) in Neumarkt. Not least in relation to the statics of the wall, which are several metres high – yet it also goes without saying that a healthy, sustainable material like LivingBoard P5 should be used for the nature lovers who train there.

BUILDING	DAV climbing gym, Neumarkt
PRODUCT	LivingBoard P5
DESIGN	Architecture firm Kirchmair + Meierhofer Untergangkofen 49a 84036 Kumhausen
REALISATION	JoBi Holzbau e.K. Bindelseigen 1 93489 Schorndorf
COMPLETED	2018

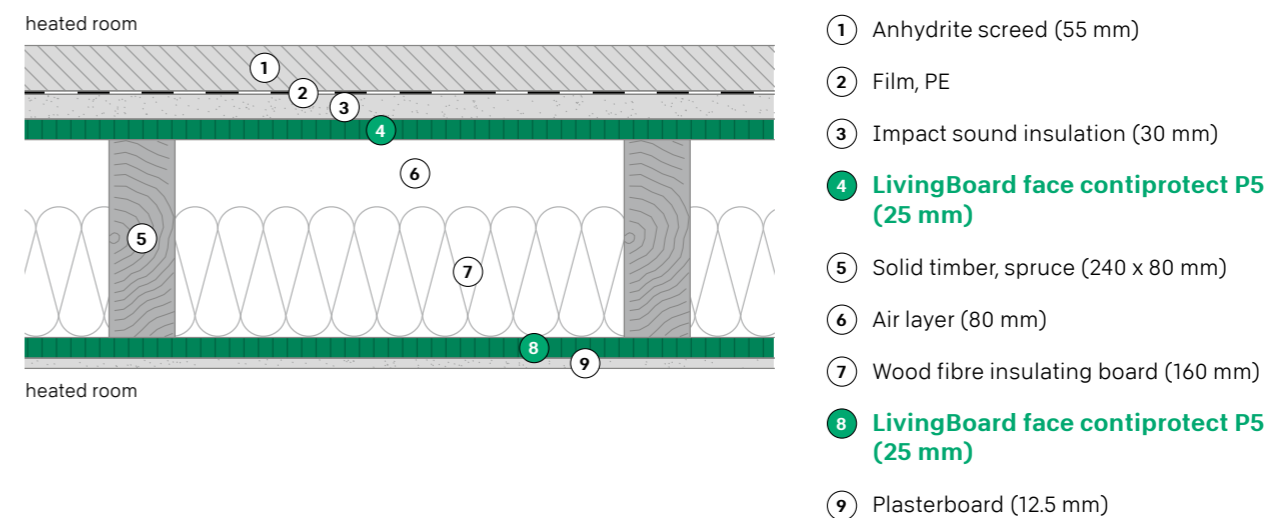


CEILING

The following ceiling structures are examples of the wide range of design options available using Pfeleiderer wood-based materials in timber construction.

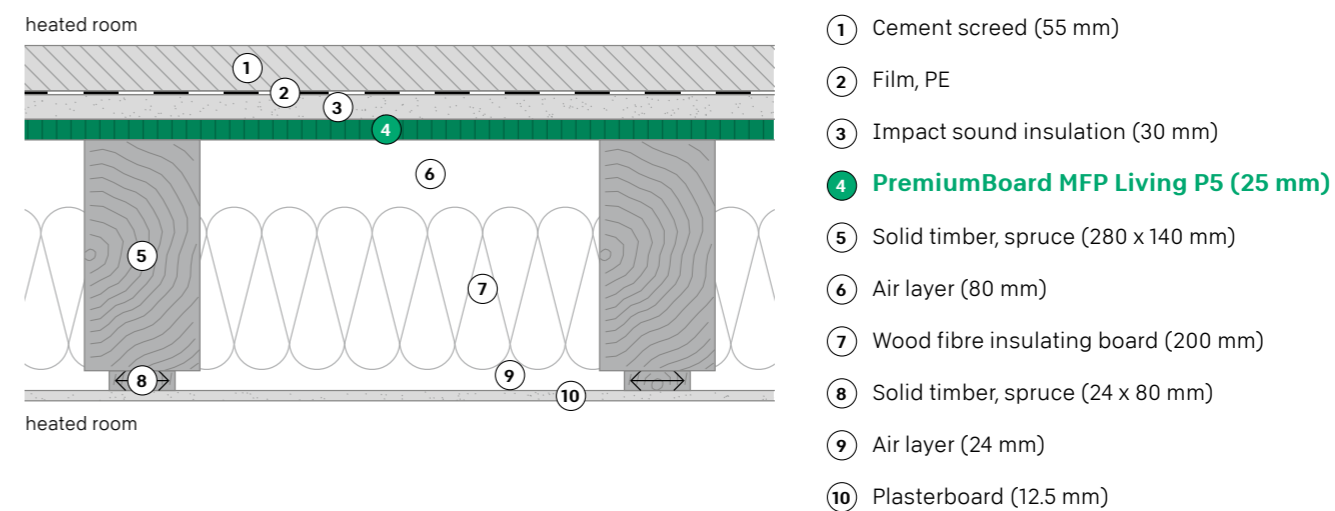
Anhydrite screed ceiling

Ceiling with a supporting structure consisting of box beams single ceiling sheathing. Substructure rigidly fixed, no load in the supporting structure, with cavity insulation in the supporting structure with length-specific flow resistance $[r]$ of $5 \leq r \leq 35 \text{ kPa s/m}^2$. No load on the supporting structure, with impact sound insulation with dynamic stiffness $[s']$ of $\leq 30 \text{ MN/m}^3$ and with dry screed.



Wet cement screed ceiling

Ceiling with a supporting structure consisting of box beams single ceiling sheathing. Substructure decoupled with cavity insulation in the sheathing, no load in the supporting structure, with cavity insulation in the supporting structure with length-specific flow resistance $[r]$ of $5 \leq r \leq 35 \text{ kPa s/m}^2$. With a load on the supporting structure, with impact sound insulation with dynamic stiffness $[s']$ of $\leq 6 \text{ MN/m}^3$ and with cement screed.



Construction Guide

For further details and the full range of DIN-standard components with Pfeleiderer wood-based materials, simply use the Construction Guide: pfeleiderer.com/construction-guide



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BUILDING	Refugee dormitory in the town of Lübbecke
PRODUCT	LivingBoard face contiprotect P5
CONSTRUCTION MANAGEMENT AND REALISATION	Zimmerer Profibau GmbH
COMPLETED	2017



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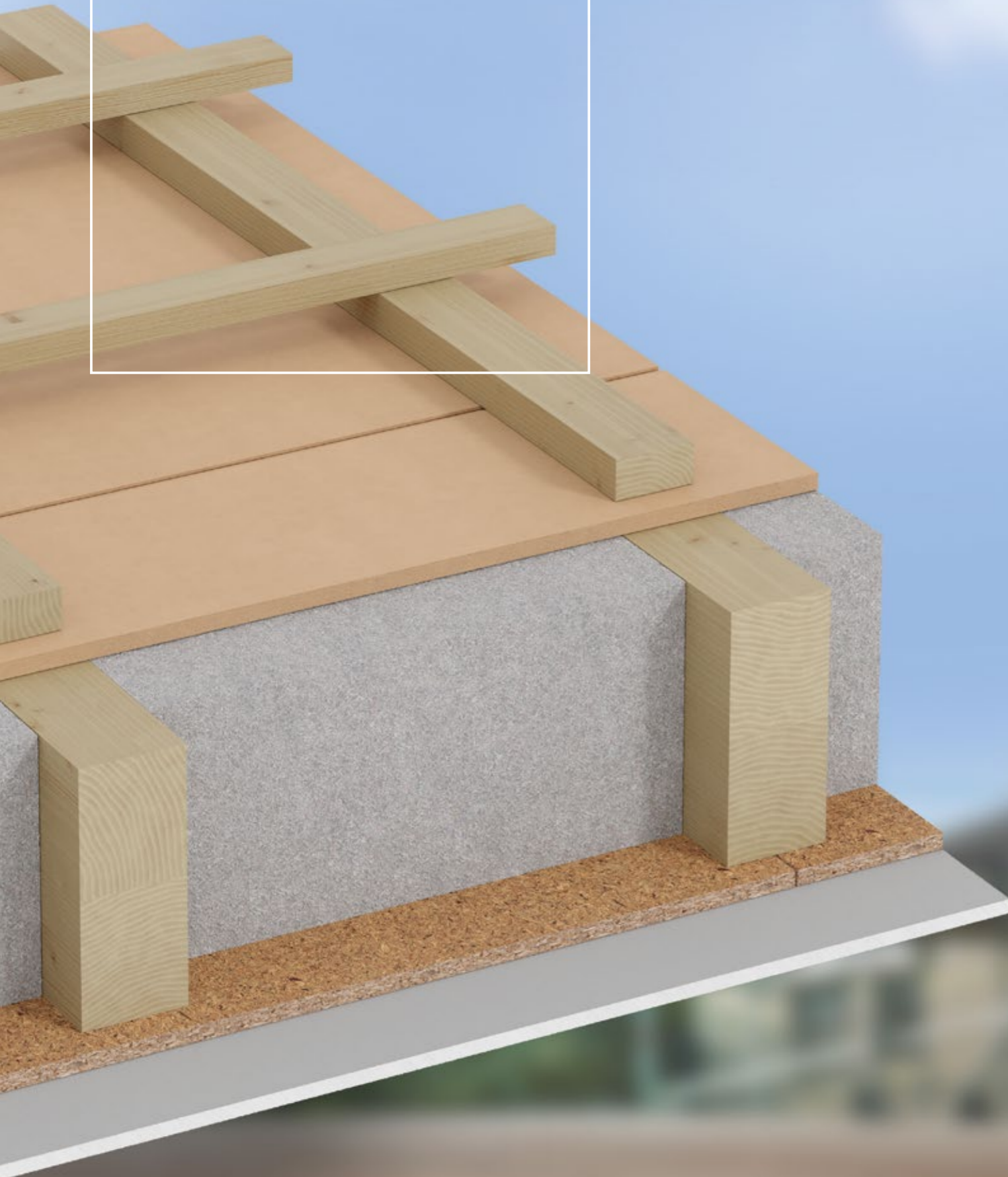


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ALL-ROUND HEALTHY LIVING: TIMBER-BASED REFUGEE DORMITORY IN LÜBBECKE.

