

# PACKAGING CONSTRUCTION

PRODUCTS AND TECHNICAL  
INFORMATION



MAKE  
YOUR  
VISIONS  
WORK.

MADE IN GERMANY

DUROPAL

thermopal

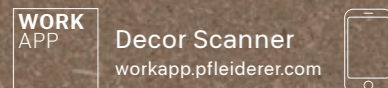
 PFLEIDERER



# MAKE YOUR VISIONS WORK.

## WOOD-BASED PANELS THAT OPEN UP NEW PERSPECTIVES.

From design to completed project, every step counts. After all, designs are only really appealing if they can also be realised. By choosing Pfleiderer, you're off to the right start. Aesthetic, functional and by design. In the 2021–2024 brochure, we introduce you to our extensive product range designed to make you more successful. Stylish, expressive and modern decors, innovative surface textures and core panels all come together perfectly to meet your technical, cost and user requirements. From high quality individual items to sector spanning concepts – you can turn your vision into reality with practical, high quality solutions from Pfleiderer.



Make work easier – with the Pfleiderer WorkApp! Simply scan decors with your smartphone, receive combination recommendations and request samples.

The new Pfleiderer WorkApp works on any smartphone. Just go to [workapp.pfleiderer.com](http://workapp.pfleiderer.com) and start the Decor Scanner. If you use it regularly, simply add the app to your home screen!



Our tip:  
scan the QR code  
and get started  
straight away.

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## **PFLEIDERER PACKAGING PANELS: SO THAT EVERYTHING GETS FROM A TO B SAFELY**

Valuable cargo must be well-protected against impact, moisture and temperature fluctuations. With our packing construction panels, we offer flexibly usable, robust, moisture-resistant and internationally approved solutions.

- We guarantee consistently high quality which is ensured by continuous external and internal monitoring, as well as our active quality management system – to achieve ISO 9001 certification.
- PremiumBoard MFP P5 and LivingBoard face contiprotect P5 can be delivered at short notice, as they are available from stock in various formats and thicknesses.
- PremiumBoard MFP P5 and LivingBoard face contiprotect P5 meet the requirements for overseas export. They are free of insects and can be labelled in accordance with the IPPC standard ISPM No. 15.



MADE IN GERMANY

SUSTAINABILITY

## UNCOMPROMISINGLY GOOD: AT PFLEIDERER QUALITY HAS A SYSTEM

### You can rely on security and transparency.

Producing wood-based materials sustainably and in the highest quality is a challenge. As a leading company in the wood industry, Pflleiderer 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

