

Product Information

Melamine faced chipboard (MFC) | DecoBoard | Technical data

Melamine faced chipboard (MFC) | **DecoBoard** by PFLEIDERER are extremely versatile in use. They are mainly used for decorative furniture making. Other possible uses are interior wall cladding, suspended ceilings and ceiling cladding, for structural installations and in general decorative interior finishes.

DecoBoard are only conditionally suitable for highly used or loaded horizontal surfaces, such as counters, shelving or kitchen worktops. We recommend the use of DUROPAL high-pressure laminate (HPL) for such uses.

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Production of melamine faced chipboard

Decorative panels are made by compressing impregnated paper on to a core panel. Raw chipboard, MDF and HDF panels or special purpose panels can be used as core material. The papers used are impregnated with curable thermosetting aminoplast resin (urea or melamine resin). Curing proceeds under pressure and heat resulting in permanent connection of the impregnated papers with the core material without requiring additional adhesives.

DecoBoard is manufactured without adding any wood preservatives or other preservatives, biocides and organic solvents. The panels are not treated with any wood preservatives classified as critical by the German Sustainable Building Council (DGNB) (GIS-Code W60/W70/W80/W90).

The press plates used for pressing also create textures. After the pressing the resin-impregnated decorative paper provides a scratch impact and abrasion resistant surface.

The surface is physiologically safe and thus perfectly suited for contact with foodstuffs.

Pfleiderer decorative panels are produced in conformity with EN 14322. Certifications under ISO 9001 and ISO 14001 ensure a continuously high quality of our products and environmentally friendly production processes.

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Product properties

Pfleiderer DecoBoards are mainly characterised by the properties named below:

- hygienic and easy-care
- antistatic, lightfast and heat resistant
- scratch, impact and abrasion resistant
- insusceptible to conventional household cleaning products
- approved for use in direct food contact
- decorative and durable
- low-emission (E1)

- high-quality melamine resin lamination on both sides or authentic real metal surface
- available in combination with an extensive range of core materials (P2, P3, MDF, Pyroex, etc.)
- extensive range of decors and surface textures
- easy machining and processing
- available as PEFC™ or FSC® (FSC licence code FSC-CO11773) certified panel on request

You can visit our website www.pfleiderer.com to see our extensive supply range.

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Technical Data and material properties

	EN 14322 requirements	Pfleiderer Decorative Panels (DecoBoard)
Edges		
Standard panels	Cracks up to 10 mm	≤ 10 mm
Rough cut-to-size	Cracks up to 3 mm	≤ 3 mm
Surface defects (stains, dirt entrapment, indentations)		
Pin knots	≤ 2 mm ² /m ²	≤ 2 mm ² /m ²
Longitudinal defects	≤ 20 mm/m	≤ 20 mm/m
Deflection		
Thickness ≥ 15 – 20 (only for balanced surface structures)	≤ 2 mm/m	≤ 2 mm/m

Abrasion behaviour	IP* (revolutions)	
1	< 50	print decors (stone and wood reproductions, creative decors)
2	≥ 50	plain decors depending on coating thickness
3A	≥ 150	plain decors depending on coating thickness
3B	≥ 250	plain decors depending on coating thickness
4	≥ 350	plain decors depending on coating thickness

*IP = initial abrasion point

Scratch resistance		
Load	≥ 1.5 N	> 1.5 N (1 – 1.2 N for glossy and matt structures)

Resistance to staining		
Grade ≥ 3	Decorative panels must be insusceptible to stains from the substances listed in EN 14322, annex A, ≥ grade 3, corresponding to moderate change of gloss level and colour.	DecoBoards comply with the required values for contact times of 16 hours.

Susceptibility to cracking		
	≥ grade 3	≥ grade 3

Please avoid direct panel contact with heat sources (e.g. coffee machines, printers, fax machine) to prevent cracks in dried out panels. All technical properties apply exclusively to moderate climatic zones (temperature, air humidity, exposure to light, etc.) For further information regarding bending strength, tensile strength, thickness swelling etc. please refer to the section about core materials. The mentioned values apply also to decorative panels / DecoBoard.

	Chipboard / DecoBoard	MDF- panels / DecoBoard MDF
Reaction to fire classification EN 13501-1	D-s2,d0 according to EN 13986 dependent on end use (Thickness: ≥ 9 mm / Gross density: ≥ 600 kg/m ³) PremiumBoard / DecoBoard Pyroex: B-s2,d0 / C-s2,d0 (decor dependent)	D-s2,d0 according to EN 13986 dependent on end use (Thickness: ≥ 9 mm / Gross density: ≥ 600 kg/m ³) DecoBoard MDF Pyroex: C-s2,d0
Thickness tolerance for sanded panels	Raw chipboard ≤ 19 mm >19 mm ± 0.2 mm ± 0.3 mm DecoBoard ≤ 20 mm >20 mm $+ 0.5$ mm ± 0.5 mm $- 0.3$ mm	Raw-MDF ± 0.3 mm DecoBoard ≤ 20 mm >20 mm $+ 0.5$ mm ± 0.5 mm $- 0.3$ mm
Thickness tolerance for unsanded panels	-0.3 mm, +1.7 mm	
Length / width tolerance for standard panels	± 5 mm for DecoBoard cut-to-size: ± 2.5 mm	± 5 mm
Edge straightness tolerance	1.5 mm per meter	1.5 mm per meter
Squareness tolerance	2 mm per meter	2 mm per meter
Moisture content, ex works delivery	9% \pm 4%	8% \pm 3%
Raw density tolerance	$\pm 10\%$	$\pm 7\%$
Emission class	E1 (Formaldehyde emission ≤ 0.1 ppm)	E1 (Formaldehyde emission ≤ 0.1 ppm)
Low-emission quality labels	CARB2, F**** UZ Blue Angel, EPF-S	CARB2, F****, Nordic Swan
Deflection	≥ 15 mm: ≤ 2 mm at 1.000 mm if panel structure is symmetrical	