The home for refugees in the town of Lübbecke, North-Rhine Westphalia, had to be built quickly, efficiently and in an environmentally friendly manner. This has been assured to the highest degree by opting for a timber design. What's more, the quality of the LivingBoard face contiprotect P5 used in the design ensures that nothing can stand in the way of the structure's future use as social housing.

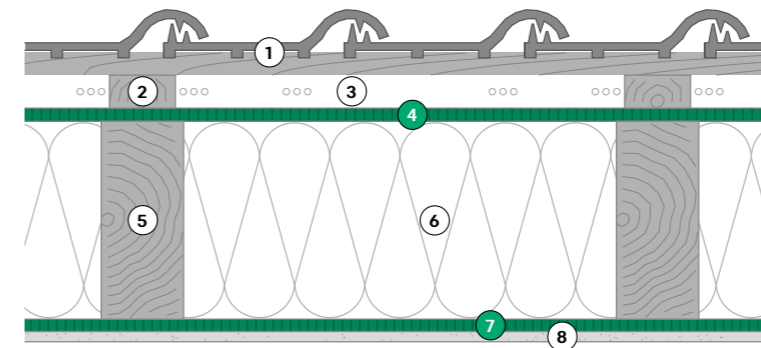
ROOF



The following roof structures are examples of the wide range of design options available using Pfleiderer wood-based materials in timber construction.

Roof with air space and counter battens and covered with interlocking tiles

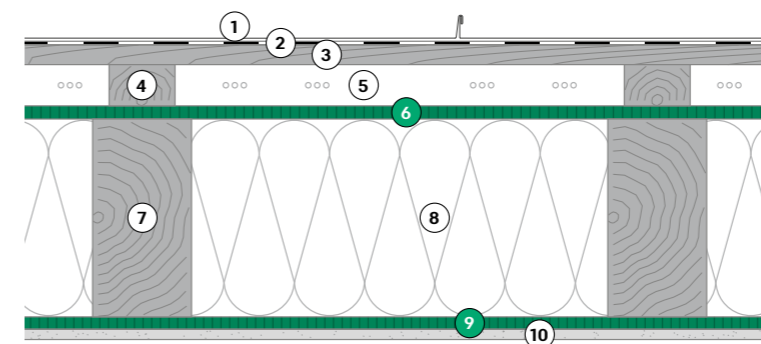
Pitched roof with a supporting structure consisting of ribs/rafters with cavity insulation in the supporting structure with length-specific flow resistance of $5 \leq r \leq 35 \text{ kPa s/m}^2$.



- ① Interlocking tiles, incl. battens (103 mm)
- ② Counter battens (40 x 80 mm)
- ③ Air space (40 mm)
- ④ **StyleBoard MDF.RWH (16 mm)**
- ⑤ Solid timber, spruce (240 x 120 mm)
- ⑥ Cellulose (240 mm)
- ⑦ **LivingBoard face contiprotect P5 (15 mm)**
- ⑧ Plasterboard (12,5 mm)

Roof with air space counter battens and covered with a standing seam

Pitched roof with a supporting structure consisting of ribs/rafters with cavity insulation in the supporting structure with length-specific flow resistance of $5 \leq r \leq 35 \text{ kPa s/m}^2$.



- ① Standing seam roof
- ② Bitumen roofing membrane
- ③ Planking with joints (24 mm)
- ④ Counter battens (50 x 80 mm)
- ⑤ Air space (50 mm)
- ⑥ **StyleBoard MDF.RWH (16 mm)**
- ⑦ Solid timber, spruce (240 x 120 mm)
- ⑧ Cellulose (240 mm)
- ⑨ **LivingBoard face contiprotect P5 (15 mm)**
- ⑩ Plasterboard (12,5 mm)



Construction Guide

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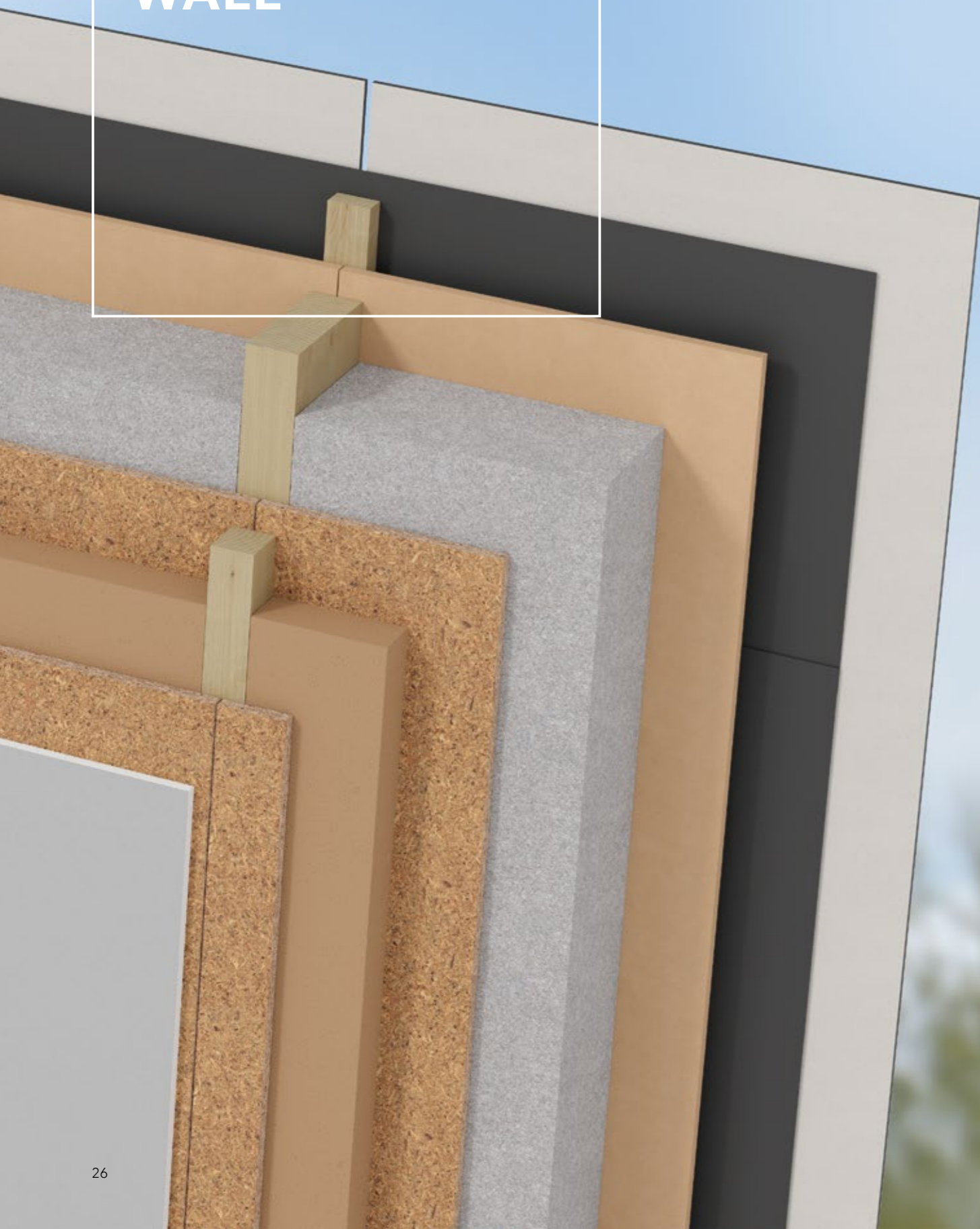


PERFECTLY CONCEIVED: WAREHOUSE FOR REHAU.

The Rehau warehouse combines the highest standards of sustainable building with the robustness needed to cope with the rough demands of everyday logistics. Extensive parts of the building shell, including the roof, were constructed using LivingBoard P7, whose 100 % formaldehyde-free glue gives the building maximum stability and outstanding sound insulation.

BUILDING	Rehau warehouse
PRODUCT	LivingBoard P7
PLANNING AND REALISATION	NMS Natural Wood Solutions GmbH Ziegelhüttenweg 9 95111 Rehau
COMPLETED	2017

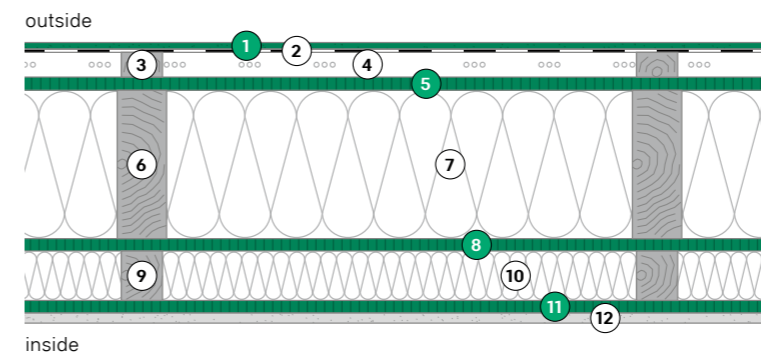
FAÇADE AND EXTERIOR WALL



The following exterior wall structures are examples of the wide range of design options available using Pfeleiderer wood-based materials in timber construction.

Exterior wall with installation level and a rear-ventilated curtain wall façade with Duropal XTerior compact F

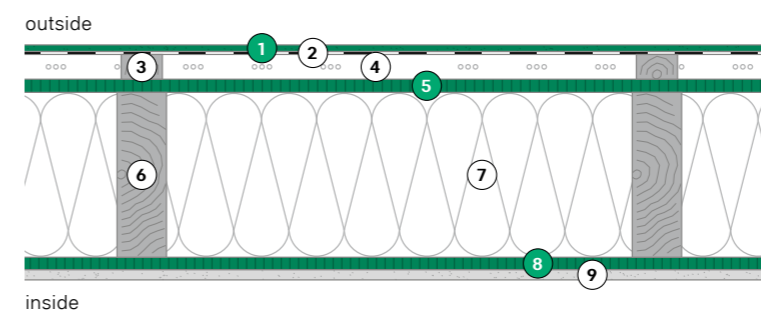
Exterior wall with a supporting structure consisting of studs with cavity insulation in the supporting structure with length-specific flow resistance of $5 \leq r \leq 35 \text{ kPa s/m}^2$. Planked on the outside and inside, single planking outside, single planking inside. Single sheathing with cavity insulation in the sheathing. Rear-ventilated façade.