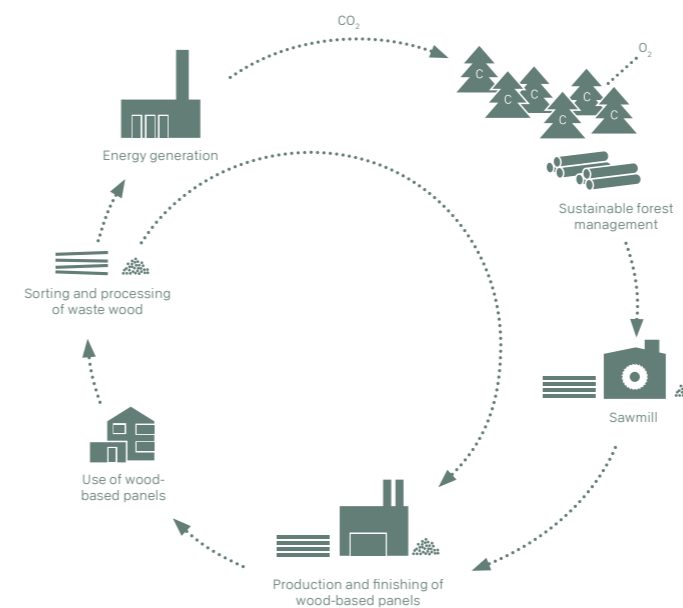
## DESIGNED FOR A FUTURE WORTH LIVING: SUSTAINABILITY AT PFLEIDERER

### Responsibility for tomorrow starts today.

Those who rely on wood as a raw material rightly expect an environmentally conscious “green” material. We at Pflleiderer want to do full justice to this and have therefore been offering an extensive range of low-emission and environmentally friendly products for many years. Sustainability – in addition to ecological, social and economic aspects – as well as careful use of natural resources are permanent pillars of our corporate philosophy. Consistent recycling management and wood recycling ensure that no trees are felled for our products. Through regular independent evaluation of our procurement and production processes, we are able to ensure that we are able to offer our customers the best possible service, manufacturing and logistics processes as well as a corporate culture of accountability. We ensure that you can use our products with a clear conscience and recommend them to your customers.

### A healthy full range of products.

Pflleiderer focuses on low-emission materials, e.g. F\*\*\*\* glued panels for interior design or LivingBoard with formaldehyde-free gluing. Many of our board materials have been awarded the Blue Angel for a healthy indoor climate for many years. At the beginning of 2020, we succeeded in obtaining this award – in addition to raw boards and directly coated products – also for large parts of the HPL range. This means that you can also fall back on a consistently sustainable full product range for demanding projects – and fulfil customer wishes without compromising on ecology and sustainability.



Through multi-stage wood utilisation (so-called cascade utilisation), wood recycling, and the use of forestry wood and industrial waste wood for high quality materials with a long service life, Pflleiderer conserves valuable resources and actively contributes to reducing carbon emissions, air, water and soil pollution and energy consumption. We control the wood mix individually, depending on the product, to achieve a perfect balance between quality requirements and resource conservation.



[www.blauer-enge.de/uz76](http://www.blauer-enge.de/uz76)



# PREMIUM-BOARD

Ideal condition for packaging purposes: the multifunctional board.

## Areas of application

- Ideal for packaging purposes
- Suitable for crate making in accordance with the HPE guidelines

## Properties

- Moisture resistant
- Attractive natural wood look
- Isotropic strengths in longitudinal and transverse direction
- Sanded surface

## Advantages

- Isotropic strength properties in all panel directions ensure optimised cut-to-size
- Nails, screws and staples sit perfectly, even in the edge area
- Food safe
- Easy to write on due to sanded surface

## Materials used

- Fresh forest wood and sawmill wood, recycled material
- Moisture-resistant amino resin

## PremiumBoard MFP P5



Particleboard MFP, type P5 in accordance with EN 312, suitable for load-bearing purposes in damp areas.

### AREAS OF APPLICATION



Timber construction



Packaging construction



FORMWORK CONSTRUCTION

PremiumBoard MFP P5 is ideally suitable for packaging purposes and has the ideal prerequisites: stability, load-carrying capacity and moisture resistance. Packing crates made of PremiumBoard MFP P5 are also suitable, for example, for the storage of dry food. PremiumBoard MFP P5 can be labelled to the IPPC standard ISPM No. 15 for export overseas.

### PRODUCT FEATURES



Sanded



Low swelling / moisture resistant



Load-bearing



Direction-free application



Floor panel available

<b>Product-type</b>	P5
<b>EC scope</b>	EN 13986:2004 +A1:2015 Load-bearing boards for use in humid conditions
<b>Reaction to fire</b>	D-s2,d0 according to EN 13986 dependent on end use (Thickness: $\geq 9$ mm / Gross density: $\geq 600$ kg/m <sup>3</sup> )
<b>Formaldehyde emission class</b>	E1 E05
<b>Nutzungs-kategorie</b>	1 & 2 – Dry area & moist area (EN 1995-1-1)
<b>Note</b>	FSC certification or PEFC certification available on request.

