



Drywall Systems

**K874a.de**

Product Data Sheet

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# DESIGNBOARD 227 WOOD

The veneered gypsum fibre board

## Product description

DESIGNBOARD 227 WOOD acc. to EN 14190 consists of a non-combustible gypsum fibre board acc. to EN 15283-2 and is veneered with real wood and painted in the factory.

## Storage

Store boards on board pallets in a dry environment

## Quality

In compliance with EN 14140, the product is subject to initial type testing and continuous factory production control and bears the CE marking.

## Properties and added value

- Not easily flammable B-s1, d0
- Universal application
- Robust surface
- Good coherence of structure when exposed to fire
- Easy application
- Low expansion and shrinkage when climate conditions change
- Eco-friendly carrier board

## The veneered gypsum fibre board

### Field of application

DESIGNBOARD 227 WOOD is used in all areas of high-quality interior design with very exacting design requirements. The refined surface finish of DESIGNBOARD 227 WOOD facilitates customized designs ensuring that tomorrow's requirements can be met today. Sound insulation, acoustic properties, fire resistance as well as robustness in addition to a high degree of design flexibility are requirements met by DESIGNBOARD 227 WOOD in correspondingly tested systems. Ideally suited for applications subject to building authority approval where not easily flammable composite materials are required. DESIGNBOARD 227 WOOD can be installed using our KEILLEISTE or DESIGNBOARD FIX substructure.

For example in:

- Public buildings
- Escape and access routes
- Meeting halls
- Hospitals
- High-rise buildings
- Sports halls

### Usability

- Ceiling linings and suspended ceilings
- Partition systems
- Acoustic systems

### Application

DESIGNBOARD 227 WOOD can be sawn, milled, drilled, trimmed and cropped with the standard machine tools and tungsten carbide tipped tools for woodworking. Diamond-coated tools also benefit from an extended service life and are recommended for high-speed tools. Precautionary measures are required to prevent scratching, such as ensuring a clean workplace and working on the rear of the board material. Dust extractors are recommended to reduce the generation of dust.

#### Notes

- Screw fastening can be undertaken and is dependent on the screw diameter and the screw type used.
- Pilot drill holes are recommended for wood screws and Euro screws.
- Always carry DESIGNBOARD 227 WOOD vertically upright.
- When applying DESIGNBOARD 227 WOOD to the substructure, expansion joints are useful to allow for shrinkage and swelling of the boards.
- Design measures undertaken with the substructure make it possible to avoid the formation of cracks and warping of abutting joints.

**Technical data**

Description	Standard	Unit	DESIGNBOARD 227 WOOD
Standard formats	–	mm mm	3000 x 1250 2540 x 1250
Thickness	–	mm mm	12.6 / 15.6 / 18.6
Dimensional tolerances	–		
Length		mm/m	+/- 0.3
Width		mm/m	+/- 0.3
Thickness		mm	+/- 0.5
Edge type <sup>1)</sup>	–	–	Unprocessed
Reaction to fire	EN 13501-1	Class	B-s1, d0
Water vapour resistance factor $\mu$ <sup>2)</sup>	DIN 52615	–	21
Thermal conductivity $\lambda$	EN 12664	W/(m·K)	0.3
Density <sup>2)</sup>	–	kg/m <sup>3</sup>	1000 ÷ 1250
Specific heat capacity c	–	J/(kg·K)	> 1000
Hygrothermal installation conditions	–	°C % r.h.	+10 – +30 45 – 70 (Exception nano perforation max 60%)
Hygrothermal usage conditions	–	°C % r.h.	+10 – +30 45 – 70 (Exception nano perforation max 60%)
Thermal expansion coefficient $\alpha$ <sup>2)</sup>	–	1/K	10*10 <sup>-6</sup>
Changes in length for fluctuations in air humidity <sup>2)</sup>	–	mm/m	0.3
Flexural strength <sup>2)</sup>	–	N/mm <sup>2</sup>	4.5
Modulus of elasticity <sup>2)</sup>	–	N/mm <sup>2</sup>	3900
Surface			
Abrasion resistance	DIN 68861-2	Degree	2E
Scratch resistance	DIN 68861-4	Degree	4B

1 ) Edge coating composite tested acc. to EN 13501-1 B-s1, d0

Required components: Knauf Design PU edge adhesive, Knauf Design laminate edge 0.3 mm, Knauf Design laminate edge with hot-melt adhesive 0.3 mm, acc. to product range

2) Carrier board

## Building biology: Rating of the eurofins emission test results

DESIGNBOARD 227 WOOD			
Regulation or protocol	Conclusion		
French VOC directive	A+	after 28 days	Below the evaluation limit
French CMR components	fulfilled	after 28 days	Below the evaluation limit
AgBB	fulfilled	after 3 and 28 days	Below the evaluation limit
Belgian regulations	fulfilled	after 28 days	Below the evaluation limit
Indoor Air Comfort GOLD	fulfilled	after 3 and 28 days	Below the evaluation limit
EN 717-1	E1 (0.007 mg/m <sup>3</sup> )	after 28 days	Below the evaluation limit
BREEAM NOR	Compliant	BREEAM International New Construction v2.0 (2016)	
LEED v4.1 BETA (outside U.S.)	Compliant	LEED v4.1 BETA for Building Design and Construction (February 2021)	
Carcinogenic substances <sup>1)</sup>	after 3 and 28 days		Below the evaluation limit
TVOC <sup>2)</sup>	after 3 and 28 days		Below the evaluation limit
SVOC <sup>3)</sup>	after 28 days		Below the evaluation limit
VOC <sup>4)</sup> individual substances R <sub>D</sub> and R <sub>B</sub>	after 28 days		Below the evaluation limit
VOC <sup>4)</sup> individual substances without LC1b	after 28 days		Below the evaluation limit
Formaldehyde	after 28 days		Below the evaluation limit

1) Carcinogenic substances = substances which can cause cancer

2) TVOC = total volatile organic compounds

3) SVOC = semi-volatile organic compounds

4) VOC = volatile organic compounds

The VOC emissions have been tested on the product and meet the requirements of the national regulations in Europe.



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[www.knauf.de/knauf-design-videos](http://www.knauf.de/knauf-design-videos)



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