- 1 Duropal XTerior compact F – single-sided lacquering (8 mm)
- 2 Underlay
- 3 Solid timber, spruce (20 x 50 mm)
- 4 Air space (20 mm)
- 5 StyleBoard MDF.RWH (16 mm)
- 6 Solid timber, spruce (180 x 60 mm)
- 7 Cellulose (180 mm)
- 8 LivingBoard face contiprotect P5 (15 mm)
- 9 Solid timber, spruce (60 x 50 mm)
- 10 Wood fibre insulating board (60 mm)
- 11 LivingBoard P4 (15 mm)
- 12 Gypsum fibreboard (12.5 mm)

Exterior wall without installation level and a rear-ventilated curtain wall façade with Duropal XTerior compact F

Exterior wall with a supporting structure consisting of studs with cavity insulation in the supporting structure with length-specific flow resistance of $5 \leq r \leq 35 \text{ kPa s/m}^2$. Planked on the outside and inside, single planking outside, double planking inside. No sheathing. Rear-ventilated façade.



- 1 Duropal XTerior compact F – single-sided lacquering (8 mm)
- 2 Underlay
- 3 Solid timber, spruce (20 x 50 mm)
- 4 Air space (20 mm)
- 5 StyleBoard MDF.RWH (16 mm)
- 6 Solid timber, spruce (200 x 60 mm)
- 7 Cellulose (200 mm)
- 8 PremiumBoard MFP Living P5 (15 mm)
- 9 Gypsum fibreboard (12.5 mm)



Construction Guide

For further details and the full range of DIN-standard components with Pfeleiderer wood-based materials, simply use the Construction Guide: pfeleiderer.com/construction-guide



BUILDING	Private house owned by the Göllner family, Vechta
PRODUCT	Duropol XTerior compact
DESIGN AND REALISATION	Jens Göllner Innenarchitekt bdia Mühlenstraße 49 49377 Vechta
COMPLETED	2018



AN OUTDOOR EYE-CATCHER: HOUSE FAÇADE WITH XTERIOR COMPACT.

The rear-ventilated curtain wall façade design of the Göllner residential building in Vechta impressively shows how lacquered XTerior Compact boards encapsulate stylish looks, a fascinating matt texture and robust wind and weather resistance.





EXEMPLARY SUSTAINABILITY: INTELLIGENT MATERIAL SELECTION FOR HOUSING.

On the site of the former Prince Eugen Barracks, it is clear that sustainable building is possible on any scale. With exterior wall systems featuring a hybrid wood design, the building with a total of 180 rental apartments easily surpasses the funding standards set by the City of Munich for buildings with a high proportion of renewable raw materials.

BUILDING	Timber housing estate Prince Eugen Park, Munich
PRODUCT	LivingBoard face contiprotect P7
DESIGN	Studio Silberburg, Stuttgart
AUSFÜHRUNG	Huber & Sohn GmbH & Co. KG, Eiselring
REALISATION	2020



PRODUCTS

Whether load-bearing, moisture-resistant or with high bending strength, Pfleiderer supplies the right, sustainable wood-based materials for almost all requirements in the area of timber construction, from particle board with outstanding isotropic properties to tongue-and-groove floor panels that can be used along any direction and vapour permeable MDF board. Everything is designed with efficient installation in mind, featuring uncompromisingly good quality and available in PEFC- or FSC-certified versions, if required.



LivingBoard P4/P5/P7

Formaldehyde-free glued chipboard for load-bearing use, sanded smooth, with fine chips on the surface. LivingBoard is the ideal choice for eco-friendly timber construction projects.



> p. 34 ff.

LivingBoard face contiprotect P5/P7

Moisture-resistant, extremely tough, formaldehyde-free glued raw panels with a rough finish and Contiprotect coating. The low emission natural solution for modern timber construction projects.



> p. 40 ff.

PremiumBoard MFP Living P5

From wall to roof panels and flooring substructures: these moisture-resistant formaldehyde-free glued universal panels with a high recycled wood content are particularly suitable for sustainable construction.



> p. 44

StyleBoard MDF.RWH

The natural, vapour permeable, formaldehyde-free bonded fibreboard, ideal for underlay applications in the roof and wall.



> p. 46

Duropal XTerior compact

Premium for outdoor use – from garden furniture to facades. Uniquely matt finish on very weatherproof and extremely strong compact panels especially designed for outdoor use.



> p. 48

LIVINGBOARD P4



Discover further product details and formats at pfleiderer.com

Application areas



Interior wall



Ceiling

Environmental benefits

- Low VOC emissions due to the use of low-resin wood
- 100 % formaldehyde-free PU bonding
- Comprehensively certified for sustainability and healthy living



Product features



Sanded



Direction-free application



Particularly ecological



Particularly low emission



Load-bearing

Structural features

- Low thickness and edge swelling
- Reliable use thanks to uniform product properties
- Optimal use of offcuts thanks to isotropic strength properties in all directions
- Wooden particle board type P4 in conformity with EN 312

Product type	P4
CE area of validity	EN 13986:2004 +A1:2015 Boards for load-bearing applications in dry areas
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 – dry area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)			
			> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25	> 25 to ≤ 32
Thickness in mm		mm	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25	> 25 to ≤ 32
Average gross density	EN 323	kg/m ³	750–660	680–650	650–630	640–620
Bending strength	EN 310	N/mm ²	16	15	13	11
Modulus of elasticity in bending	EN 310	N/mm ²	2,300	2,300	2,050	1,850
Internal bond strength	EN 319	N/mm ²	0.4	0.35	0.3	0.25
Thickness swelling, 24 h	EN 317	%	16	15	15	15
Thermal conductivity (EN 13986)		W/(mK)	0.12	0.12	0.12	0.12
Water vapour permeability, μ wet (DIN 20000-1)		–	50	50	50	50
Water vapour permeability, μ dry (DIN 20000-1)		–	100	100	100	100

LIVINGBOARD P5



Discover further product details and formats at pfleiderer.com

Application areas



Environmental benefits

- 100 % formaldehyde-free PU bonding
- The use of low-resin woods results in low VOC emissions
- Comprehensively certified for sustainability and healthy living



Product features



Structural features

- Moisture-resistant PU bonding
- For load-bearing applications in wet areas
- High dimensional accuracy of the tongue-and-groove joint for an optimum fit and level, flush laying
- Wooden particle board type P5 in conformity with EN 312

Product type	P5
CE area of validity	EN 13986:2004 +A1:2015 Boards for load-bearing applications in wet areas
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)		
Thickness in mm		mm	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Average gross density	EN 323	kg/m³	770–680	700–660	670–650
Bending strength	EN 310	N/mm²	18	16	14
Modulus of elasticity in bending	EN 310	N/mm²	2,550	2,400	2,150
Internal bond strength	EN 319	N/mm²	0.45	0.45	0.4
Thickness swelling, 24 h	EN 317	%	11	10	10
Internal bond strength after boil test	EN 1087-1	N/mm²	0.15	0.14	0.12
Thermal conductivity (EN 13986)		W/(mK)	0.12	0.12	0.12
Water vapour permeability, μ wet (DIN 20000-1)		–	50	50	50
Water vapour permeability, μ dry (DIN 20000-1)		–	100	100	100

LIVINGBOARD P7



Discover further product details and formats at pfleiderer.com

Application areas



Roof



Interior wall



Ceiling



Exterior wall

Environmental benefits

- 100 % formaldehyde-free PU bonding
- Comprehensively certified for sustainability and healthy living
- The use of low-resin woods results in low VOC emissions



Product features



Sanded



Low swelling / moisture-resistant



Load-bearing



Direction-free application



Particularly ecological



Particularly low emission

Structural features

- Moisture-resistant PU bonding
- Heavy-duty
- For load-bearing applications in wet areas
- Particularly high bending strength
- Wooden particle board type P7 in conformity with EN 312

Product type	P7
CE area of validity	EN 13986:2004 +A1:2015 Heavy-duty boards for load-bearing applications in wet areas.
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (DIN 1052)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)		
Thickness in mm		mm	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Average gross density	EN 323	kg/m ³	740–720	720–700	700–680
Bending strength	EN 310	N/mm ²	22	20	18.5
Modulus of elasticity in bending	EN 310	N/mm ²	3,350	3,100	2,900
Internal bond strength	EN 319	N/mm ²	0.75	0.7	0.65
Thickness swelling, 24 h	EN 317	%	10	10	10
Internal bond strength after boil test	EN 1087-1	N/mm ²	0.25	0.23	0.2
Thermal conductivity (EN 13986)		W/(mK)	0.12	0.12	0.12
Water vapour permeability, μ wet (DIN 20000-1)		–	50	50	50
Water vapour permeability, μ dry (DIN 20000-1)		–	100	100	100

LIVINGBOARD FACE CONTIPROTECT P5

What is the contiprotect surface?

The contiprotect surface is a moisture- and dirt-resistant film that is created during the manufacturing process and not sanded off. It forms when the bonded wood chips on the board surface come into direct contact with hot press plates.



Discover further product details and formats at pfleiderer.com

Application areas



Roof



Interior wall



Ceiling



Exterior wall

Environmental benefits

- 100 % formaldehyde-free bonding
- Particularly low emission and eco-friendly
- Comprehensively certified for sustainability and healthy living



Product features



Low swelling / moisture-resistant



Load-bearing



Direction-free application



Floor panel available



Particularly ecological



Particularly low emission

Structural features

- Moisture-resistant bonding
- For use in rough and adverse conditions
- Delayed absorption of moisture thanks to the contiprotect surface
- For load-bearing applications in wet areas
- High dimensional accuracy of the tongue-and-groove joint for an optimum fit and level, flush laying
- Wooden particle board type P5 in conformity with EN 312

Product type	P5
CE area of validity	EN 13986:2004 +A1:2015 Boards for load-bearing applications in wet areas
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)		
Thickness in mm		mm	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Average gross density	EN 323	kg/m ³	770–680	700–660	670–650
Bending strength	EN 310	N/mm ²	18	16	14
Modulus of elasticity in bending	EN 310	N/mm ²	2,550	2,400	2,150
Internal bond strength	EN 319	N/mm ²	0.45	0.45	0.4
Thickness swelling, 24 h	EN 317	%	11	10	10
Internal bond strength after boil test	EN 1087-1	N/mm ²	0.15	0.14	0.12
Thermal conductivity (EN 13986)		W/(mK)	0.12	0.12	0.12
Water vapour permeability, μ wet	EN ISO 12572	–	100	100	100
Water vapour permeability, μ dry	EN ISO 12572	–	100	100	100

LIVINGBOARD FACE CONTIPROTECT P7

What is the contiprotect surface?