### MECHANICAL AND PHYSICAL PROPERTIES

Property	Test method	Unit	Requirement Thickness/Range of thickness (mm, nominal dimension)			
Thickness in mm		mm	> 8.9 to $\leq 10$	> 10 to $\leq 13$	> 13 to $\leq 20$	> 20 to $\leq 25$
Mean density	EN 323	kg/m <sup>3</sup>	790–690	770–680	700–660	670–650
Bending strength	EN 310	N/mm <sup>2</sup>	18	18	16	14
Bending modulus of elasticity	EN 310	N/mm <sup>2</sup>	2,550	2,550	2,400	2,150
Internal bond	EN 319	N/mm <sup>2</sup>	0.45	0.45	0.45	0.4
Swelling in thickness, 24 h	EN 317	%	13	11	10	10
Internal bond after boil test	EN 1087-1	N/mm <sup>2</sup>	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, wet cup $\mu$			50	50	50	50
Water vapour permeability, dry cup $\mu$			100	100	100	100

### FORMAT IN MM

Length	Width	Thickness
2,500	1,250	10   12   15   18   22   25
2,800	1,196	12
5,030	1,250   2,500	10   12   15   18   22   25

Refer to price list for minimum order quantities. Other formats and thicknesses on request.





# LIVINGBOARD FACE CONTIPROTECT

Coarse particle board with contiprotect surface. The low emission, natural solution for packaging purposes.

## Areas of application

- Ideally suitable for packaging purposes with high requirements
- Suitable for crate making in accordance with the HPE guidelines

## Properties

- Coarse top layer, natural look
- Formaldehyde-free and moisture resistant PU bonding
- Isotropic strengths in longitudinal and transverse direction
- Low thickness and edge swelling

## Advantages

- Isotropic strength properties in all panel directions ensure optimised cut-to-size
- Protection against short-term exposure to driving rain due to heat-finished contiprotect surface
- Good labelling capability
- No discolouration due to leaching
- High screw pull-out resistance, even in the area of the edge
- Protects the packed products reliably against impact, moisture and external temperature fluctuations

## Materials used

- Fresh wood from sawmill byproducts such as slabs, wood chips, chippings and thinnings
- Formaldehyde-free PU binder

## LivingBoard face contiprotect P5



Wood particleboard type P5 in accordance with EN 312, for structural purposes, for use in humid conditions, uncoated and 100 % formaldehyde-free bonding.

### AREAS OF APPLICATION



Timber construction



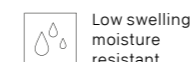
Packaging construction



FORMWORK CONSTRUCTION

LivingBoard face P5 contiprotect (unsanded board) is suitable for all areas of use in which high load-capacity values, moisture resistance as well as formaldehyde-free gluing are important. LivingBoard face P5 contiprotect, with the unsanded contiprotect surface, offers significantly increased moisture absorption and thus an optimum prerequisite for high-quality packaging.

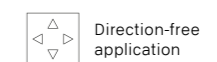
### PRODUCT FEATURES



Low swelling / moisture resistant



Load-bearing



Direction-free application



Floor panel available



Particularly ecological



Particularly low emission

<b>Product-type</b>	P5
<b>EC scope</b>	EN 13986:2004 +A1:2015 Load-bearing boards for use in humid conditions
<b>Reaction to fire</b>	D-s2,d0 according to EN 13986 dependent on end use (Thickness: $\geq 9$ mm / Gross density: $\geq 600$ kg/m <sup>3</sup> )
<b>Formaldehyde emission class</b>	E1 E05
<b>Nutzungs-kategorie</b>	1 & 2 – Dry area & moist area (EN 1995-1-1)
<b>Note</b>	FSC certification or PEFC certification available on request.

