

Rigicell 10

Original Rigips plasterboards have been on the market in Germany for more than 60 years now.

Rigicell 10 consists of a special gypsum core encased in a ground coated cardboard.



- sloping ceilings / roofs

The Institut für Baubiologie in Rosenheim (Institute for Building Biology - IBR) has classified Rigips boards as "tested and recommended building material by the IBR". This quality is re-assessed by the IBR every six months.



Rigips wallboards are used successfully in domestic buildings, offices, commercial buildings, hotels, schools and many other segments for applications such as the following:

- interior walls
- wall linings
- dry plaster
- suspended ceilings

Rigips wallboards are to be processed as per the Rigips installation guidance and as per DIN 18181.

Technical Data

Proof	as per DIN EN 520 and DIN 18180	Gypsum plasterboard type A Gypsum plasterboard GKB
Classification	as per DIN EN 13501-1	A2-s1,d0 (B), non-combustible as per Building Regulations List A Part 1, Annex 0.2.2 (2004/1)

Edge profile	Longitudinal edges	designed for filling of joints with Rigips VARIO joint filler, either with or without reinforcing strips.	 HRK
	Transverse edges		 SKF

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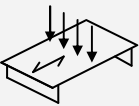
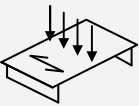
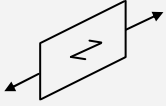
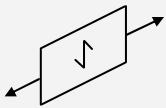
Plasterboard marking	On rear side	<p>The marking in longitudinal direction in blue contains:</p> <ul style="list-style-type: none"> • RIGICELL 10 • CE symbol • DIN EN 520: type A • DIN 18180: GKB • A2-s1, d0 (B) • Production date and/or shift number <p>Generally, together with the lettering, a row of dots mark the board centre within a strip of ca. 5 cm width (position of the metal stud sections for walls).</p>
	Edge marking	" RIGICELL 10 " at the longitudinal edge in blue

Dimensions	Nominal thickness		10	[mm]
	Width		1000	[mm]
	Lengths		1500	[mm]
	Dimensional tolerances	as per DIN EN 520	Thickness ± 0.5 Width $+0/-4$ Length $+0/-5$ Squareness deviation ≤ 2.5 per m width	[mm]

Weight	Apperent density		ca. ≥ 683	[kg/m ³]
	Weight per unit area m'	as per DIN 18180	ca. ≥ 6.8	[kg/m ²]

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Strengths	Breaking load	as per DIN EN 520 and DIN 18180	⊥ ≥ 430 ≥ 168	[N]
			⊥ perpendicular to direction of manufacture (in longitudinal direction of the board)	
			parallel to direction of manufacture (in transverse direction of the board)	
	Bending tensile strength		⊥ ≥ 7.5 ≥ 2.9	[N/mm ²]
	Modulus of elasticity	analog as per DIN 18180	⊥ ≥ 2500 ≥ 2000	[N/mm ²]
	Surface hardness	as per Brinell	ca. 10 - 18	[N/mm ²]
	Compressive strength vertical to the surface		ca. 5 - 10	[N/mm ²]
	Tensile strength	 	In longitudinal direction of the board: ca. 1.8 - 2.5 In transverse direction of the board: ca. 1.0 - 1.2	[N/mm ²]
	Shear strength of the connection between board and substructure	as per DIN EN 520	<u>No Performance Determined (NPD)</u>	
	Shear strength		Vertical to surface: ca. 3.0 - 4.5 Parallel to surface: ca. 2.5 - 4.0	[N/mm ²]
Adhesive strength of jointing compound & gypsum glue	as per DIN EN 13963	> 0.25	[N/mm ²]	

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Heat	Thermal conductivity λ	as per DIN EN 12524	0.25	[W/(m·K)]
	Specific heat capacity c	at 20°C	0.96	[kJ/(kg·K)]
	Thermal expansion coefficient	at 60% RH	ca. 0.013 - 0.020	[mm/(m·K)]

Humidity	Vapour diffusion resistance factor μ	as per DIN EN 12524	dry: 10 wet: 4	[—]
	Diffusion equivalent air layer thickness s_d	as per DIN 4108	dry: 0.10 wet: 0.04	[m]
	Water absorption for 2 h fully immersed in water		30 - 50	[Masse-%]
	Drying time after 2 h fully immersed in water		ca. 70	[h]
	Capillary rise of water (front edge immersed)		after ½ h: 3 - 4 after 2 h: 7 - 8 after 24 h: 20 - 22	[cm]
	Moisture absorption / equilibrium moisture content (depending on room climate)	at 20°C	40% RH: 0.3 - 0.6 60% RH: 0.6 - 1.0 80% RH: 1.0 - 2.0	[Masse-%]
	Change in length for a 30% change in RH	at 20°C	0.015	[%]

Other	Crystalline bonded water inside gypsum core		ca. 16 - 20	[%]
	Thermal threshold stress (long-term load)		max. 50	[°C]
	El. surface resistance at 100 V, 20°C and 65% RH	as per DIN 53486	front side: $3.5 \cdot 10^8 - 5 \cdot 10^8$ rear side: $6.5 \cdot 10^8 - 10 \cdot 10^8$	[Ω]
	El. volume resistance at 100 V, 20°C and 65% RH	as per DIN 53486	$2 \cdot 10^9$	[Ω]
	pH value		6 - 9	[—]
	Air permeability	as per DIN EN 520	$1.4 \cdot 10^{-6}$	[m ³ /(m ² ·s·Pa)]

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