The contiprotect surface is a moisture- and dirt-resistant film that is created during the manufacturing process and not sanded off. It forms when the bonded wood chips on the board surface come into direct contact with hot press plates.



Discover further product details and formats at pfleiderer.com

Application areas



Roof



Interior wall



Ceiling



Exterior wall

Environmental benefits

- 100 % formaldehyde-free bonding
- Particularly low emission and eco-friendly
- Comprehensively certified for sustainability and healthy living



Product features



Low swelling / moisture-resistant



Load-bearing



Direction-free application



Floor panel available



Particularly ecological



Particularly low emission

Structural features

- Moisture-resistant bonding
- For use in rough and adverse conditions
- Delayed absorption of moisture thanks to the contiprotect surface
- For load-bearing applications in wet areas
- Particularly high bending strength
- Wooden particle board type P7 in conformity with EN 312

Product type	P7
CE area of validity	EN 13986:2004 +A1:2015 Heavy-duty boards for load-bearing applications in wet areas.
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)		
Thickness in mm		mm	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Average gross density	EN 323	kg/m ³	740–720	720–700	700–680
Bending strength	EN 310	N/mm ²	22	20	18,5
Modulus of elasticity in bending	EN 310	N/mm ²	3,350	3,100	2,900
Internal bond strength	EN 319	N/mm ²	0,75	0,7	0,65
Thickness swelling, 24 h	EN 317	%	10	10	10
Internal bond strength after boil test	EN 1087-1	N/mm ²	0,25	0,23	0,2
Thermal conductivity (EN 13986)		W/(mK)	0,12	0,12	0,12
Water vapour permeability, μ wet	EN ISO 12572	–	100	100	100
Water vapour permeability, μ dry	EN ISO 12572	–	100	100	100

PREMIUMBOARD MFP LIVING P5



Discover further product details and formats at pfleiderer.com

Application areas



Environmental benefits

- Also available with PEFC or FSC certification on request
- 100 % formaldehyde-free bonding
- Particularly low emission and eco-friendly
- Resource-saving due to high recycling content



Product features



Structural features

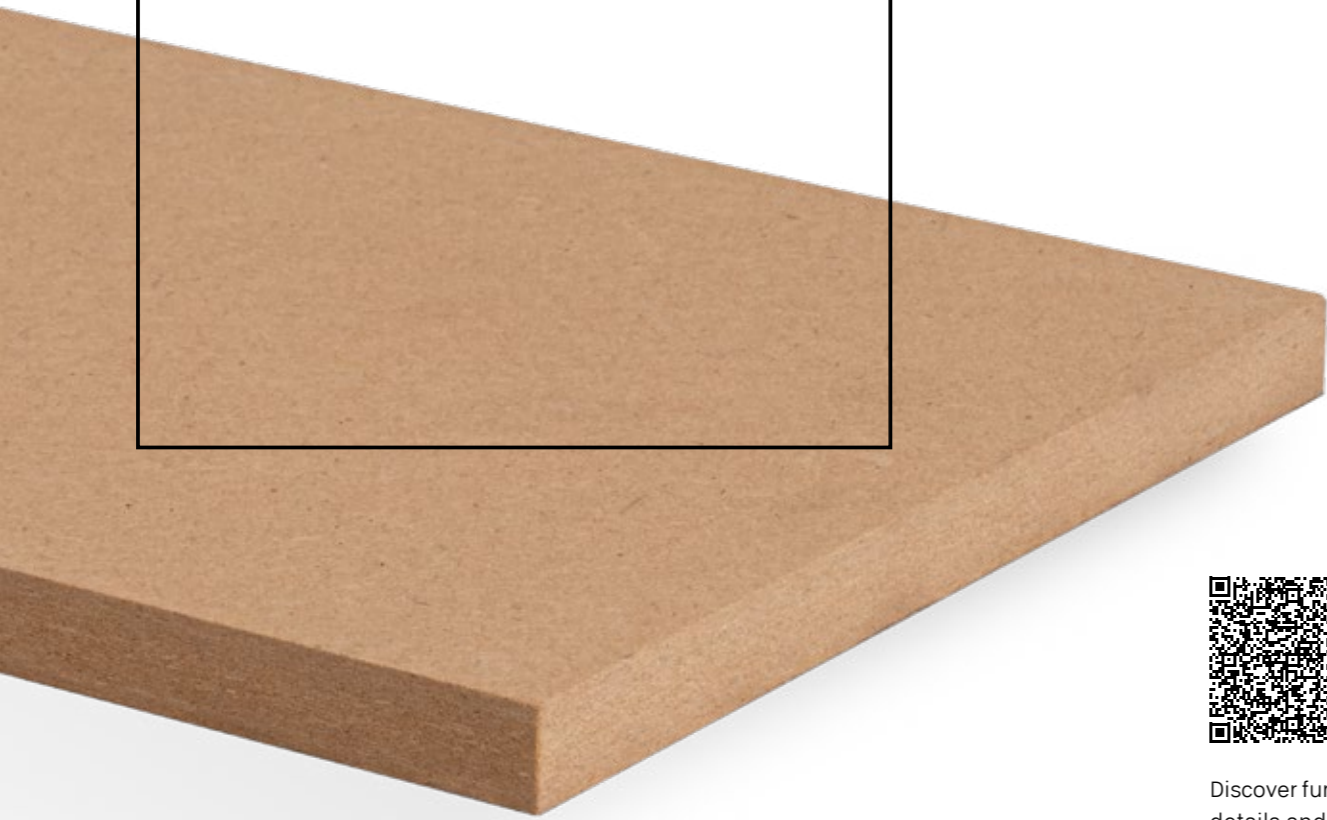
- For load-bearing applications in wet areas
- High dimensional accuracy of the tongue-and-groove joint for an optimum fit and level, flush laying
- Wooden particle board type P5 in conformity with EN 312

Product type	P5
CE area of validity	EN 13986:2004 +A1:2015 Boards for load-bearing applications in wet areas
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)			
			> 8.9 to ≤ 10	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Thickness in mm		mm	> 8.9 to ≤ 10	> 10 to ≤ 13	> 13 to ≤ 20	> 20 to ≤ 25
Average gross density	EN 323	kg/m ³	790–690	770–680	700–660	670–650
Bending strength	EN 310	N/mm ²	18	18	16	14
Modulus of elasticity in bending	EN 310	N/mm ²	2,550	2,550	2,400	2,150
Internal bond strength	EN 319	N/mm ²	0.45	0.45	0.45	0.4
Thickness swelling, 24 h	EN 317	%	13	11	10	10
Internal bond strength after boil test	EN 1087-1	N/mm ²	0.15	0.15	0.14	0.12
Thermal conductivity (EN 13986)		W/(mK)	0.12	0.12	0.12	0.12
Water vapour permeability, μ wet (DIN 20000-1)		–	50	50	50	50
Water vapour permeability, μ dry (DIN 20000-1)		–	100	100	100	100

STYLEBOARD MDF.RWH



Discover further product details and formats at pfleiderer.com

Application areas



Roof



Exterior wall

Environmental benefits

- Also available with PEFC or FSC certification on request
- 100 % formaldehyde-free bonding



Product features



Low swelling / moisture-resistant



Floor panel available

Structural features

- High dimensional accuracy of the tongue-and-groove joint for an optimum fit and level, flush laying
- Vapour permeable, formaldehyde-free bonded fibreboard in conformity with EN 622-5

Product type	MDF.RWH
CE area of validity	EN 13986:2004 +A1:2015 For use as underlay boards on roofing
Fire behaviour	D-s2,d0 in conformity with EN 13986 dependent on end use (Thickness: ≥ 9 mm / gross density: ≥ 600 kg/m ³)
Formaldehyde emission class	E1 E05
Use class	1 and 2 – dry area and wet area (EN 1995-1-1)
Note	FSC or PEFC certification available on request.

Mechanical and physical properties

Property	Test method	Unit	Requirement thickness/range (mm, nominal size)
Thickness in mm		mm	> 12 to ≤ 20
Average gross density	EN 323	kg/m ³	≥ 600
Bending strength	EN 310	N/mm ²	14
Modulus of elasticity in bending	EN 310	N/mm ²	1,600
Internal bond strength	EN 319	N/mm ²	0.3
Thickness swelling, 24 h	EN 317	%	10
Internal bond strength after boil test	EN 1087-1	N/mm ²	0.06
Thermal conductivity (EN 13986)		W/(mK)	0.1
Water vapour permeability, μ wet	EN ISO 12572	–	10
Water vapour permeability, μ dry	EN ISO 12572	–	10

DUROPAL XTERIOR COMPACT



Discover further product details
and formats at pfleiderer.com

Application areas



Façade

Environmental benefits

- Also available with PEFC or FSC certification on request



Product features



*Duropal XTerior compact F option – single-sided lacquer

Structural features

- UV-resistant and weatherproof compact board
- High mechanical strength values
- Highly aesthetic matt look
- Available with single- and double-sided lacquer
- Also comes in the Duropal XTerior compact F fire protection option – single-sided lacquer available

Product standard	EN 438-6
Core material	Compact laminate, black Solid, black pigmented compact laminate core, impact- and moisture-resistant for heavy-duty applications Duropal XTerior compact F option – single-sided lacquer: Flame-retardant compact laminate, black, suitable for heavy-duty applications that have to meet requirements relating to the surface spread of flame
Fire behaviour	Normal flammability D-s2,d0 (EN 13501-1, CWFT in conformity with 2003/593/EG) Duropal XTerior compact F option – single-sided lacquer: Flame retardant B-s1,d0 (EN 13501-1)
CE area of validity	EN 438-7:2005 Compact boards for wall and ceiling sheathing for exterior use (including suspended ceilings)
Formaldehyde emission class	E1 (EN 717-1)
Density	Min. 1,350 kg/m ³ (EN ISO 1183-1)

CHARACTERISTIC VALUES

Here you will find our products' most important characteristic values for calculating and designing timber structures.