### MECHANICAL AND PHYSICAL PROPERTIES

Property	Test method	Unit	Requirement Thickness/Range of thickness (mm, nominal dimension)		
Thickness in mm		mm	> 10 to $\leq 13$	> 13 to $\leq 20$	> 20 to $\leq 25$
Mean density	EN 323	kg/m <sup>3</sup>	770–680	700–660	670–650
Bending strength	EN 310	N/mm <sup>2</sup>	18	16	14
Bending modulus of elasticity	EN 310	N/mm <sup>2</sup>	2,550	2,400	2,150
Internal bond	EN 319	N/mm <sup>2</sup>	0.45	0.45	0.4
Swelling in thickness, 24 h	EN 317	%	11	10	10
Internal bond after boil test	EN 1087-1	N/mm <sup>2</sup>	0.15	0.14	0.12
		W/(mK)	0.12	0.12	0.12
Water vapour permeability, wet cup $\mu$			100	100	100
Water vapour permeability, dry cup $\mu$			100	100	100

### FORMAT IN MM

Length	Width	Thickness
2,500	1,250	12   15   18   22   25
2,650   2,800   3,000   3,200	1,250	15
3,000	2,500	15
5,040	2,580	12   15   18   22   25

Refer to price list for minimum order quantities. Other formats and thicknesses on request.





# STYLEBOARD

High-density, thin fibreboard

## Areas of application

- Ideally suited for dividers and partitions for packaging
- Sanded, high density fibreboard

## Properties

- Sanded surface
- Isotropic strengths in longitudinal and transverse direction

## Advantages

- Isotropic strength properties in all panel directions ensure optimised cut-to-size
- Fine, hard surface can be processed with ease
- High stability

## Materials used

- Fresh forest wood and sawmill wood
- Urea resin

## StyleBoard HDF 106



High-density, thin fibreboard in accordance with EN 622-1, with uniform structure and good stability.

### AREAS OF APPLICATION



Packaging construction

### PRODUCT FEATURES



Sanded

### Formaldehyde emission class

E1 E05  
CARB Phase 2 / TSCA Title VI

### Note

FSC certification or PEFC certification available on request.

### MECHANICAL AND PHYSICAL PROPERTIES

Property	Test method	Unit	Requirement Thickness/Range of thickness (mm, nominal dimension)	
Thickness in mm		mm	> 4.9 to ≤ 6	> 6 to ≤ 6.7
Mean density	EN 323	kg/m <sup>3</sup>	910	910
Bending strength	EN 310	N/mm <sup>2</sup>	40	40
Bending modulus of elasticity	EN 310	N/mm <sup>2</sup>	3,500	3,500
Internal bond	EN 319	N/mm <sup>2</sup>	1.5	1.5
Swelling in thickness, 24 h	EN 317	%	20	14

### FORMAT IN MM

Length	Width	Thickness
5,310	2,100	5   6

Other formats and thicknesses on request; please also note our respective minimum order quantities.