Vapour diffusion resistance factor		
μ -Wert humid	50	20
μ -Wert dry	100	30

Thermal conductivity	Medium raw density (kg/m ³)	Thermal conductivity (W/mK)
Chipboard	300	0.07
	600	0.12
	900	0.18
MDF-Platten	400	0.07
	600	0.10
	800	0.14

External production monitoring by WKI (Fraunhofer Institute for Wood Research, Braunschweig), IHD (Institute for Wood Technology, Dresden) and Qualitätsgemeinschaft Holzwerkstoffe e.V.

All technical properties apply exclusively to moderate climatic zones (temperature, air humidity, exposure to light, etc.) As a natural raw material wood adjusts its moisture content to the ambient climatic conditions; this must be taken into account when dimensioning timber constructions.

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For all specific purpose the right surface texture

Scratch resistance

The coarser the texture and the lighter the decor, the more the scratch resistance increases. As smooth surfaces (scratch resistance approx. 1.0 N) and graphic structures are very susceptible to scratching, we recommend our pearl and parchment structures here.

Stain sensitive

Stain sensitivity increases the smoother the surface texture and the lighter coloured the decor. If stain resistance is required, pearl or hand-made (vat) textures (e.g. MP) should be used. Smooth surface textures (e.g. SM, FM, ML) are not suitable.

Ease of cleaning

Ease of cleaning increases the more closed or glossy the surface texture is. Here we refer to the separately available care and cleaning recommendations for decorative panels (DecoBoard).

Abrasion resistance

The abrasion resistance depends on the properties of the paper in the decor used. Plain colours achieve the best values, as the papers are through-dyed. Printed decors (wood, stone and creative decors) achieve lower values, as only the imprint can be used for the wear resistance. The surface texture used does not play any role in the abrasion resistance.

Surface flatness

The surface uniformity depends on the coreboard used. Very good surface uniformity results can be achieved with raw particleboards. We recommend use of fibre boards for maximum requirements.

Surface gloss

The surface gloss is solely dependent on the surface texture chosen. All textures achieve values below the limit value of 0.45 specified in the office furniture standard DIN 4554.

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Storage and transport

Wood-based materials react to changes of air moisture content and temperature, with equilibrium moisture content of panels changing in relation to the ambient humidity. Changes in panel moisture content lead to dimensional changes (shrinking, swelling).

Coated panels with glossy and matt textures like e.g. Matt lacquer (ML) and High gloss (HG) are delicate and require particular care. To protect the high-quality surfaces, Pfleiderer delivers these surface textures with a protective film. For further processing not later than 6 months after delivery, foils are to be removed from the panels.

Please observe the following instructions for the storage of wood-based materials:

- Coated panels must be protected from humidity and stored in closed dry rooms under normal climate conditions on an even surface. Storage under shed roofs and in the open is unsuited.
- Wood-based panels should be stored horizontally on dry support timbers to avoid direct ground contact.
- Panels from 15 mm thickness are to be placed on equally spaced (80 cm max.) support timbers of same thickness. Shorter spacing is required for thinner panels.
- If stacks of panels are piled up, the support timbers should be vertically aligned. Please make sure that panels are stacked flush to avoid damage to unprotected corners and edges.
- Cover the top panel fully with a cover board or cardboard. Keep sufficient distance from walls and avoid direct contact.



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Safety related data | please note

Wood-based panels are products not classified as hazardous – therefore, no safety data sheets are required.

Machining and processing

Pfleiderer panels meet the requirements of the Banned Chemicals Ordinance regarding formaldehyde. Wood dust may be generated in the processing of raw chipboard. In the TRGS 900 MAC Values List wood dust has been classified in category III B as substance where there is a reasonable suspicion of carcinogenic potential. According to the German Technical Rules for Hazardous Substances 553 the concentration of wood dust in the air at the workplace may not exceed 2 mg/m³. Therefore dust extraction systems are generally connected to machining tools.

Personal protective measures

No measures required. Pfleiderer panels are not toxic within the meaning of Banned Chemicals Ordinance. In machining and processing / installation of wood-based materials, the usual health and safety measures (work gloves, dust mask for sanding operations), as in force for the processing of solid wood, are to be observed.

Disposal

recycling
energetic use (combustion in suitable facilities from 50 kW under the 1. German Federal Immission Control Act)

Heavy metals

Heavy metals do not play a role in wood-based materials manufacture. Except for special variants DecoBoard P2 ESA and Duropal HPL ESA, only papers free from heavy metals are used for the coating of decorative panels. Neither halogen-organic compounds (like PVC) nor hardeners on the basis of ammonium chloride are used in the manufacture of Pfleiderer wood-based materials.

Product ingredients

Softwood, hardwood, sawmill residues and uncontaminated recycled wood. The raw wood originates mainly from forests in Germany, Austria and Switzerland.

Additives

Ammonium sulphate as hardener, paraffine for water-repellency.

Plant protection product – ISPM 15

Our manufacturing process, including drying of wood at 150 to a maximum of 500 °C over an extended period, followed by chip gluing in the pressing process at temperatures above 200 °C and, in the third stage, by compressing raw chipboard / M DF / HDF with melamine-impregnated papers at 170 to 200 °C, guarantees that our panels are free from insects or insect larvae when leaving our plants.

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