Thickness t_{nom}	Strength values in N/mm ²					Stiffness values in N/mm ²		
	Deflection f_m	Pulling f_t	Pressure f_c	Shear perpen- dicular to the grain f_v	Shear parallel to the grain f_{\parallel}	Deflection E_m	Pulling and pres- sure E_t, E_c	Shear perpen- dicular G_v
LivingBoard P4								
> 6–13 mm	14.2	8.9	12	6.6	1.8	3,200	1,800	860
> 13–20 mm	12.5	7.9	11.1	6.1	1.6	2,900	1,700	830
> 20–25 mm	10.8	6.9	9.6	5.5	1.4	2,700	1,600	770
LivingBoard P5/ face contiprotect P5								
> 6–13 mm	15.0	9.4	12.7	7.0	1.9	3,500	2,000	960
> 13–20 mm	13.3	8.5	11.8	6.5	1.7	3,300	1,900	930
> 20–25 mm	11.7	7.4	10.3	5.9	1.5	3,000	1,800	860
LivingBoard P7/ face contiprotect P7								
> 6–13 mm	18.3	11.5	15.5	8.6	2.4	4,600	2,600	1,250
> 13–20 mm	16.7	10.6	14.7	8.1	2.2	4,200	2,500	1,200
> 20–25 mm	15.4	9.8	13.7	7.9	2.0	4,000	2,400	1,150
PremiumBoard MFP Living P5								
> 6–13 mm	15.0	9.4	12.7	7.0	1.9	3,500	2,000	960
> 13–20 mm	13.3	8.5	11.8	6.5	1.7	3,300	1,900	930
> 20–25 mm	11.7	7.4	10.3	5.9	1.5	3,000	1,800	860

The characteristic values are taken from DIN EN 12369-1 and apply to load-bearing applications relevant to type P4 under use class 1 conditions and relevant to types P5 and P7 under use class 2 conditions.

FORMATS

The Pfleiderer products for timber construction are available in the following formats as standard.

	Length (mm)	Width (mm)	Thickness (mm)
LivingBoard P5	2,500	1,250	13 16 19 22 25
	5,040	2,580	13 16 19 22 25
Floorpanels (overall dimensions incl. tongue)	2,510	635	13 16 19 22 25
LivingBoard face contiprotect P5	2,500	1,250	12 15 18 22 25
	2,650	1,250	15
	2,800	1,250	15
	3,000	1,250	15
	3,000	2,500	15
	3,200	1,250	15
	5,040	2,580	12 15 18 22 25
Floorpanels (overall dimensions incl. tongue)	2,510	635	12 15 18 22 25
	2,510	1,260	12 15 18 22 25
LivingBoard face contiprotect P7	2,500	1,250	15
	2,800	1,250	15
	3,000	1,250	15
Floorpanels (overall dimensions incl. tongue)	2,510	635	22
PremiumBoard MFP Living P5	2,500	1,250	10 12 15 18 22 25
	2,800	1,196	12
	5,030	1,250	10 12 15 18 22 25
	5,030	2,500	10 12 15 18 22 25
Floorpanels (overall dimensions incl. tongue)	2,500	615	12 15 18 22 25
StyleBoard MDF,RWH	2,500	1,250	16
	3,000	1,250	16
	3,000	2,500	16
Floorpanels (overall dimensions incl. tongue)	2,510	635	16
	2,510	1,260	16
Duropol XTerior compact – single-/double-sided lacquer	2,800	2,070	6 8 10 12 13
Duropol XTerior compact F – single-sided lacquer	2,800	2,070	8 10 12 13

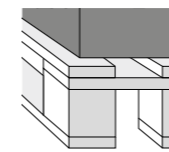
LivingBoard P4 and LivingBoard P7

From a minimum order quantity of 70 m³. Other formats and thicknesses available on request.

PERFECTLY
IN HAND

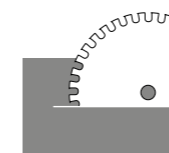
INFORMATION ON WORKING WITH THE MATERIALS

All Pfeleiderer board types can be sawn, planed, cut, drilled and sanded using conventional woodworking machines or woodworking tools. We recommend carbide-tipped tools.



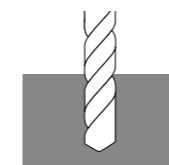
Fitting and installation

Sufficient conditioning is required prior to working with and installing the boards. The space itself should be acclimatised to the conditions under which it will later be used.



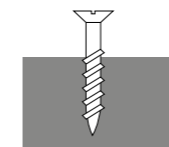
Separation and sawing

Pfleiderer boards provide the best basis for high-quality results with all commonly used saws. We recommend carbide-tipped saw blades. Optimal results can be achieved with MDF at a cutting angle of between 8 and 10° and a cutting speed of 40 to 80 m/s.



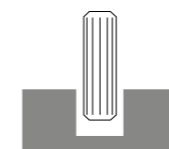
Drilling

For all drilling tasks, the same tools and materials should be used that are used for drilling plywood and solid wood boards.



Screwing

Screw holes should generally be pre-drilled. It is recommended to use a drilling diameter that is exactly the same core diameter of the screw thread. When using screws, a minimum distance of 20 mm to the edge of the board must be maintained.



Joining technology

All conventional permanent and removable joints for solid wood and wood-based materials are suitable.

CONSTRUCTING EXTERIOR AND INTERIOR WALLS

Fitting

- The boards can be aligned both vertically and horizontally
- For load-bearing walls, please select boards that are at least the height of the wall
- If fitting the boards horizontally, reinforce all contact points and exposed edges with reinforcing ribs

Expansion joints

- Maintain a space of at least 25 mm between the structure and the ground (e.g. concrete) so that no water is absorbed
- To do this, underlay the entire construction and fill the joint with cement mortar, for example.
- If an expansion joint is not possible, use chemical protection (impregnation)
- In all cases, the boards must be raised 25 mm above ground level
- There must be expansion joints of at least 3 mm between walls and around doors and windows

Fixing

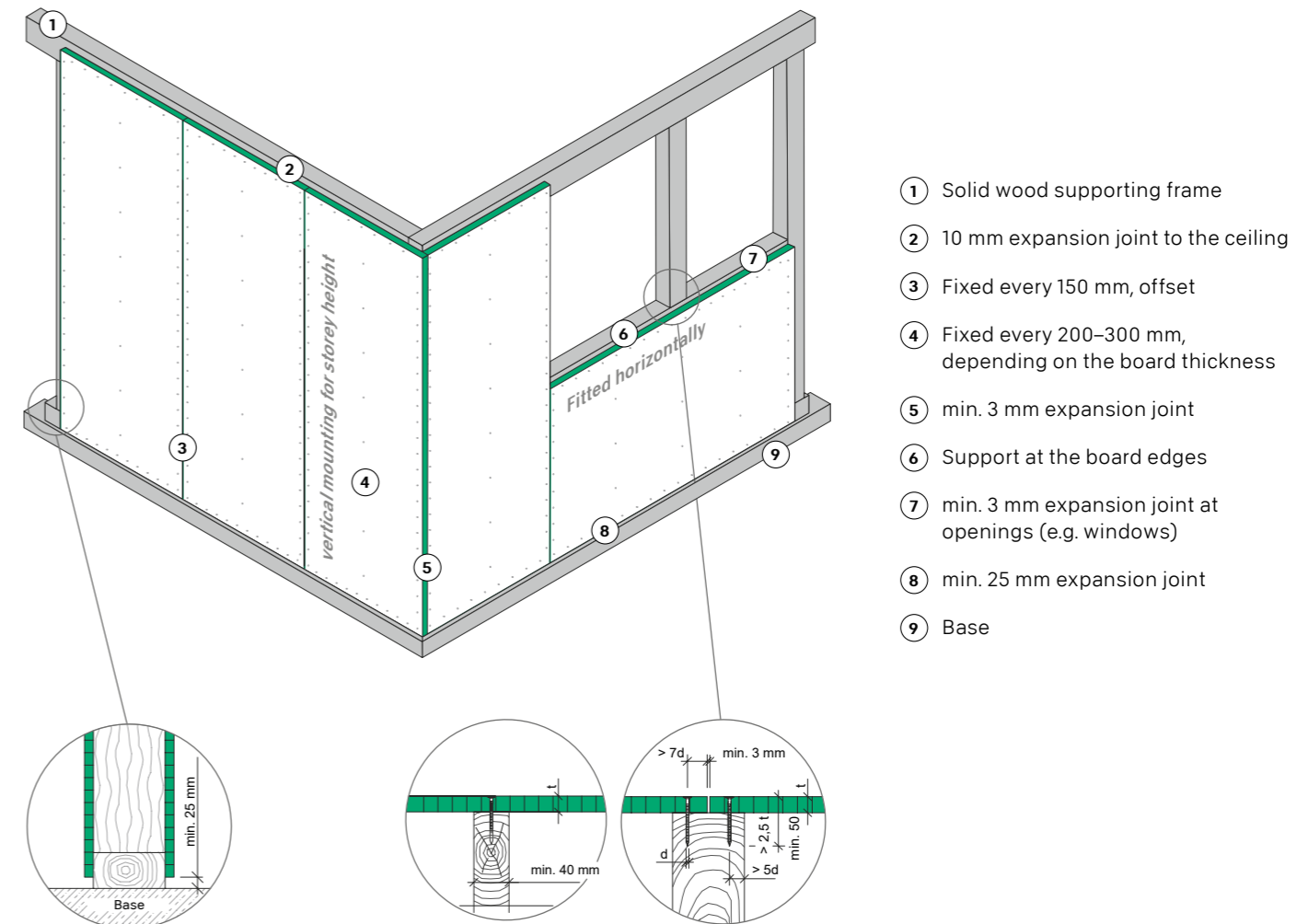
- Use nails two and a half times as long as the thickness of the board, at least 50 mm, preferably spiral or convex nails
- Use woodscrews two and a half times as long as the thickness of the board, at least 45 mm; the minimum recommended dimensions are 4.2 x 45 mm

Recommended spacing for the fixing points (nails or screws)

Board thickness	On the board edges	On the inside area of the board
9–12 mm	100 mm	200 mm
12–15 mm	125 mm	250 mm
15–22 mm	150 mm	300 mm

If walls are bearing loads, the spacing for the fixing points must be determined using static calculations.