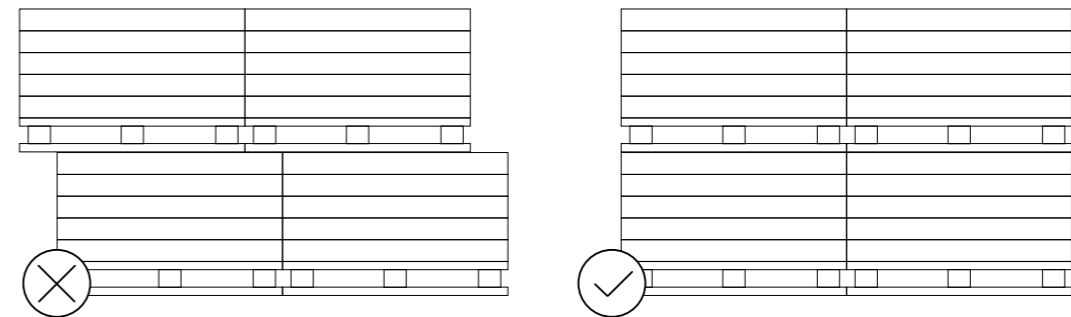




# TECHNICAL DATA

## The following instructions must be observed when storing wood-based panels:

- The faced panels must be protected from moisture and stored on a level surface in closed, dry rooms with normal climatic conditions on all sides. Outdoor storage or roofs exposed to wind uplift are not suitable.
- Wood-based panels should preferably be stored horizontally and without direct contact with the ground on dry storage timbers.
- The supporting battens used must be uniformly thick, and placed at uniform spacings from each other (maximum 80 cm). This rule applies to panels from a thickness of 15 mm. For thinner panels, choose smaller support distances.
- If several stacks of panels are layered on top of each other, the supporting battens must be aligned vertically on top of each other. The panels must be stacked with their edges flush to prevent damage to unprotected edges and corners.
- The top panel is to be covered with a protective panel or cardboard over the entire surface. Maintain an adequate distance from walls and avoid direct contact with walls and other objects.



Wood-based panels are not classified as hazardous products, No safety data sheet is therefore required.





## INSTRUCTIONS FOR PROCESSING AND DISPOSAL

<b>Machining</b>	Pfleiderer boards meet the requirements of the ChemVerbotsV regarding formaldehyde. Wood dust can be produced when machining and using wood-based material boards or panels. Wood dust has been classified in the TRGS 900 "MAH values list" under III B as a substance with justified suspicion of carcinogenic potential. According to TRGS 553 the concentration of wood dust in the air at the workplace may not exceed 2 mg/m <sup>3</sup> . This usually requires the machine tools to be connected to an extraction system.
<b>Personal protective measures</b>	No special measures necessary. Pfleiderer panels are not toxic in the sense of the ChemVerbotsV. During processing / assembly of the wood-based materials the usual work safety measures (work gloves, dust mask for sanding work, etc.) must be taken.
<b>Disposal</b>	Material recovery (recycling) use for energy purposes (incineration in suitable plants from 50 kW according to 1. BImSchV)

## GLOSSARY

<b>Bending strength</b>	The bending strength describes the bending behaviour of a chipboard under loading and is measured in N/mm <sup>2</sup> . During the test a defined weight presses vertically in the middle of a chipboard, which is supported on the left and right only. The load is increased during the test, whereby the respective board deflection is measured and recorded. The value given in the technical tables indicates the minimum load a board can be exposed to without breaking. The bending strength depends on the board thickness; the thinner the board, the higher the bending strength. This apparent contradiction is related to the applied point load or greater stiffness of the thicker boards.
<b>CE marking</b>	The CE marking (CE stands for Communauté Européenne = French for European Community) is a marking under EU law related to product safety. Since 01/04/2004, CE marking has been mandatory for chipboards that are a construction product. With the CE marking, the manufacturer confirms the conformity of the product with the relevant EC directives and compliance with the "essential requirements" defined in them.
<b>DIN</b>	DIN stands for "Deutsches Institut für Normung e. V." and is the German national standards organisation based in Berlin. Standards are used to rationalise, inform, for fitness for use, quality assurance, compatibility, replaceability, health and safety and environmental protection. Examples for standards in wood-based panel production: a. DIN EN 312 (particleboards)) b. DIN EN 622 (MDF) c. DIN EN 14322 (melamine faced boards)
<b>Modulus of elasticity</b>	The modulus of elasticity in bending (flexural modulus) gives the ratio of stress and strain within the elastic range of a material and its units are N/mm <sup>2</sup> . The value describes the maximum force with which a board can be extended and, after the force has been removed, returns to its original shape.
<b>E1</b>	All wood-based panels produced or sold in Germany must comply with class E1 emission limits. E1 means that the maximum emission of formaldehyde is 0.1 ppm (parts per million). Measured according to DIN EN 16516. No other wood-based panels are permitted in Germany.
<b>ISO</b>	The "International Organization for Standardization" – or ISO for short – is the international association of standardisation organisations and draws up international standards in all areas except electrics and electronics.
<b>ISO 14001</b>	Defines minimum requirements for an environmental management system. The objective is to minimise environmental impacts in line with economic, social and political requirements.
<b>ISO 9001</b>	Quality Management defines minimum requirements for the quality management system, which a company has to meet to achieve certification.
<b>IPPC</b>	The International Plant Protection Convention specifies import regulations for the international shipping of packaging made of solid wood.
<b>Service class</b>	Service class 1: Dry conditions Service class 2: Humid conditions Service class 3: Exterior conditions
<b>ppm</b>	Parts per million (ppm) stands for the number 10 <sup>-6</sup> and is used in science to denote one millionth, in the same ways as percent (%) for the number 10 <sup>-2</sup> and for one hundredth. In the case of woodbased panels, the term is related to formaldehyde measurement and definition of emission classes. In Germany, only wood-based panels with at least emission class 1 (E1) may be produced and distributed. The formaldehyde content may not exceed 0.1 ppm maximum in the test chamber.