Construction diagram



Note: During subsequent construction planning, structural solutions must always be adapted to the individual requirements and structural conditions.

Moisture

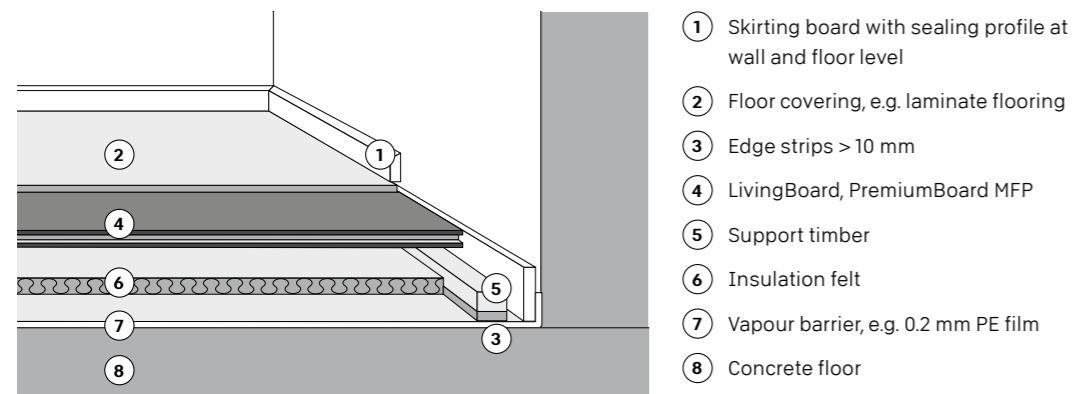
The use of rear-ventilated curtain wall façades is recommended for exterior walls. These allow constant ventilation and drawing away of moisture. The diffusion resistance of boards fitted outside on external walls must be taken into consideration in terms of the penetration of water vapour. On internal walls, the boards can serve as the vapour barrier, as long as the joint between them and the other structural elements has been sealed with suitable adhesive tape (see p. 63 "Airtightness"). When using tongue-and-groove boards, this seal can also be achieved using PUR or PVAC adhesive. In all cases, a sealing coat must be applied to all contact surfaces of the entire structure to prevent water ingress.

FLOOR STRUCTURES WITH TONGUE-AND-GROOVE BOARDS

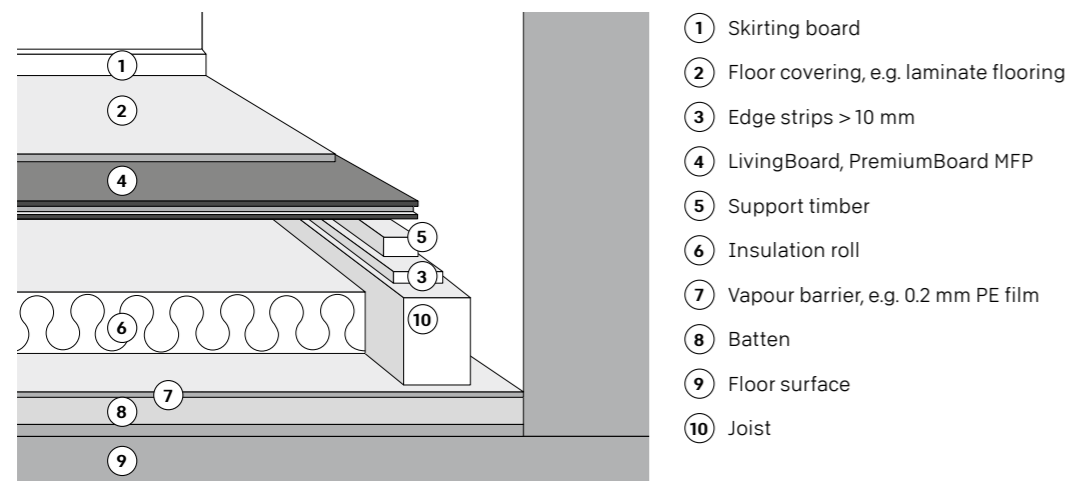
Laying the board on support timbers

Floor panels are frequently used in old buildings. However, since the concrete floors here often have recesses measuring several centimetres, they must first be levelled with filling material before the panels are actually laid. Laying the floor panels on support timbers is the more sensible and cost-effective alternative. Type P4 boards or higher should be used.

Over solid floors

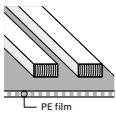


Over floor joists

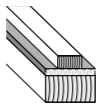


Notes about joists

The condition of the old joists must be checked during renovation work. If there is any uncertainty, the advice of an expert should be sought. This is absolutely essential in cases where the space is being converted for a new use involving higher loads. In the case of joist spacing that exceeds the figures set out in the table, a structural analysis must be performed.



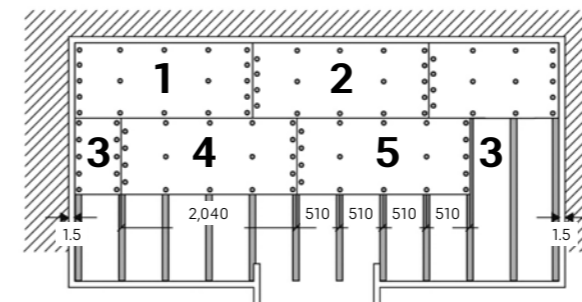
If a vapour-proof film is advisable to provide protection against moisture, 0.2 mm thick polyethylene film should be used as a vapour barrier. This should only be used on the underside of the joists (warm side), i.e. above the floor surface.



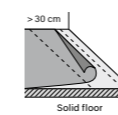
For sound insulation reasons, the floor panels should not be laid directly onto the joists. It is better to use a slightly springy overlay and additional support timbers here.

Alignment of the support timbers

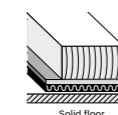
The upper sides of the support timbers should firstly be carefully brought to the same height and then aligned horizontally. The support timbers should not be directly connected to the adjoining walls. Additional insulation roll can be fitted between the support timbers to achieve high levels of thermal and acoustic insulation. Then the floor panels are laid. A space measuring between 10 and 20 mm should be left for ventilation purposes between the upper edge of the insulation material and the underside of the floor panel. Lay the panels with the long side at a right angle to the support timbers with offset edges. It is best to arrange the edges on the narrow sides so that they rest on the support timbers. The floor panels are screwed onto the support timbers at intervals of around 33 cm. The necessary edge spacing must be maintained. The minimum cross section of the support timbers is 58 x 38 mm. The support timbers should be laid parallel to the walls.



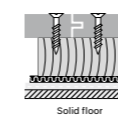
Fitting



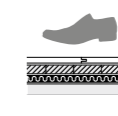
1. We recommend vapour barriers – such as 0.2 mm polyethylene film – above solid floors in old and new buildings. Attention must be paid to heavily overlapping (min. 30 cm) or welded edges.



2. An even height can be achieved by using different kinds of underlay material. Strips of solid wood, hardboard, plastic or raw particle board should be prepared for this purpose. These are held together during installation with PVA adhesive.



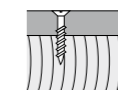
3. When fitting screws, care must be taken to ensure that the screws do not reach as far as the solid floor. All forms of wall insulation should be raised to the upper edge of the floor covering (approx. 10 cm), and the film should remain undamaged – including when any subsequent work is carried out. The film overlap should ideally be arranged beneath the support timbers.



4. Better impact sound protection can be achieved by using mineral wool insulation. Glass mineral wool insulation materials are recommended. If higher impact sound insulation is required, please use commercially available resilient channel systems for soundproofing.

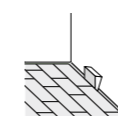


5. The underside of the groove and the upper surface of the tongue should additionally be glued with synthetic resin adhesive (PVAc). Gluing increases the overall stiffness of the board.

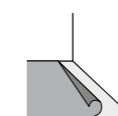


6. The screw holes may need to be filled level with the surface covering and in some cases they may have to be drilled with a countersink drill bit. **Use fully threaded screws (not partially threaded)!**

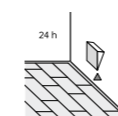
Final steps



1. After laying all of the floor panels and before the adhesive sets, the panels should be wedged against the walls – for an optimal bond and to prevent any creaking sounds.



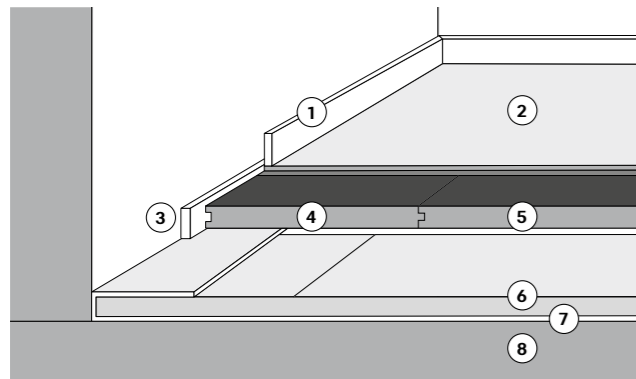
2. A covering must immediately be laid over the floor panels or they must be covered with polyethylene film in order to prevent drying out on one side.



3. The wedges can be removed after the adhesive has been allowed to dry for an adequate period of time (approx 24 hours).

Laying a floating floor

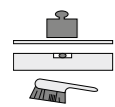
Note: If the floor is subjected to normal loads, a board thickness of at least 22 mm should be used.



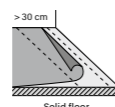
- ① Skirting board
- ② Floor covering, e.g. laminate flooring
- ③ Edge strips > 10 mm
- ④ LivingBoard, PremiumBoard MFP or P2, P3 floor panels
- ⑤ Tongue and groove, glued
- ⑥ Impact sound insulation
- ⑦ Vapour barrier, e.g. 0.2 mm PE film
- ⑧ Concrete floor



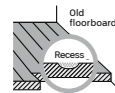
Preparation



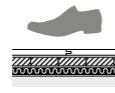
1. The supporting substructure should be even, dry, clean and capable of bearing a load.



2. We recommend vapour barriers – such as 0.2 mm polyethylene film – above solid floors in old and new buildings. Attention must be paid to heavily overlapping (min. 30 cm) or welded edges.

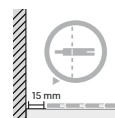


3. Recesses in the existing floor should be filled using a loose, rot-proof filling material (such as natural expanded shale). Under no circumstances should sand be used!



4. Better impact sound protection can be achieved by using mineral wool insulation slabs.

Fitting



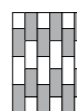
1. In order to prevent creaking noises, space for a 15 mm expansion joint should be left between the wall and floor panel. The tongues should be removed for the first row. Intermediate expansion joints will be needed for larger areas (more than 10 m long).



2. The remaining sections of the floor panels in the first row can easily be used to start off the second row in order to avoid waste.

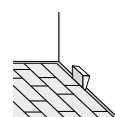


3. Glue the underside of the groove and the upper surface of the tongue with synthetic resin adhesive (PVAc). Slot the floor panel with the tongue into the groove of the already laid surface.

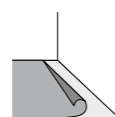


4. The floor panels should be laid in formation with the edges offset (by at least 15 cm) – i.e. with no cross joints.

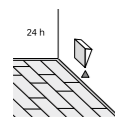
Final steps



1. After laying all of the floor panels and before the adhesive sets, the panels should be wedged against the walls – for an optimal bond and to prevent any creaking sounds.



2. A covering must immediately be laid over the floor panels or they must be covered with polyethylene film in order to prevent drying out on one side.

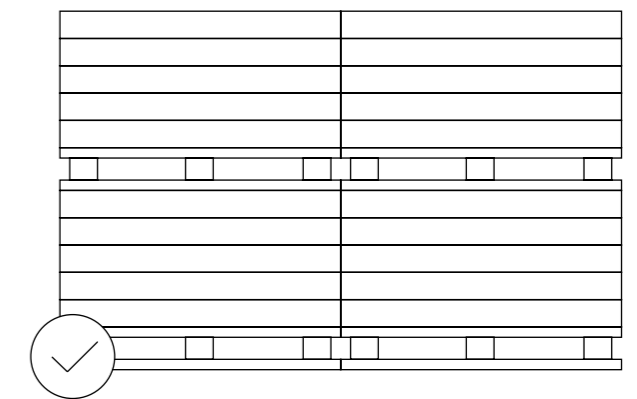
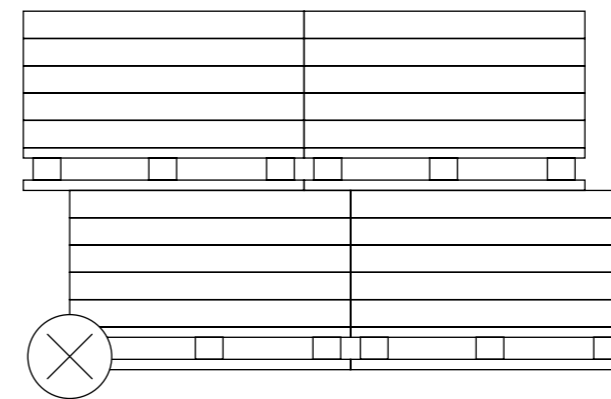


3. The wedges can be removed after the adhesive has been allowed to dry for an adequate period of time (approx 24 hours).

STORAGE AND TRANSPORT

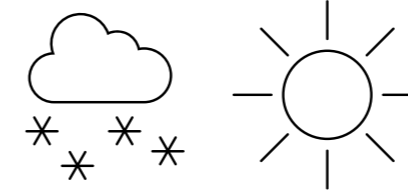
The following information should be noted when storing or transporting wood-based materials:

- Wood-based materials should preferably be stored horizontally on dry support timbers to avoid direct ground contact.
- The top board should be fully covered with a protective cover board or cardboard. Sufficient distance should be maintained from walls and direct contact should be avoided.
- If several boards are stacked on top of one another, care must be taken to ensure that square lengths of timber are placed in between every 15 to 20 boards in order to ensure that air can circulate. Panels are to be placed on equally spaced (max. 80 cm) support timbers of the same thickness, vertically aligned. This rule applies to boards starting at a thickness of 15 mm. Smaller spacing should be chosen for thinner boards.
- There should be no more than a 150 mm overhang of boards at the end of the stack.



QUALITY BUILT-IN

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THERMAL PROTECTION

Winter thermal protection

The task of thermal protection in winter is to reduce heat loss in buildings, create a comfortable indoor climate and permanently protect building structures from climate-related moisture ingress and condensation. Materials with good thermal insulation properties and a building envelope that is as airtight as possible play a key role here.

Summer thermal protection

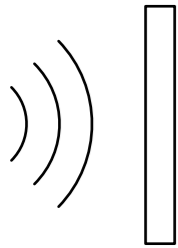
Thermal protection in summer serves to limit the heating of rooms caused by solar radiation. Building materials with low thermal conductivity and an airtight building envelope help to achieve the desired thermal protection in summer.



MOISTURE PROTECTION

Moisture protection is designed to protect the building structure from climate- and usage-related moisture ingress and the damage subsequently caused. For instance, the wall structure should be vapour permeable from the inside to the outside to allow moisture from the structural components (such as solid timber) and any other humidity to escape. A suitable solution here would be an exterior wall built using StyleBoard MDF.RWH and a braced wall on the interior side using LivingBoard, for example.

For moisture protection calculations, we recommend dynamic methods, using WUFI®, for example. This takes into account moisture-related material properties – such as moistening and drying – of construction materials, enabling a realistic calculation of the expected condensation.



SOUND INSULATION

The aim of sound insulation is to reduce sound transmission in a building and improve quality of life by cutting sound emissions. Sound insulation can be improved by using structural components with a higher mass per unit area, such as LivingBoard. Sound transmission can also be minimised by separating structural components. The use of a suspended structure minimises sound transmission through ceilings.

Sound absorption coefficient

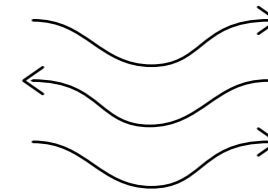
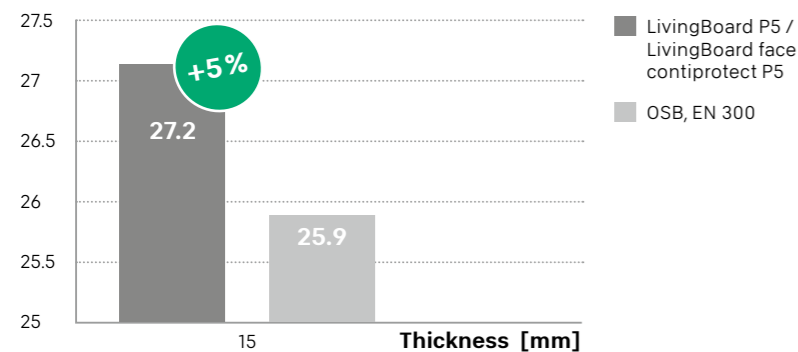
(Refer to EN 13986 for the sound absorption coefficient.)

Board type	Sound absorption Frequency range 250 Hz to 500 Hz	Sound absorption Frequency range 1,000 Hz to 2,000 Hz
PremiumBoard MFP Living P5	0.10	0.25
LivingBoard P4 / P5 / P7	0.10	0.25
LivingBoard face P5 / P7	0.10	0.25
LivingBoard face contiprotect P5 / P7	0.10	0.25
StyleBoard MDF.RWH	0.10	0.20

Airborne sound insulation

With its higher and more even gross density, LivingBoard provides much better airborne sound insulation than a standard oriented strand board.

R [dB]



AIRTIGHTNESS

An airtight building envelope is important to prevent moisture damage to the structure and heat loss due to unwanted air exchange. DIN 4108 requires airtight building envelopes to prevent a flow of air that carries some of the indoor air humidity with it, which can cause the build-up of condensation in the structural elements.

Wood-based material joints must be sealed in order to ensure that the requirements of the blower door test are met. LivingBoard is advantageous in this regard because it can be sealed with standard adhesive tapes without having to apply a primer beforehand. The adhesive tape should be a minimum of 6 cm wide. It should be placed centrally over the butt joint. Appropriate measures should be taken in areas where the adhesive tape overlaps, e.g. at T-joints. The manufacturer's guidelines on working with the material must be observed.

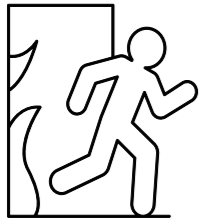
ADHESIVE TAPE RECOMMENDATIONS

Interior areas

SIGA Sicral® , SIGA Cover AG, Ruswil (Switzerland)
 Ampacoll® INT, Ampack AG, Rorschach (Switzerland)
 RAPID CELL, Pro clima/MOLL GmbH, Schwetzingen
 UNI TAPE, Pro clima/MOLL GmbH, Schwetzingen

Joints and intersections

Ampacoll® BK 535, Ampack AG, Rorschach (Switzerland)



FIRE PREVENTION

Fire prevention is of great importance for any timber building. Fire prevention requirements are laid down in national building regulations. Pfleiderer PremiumBoard, LivingBoard and StyleBoard MDF. RWH starting at a thickness of ≥ 9 mm and a raw density of ≥ 600 kg/m³ are classified in Euro class D-s2, d0 1 in conformity with EN 13986.