# SERVICE

## ILLUSTRATIVE AND RESULTS-DRIVEN: DIGITAL SERVICES FROM PFLEIDERER



### **Digital Product Finder: [productfinder.pfleiderer.com](https://productfinder.pfleiderer.com)**

Which decorative panel is best suited to which application? Which product has particular material properties or surface characteristics? What is available quickly? Use the digital product finder to find the perfect material for your application in just a few steps. After all, bringing together creative ideas with construction requirements is what Pfleiderer does best!



### **Room Designer: [roomdesigner.pfleiderer.com](https://roomdesigner.pfleiderer.com)**

Combine all the decor collections in 26 different digital room layouts – and show your customers in advance how bespoke design options could look in their home, health or care setting, office, hotel, shop, caravan or yacht. Easy to use, with detailed decor lists and smart filters as well as an interactive compare function. You can print and download the results or save them as favourites.



### **Mood Board Tool: [moods.pfleiderer.com](https://moods.pfleiderer.com)**

Get the first glimpse of your desired decor before you order! Just upload your own image to our Mood Board Tool. The tool extracts the colours from your motif and suggests suitable decors from our portfolio. You can then save your created mood board in your account or send it via e-mail in order to discuss the selection further.



### **3D-Viewer: [3d-viewer.pfleiderer.com](https://3d-viewer.pfleiderer.com)**

In order to properly evaluate a surface texture, you have to be able to see it from different angles. That's why we provide the 3D VIEWER for surface textures! It enables you to get a realistic 360-degree view of our surface textures from all sides and in different lighting conditions. A useful tool for everyone who appreciates quick and illustrative support when evaluating and deciding on different textures!



### **Individual Konfigurator: [individual.pfleiderer.com](https://individual.pfleiderer.com)**

The idea behind Pfleiderer's individual design concept is to enable almost unlimited creative freedom starting from a lot size of one. It allows you to use your own motifs – without compromising on the quality of the surface or core materials. You can use the Individual Product Finder to configure your unique product easily online, from selecting the core material to uploading your motif and enquiring about production.



### **BIM Data and Specifications: [BIM.pfleiderer.com](https://BIM.pfleiderer.com)**

Access the BIM product data from Heinze directly via our website – including all of the datasets for the entire Pfleiderer range. You can access all the relevant product information and downloads in one place. From the BIM data itself to additional product information, decor and texture samples as well as declarations of origin and conformity. On our tendering support page, you can also find text blocks for the different products.





**Decor Scanner**  
workapp.pfleiderer.com



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You can find our general terms and conditions on our webpage: [www.pfleiderer.com](http://www.pfleiderer.com)

**Pfleiderer uses wood from Certified Sustainable Forest Management.**



[www.blauer-engel.de/uz76](http://www.blauer-engel.de/uz76)

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

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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](http://quality.pfleiderer.com).

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