Charring rates

Pfleiderer wood-based materials have the following charring rates under Eurocode EN 1995-1-2:

$$\beta_0 = 0.9 \times k_p \times k_t$$

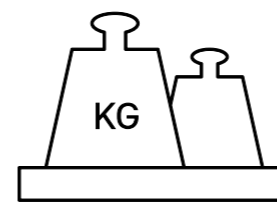
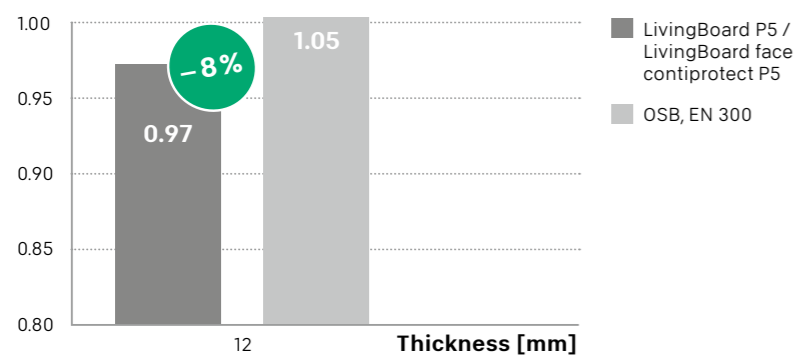
$$k_p = \sqrt{\frac{450}{\rho_k}} \quad k_t = \sqrt{\frac{20}{h_t}}$$

ρ_k : characteristic raw density [kg/m³]; h_t : Material thickness [mm]

	Calculated charring rate in mm/min							
	Thickness in mm							
	12	13	15	16	18	19	22	25
LivingBoard face P5 / P7 LivingBoard face contiprotect P5 / P7 PremiumBoard MFP Living P5	0.97		0.90		0.82		0.78	0.73
LivingBoard P4 / P5 / P7		0.93		0.87		0.8	0.78	0.73

Compared to standard OSB

Charring rate in mm/min



STATICS

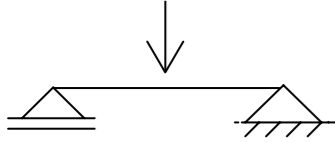
Timber structures should be designed on the basis of national and European standards and relevant building regulations. They are designed in Europe in conformity with Eurocode 5. In addition, a so-called National Application Document (NAD) may have to be followed in EU member states. Pfleiderer products are governed by the Construction Products Regulation and approved by the building authorities in conformity with the European Standard EN 13986. Refer to EN 12369-1 for the characteristic values for designing timber structures using Pfleiderer wood-based materials. The most important values can be found on page 50 of this brochure.



LOAD TABLE

P7 BOARDS

Supporting member spacing (centre distance) [cm], maximum permissible surface load on boards of different thicknesses [mm], spans and deflection criteria [kN] – use class 1 – load duration class: medium-term



Static system: Single-span beam with point load.
Calculated values as per DIN EN 12369-1:2001-04 / calculation in conformity with DIN EN 1995-1-1:2010-12

Thickness in mm	Supporting member spacing (centre distance) in cm																									Deflection criteria	
	30	35	40	45	50	55	60	62.5	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145		150
12	21	17	13	10	0.8	0.7	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	L/150
	1.7	1.3	1.0	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	L/200
	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	L/300
	5.8	5.0	4.4	3.9	3.5	3.2	2.9	2.8	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.1	1.1	Break
13	2.5	2.1	1.6	1.3	1.0	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	L/150
	2.2	1.6	1.2	1.0	0.8	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	L/200
	1.5	1.1	0.8	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	L/300
	6.8	5.9	5.1	4.5	4.1	3.7	3.4	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.3	Break
15	3.0	2.6	2.2	1.8	1.5	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	L/150
	3.0	2.3	1.7	1.4	1.1	0.9	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	L/200
	2.1	1.5	1.1	0.9	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	L/300
	8.3	7.1	6.2	5.5	5.0	4.5	4.1	4.0	3.8	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.7	1.6	1.5	Break
16	3.4	2.9	2.5	2.2	1.8	1.5	1.2	1.1	1.0	0.9	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	L/150
	3.4	2.8	2.1	1.6	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	L/200
	2.5	1.8	1.4	1.1	0.9	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	L/300
	9.5	8.1	7.1	6.3	5.7	5.1	4.7	4.5	4.3	4.0	3.7	3.5	3.3	3.1	2.9	2.8	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.8	Break
18	4.3	3.7	3.2	2.9	2.5	2.1	1.7	1.6	1.5	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	L/150
	4.3	3.7	3.0	2.4	1.9	1.6	1.3	1.2	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	L/200
	3.5	2.6	2.0	1.6	1.2	1.0	0.8	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	L/300
	12.0	10.3	9.0	8.0	7.2	6.5	5.9	5.7	5.5	5.1	4.7	4.4	4.2	3.9	3.7	3.5	3.3	3.2	3.0	2.9	2.8	2.6	2.5	2.4	2.3	2.2	Break
19	4.8	4.1	3.6	3.2	2.9	2.5	2.1	1.9	1.7	1.5	1.3	1.1	1.0	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	L/150
	4.8	4.1	3.5	2.8	2.2	1.8	1.5	1.4	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	L/200
	4.2	3.1	2.3	1.8	1.5	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	L/300
	13.4	11.4	10.0	8.9	8.0	7.2	6.6	6.4	6.1	5.7	5.3	4.9	4.6	4.4	4.1	3.9	3.7	3.5	3.4	3.2	3.1	2.9	2.8	2.7	2.6	2.5	Break
22	5.9	5.1	4.4	3.9	3.5	3.2	2.9	2.8	2.6	2.2	1.9	1.7	1.5	1.3	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	L/150
	5.9	5.1	4.4	3.9	3.3	2.7	2.3	2.1	1.9	1.6	1.4	1.2	1.1	0.9	0.8	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	L/200
	5.9	4.5	3.5	2.7	2.2	1.8	1.5	1.4	1.3	1.1	0.9	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	L/300
	16.5	14.2	12.4	11.0	9.9	9.0	8.2	7.9	7.6	7.0	6.5	6.1	5.7	5.4	5.1	4.8	4.6	4.4	4.2	4.0	3.8	3.7	3.5	3.4	3.2	3.1	Break
25	7.7	6.6	5.7	5.1	4.6	4.2	3.8	3.7	3.5	3.3	2.8	2.5	2.2	1.9	1.7	1.5	1.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.5	L/150
	7.7	6.6	5.7	5.1	4.6	4.0	3.4	3.1	2.8	2.4	2.1	1.8	1.6	1.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.3	L/200
	7.7	6.6	5.1	4.0	3.2	2.6	2.2	2.0	1.9	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.1	L/300
	21.3	18.3	16.0	14.2	12.8	11.6	10.6	10.2	9.8	9.1	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.4	5.2	4.9	4.7	4.6	4.4	4.2	4.1	Break

The tables are to be used for preliminary dimensioning purposes and are no substitute for a structural analysis in specific cases.



CONSTRUCTIVE SUPPORT

ADVICE

You can directly get in touch with our specialists for all matters relating to the subject of timber construction. Send us an email and we will personally contact you as soon as possible!

info-uk@pfleiderer.com



BROCHURES

You can find further information in our themed brochures – covering our structural solutions as well as our stylish decors and highly functional surfaces. Simply download them in PDF form from the service section at pfleiderer.com or order them via the shopping cart.



Workbook 2021–2024

The entire collection at a glance – from cores to decors and surface structures.



Wood-based materials with perspectives

Detailed background information on everything that makes our products what they are.

DIGITAL SERVICES

In order to make it as simple as possible for you to use our products, we offer you comprehensive support with our digital services when selecting, designing, planning and realising projects.



CONSTRUCTION GUIDE



Find the DIN standard component click by click The Construction Guide quickly and reliably guides you through the selection process.

pfleiderer.com/construction-guide



ECO PRODUCT INSIGHTS



100 % transparent sustainability: all information on certificates, emission classes and recycled wood percentages at a glance.

pfleiderer.com/eco-product-insights

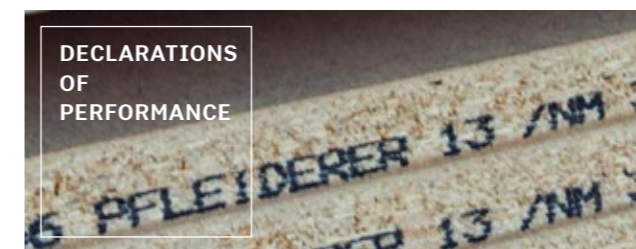


BIM DATA



Incorporate product information, decor and texture patterns with ease into your digital project planning.

pfleiderer.com/bim



DECLARATIONS OF PERFORMANCE



Use our BIM data to access the digital version of all relevant declarations of performance.

pfleiderer.com/declarations-of-performance



**MADE IN
GERMANY**

UNCOMPROMISINGLY GOOD: AT PFLEIDERER QUALITY HAS A SYSTEM.

You can rely on safety and transparency.

Producing wood-based materials sustainably and in the highest quality is a challenge. As a leading company in the wood industry, Pfleiderer faces up to this challenge at all levels – and with traditional entrepreneurial diligence. With modern production sites, an integrated management system for quality, environment, energy and safety, and a corporate culture that continuously develops these values. Because for us, the compatibility of quality and sustainability is a matter of course!

In concrete terms, this means that we certify our processes throughout the entire value chain – often far beyond what is legally required. We attach great importance to being as transparent as possible for our customers and partners. Our environmental management systems at our locations are certified according to DIN ISO EN 14001 and ISO 50001. Also we belong to the Quality Association for Wood-based Panels and have certifications according to FSC® (License Code: FSC® C011773) and PEFC (License Code: PEFC/04-32-0828). And if you want to know more, just contact us. We will be happy to give you detailed information!



MADE IN GERMANY



Construction Guide

For further details and the full range of DIN-standard components with Pfleiderer wood-based materials, simply use the Construction Guide: [pfleiderer.com/construction-guide](https://www.pfleiderer.com/construction-guide)

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You can find our general terms and conditions on our webpage: www.pfleiderer.com

Pfleiderer uses wood from Certified Sustainable Forest Management.



www.blauer-engel.de/uz76

- low emissions
- wood from sustainable forestry
- no adverse impact on health in the living environment

 MADE IN GERMANY

Good to know: the Pfleiderer quality promise.

Pfleiderer wood-based panels stand for quality without compromise. We use sustainable raw materials and state-of-the-art production processes and we are fully committed to our site in Germany. For more information, visit quality.pfleiderer.com.

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