Product data sheet

Rigips Die Harte 15, moisture resistant

Product description: Gypsum plasterboard acc. to DIN EN 520, type DFH2IR, moistureresistant, made of a gypsum core with high surface hardness, dense gypsum core encased in cardboard.

Area of application: For installation of wall- and ceiling systems with high resistance to mechanical loads and high sound insulation requirements e. g. in domestic bathrooms and similarly used rooms.

Technical specifications

Parameters	Sign	Value	Unit	Certification
Material				
Type of material		gypsum plasterboard		
Typesetting				
Type		DFH2IR		EN 520
Type		GKFI		DIN 18180
Building material class				
Fire behaviour		A2-s1, d0		EN 13501-1
Edges				
Longitudinal edge		VARIO		
Transverse edge		SKF		
Dimensions				
Thickness	t	15	mm	EN 520
Width	w	1250	mm	EN 520
Length	l	2000	mm	EN 520
Tolerances				
Thickness		±0.5	mm	EN 520
Width		+0/-4	mm	EN 520
Length		+0/-5	mm	EN 520
Perpendicularity: deviation per meter of width		≤2.5	mm/m	EN 520
Nominal Weight				
Surface-related mass	≥	15.4	kg/m²	DIN 18180

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Parameters	Sign	Value	Unit	Certification
Bulk density	≥	1030	kg/m³	EN 520
Characteristic strength values				
Bending breaking load - in parallel direction of the board	≥	360	N	EN 520 / DIN 18180
Bending fracture load - in transverse direction of the board	≥	870	N	EN 520 / DIN 18180
Bending tensile strength - parallel to the fibre (in the transverse direction of the sheet)		2.8	N/mm²	Calculated
Bending tensile strength - transverse to the fibre (in the longitudinal direction of the panel)		6.8	N/mm²	Calculated
Tensile strengths - across the board fibre (in board transverse direction) approx.		1.0-1.2	N/mm²	Gypsum data book
Tensile strengths - in longitudinal direction of board approx.		1.8-2.5	N/mm²	Gypsum data book
Modulus of elasticity - parallel to the fibre (in the transverse direction of the board)	≥	3500	N/mm²	DIN 18180
Modulus of elasticity - transverse to the fibre (in the longitudinal direction of the panel)	≥	4500	N/mm²	DIN 18180
Adhesion strength - of joint filler	≥	0.25	N/mm²	EN 13963
Shear strength - of the connection between panel and substructure		NPD	N	EN 520
Shear strength - vertical to the surface approx.		3.0-4.5	N/mm²	Gypsum data book
Shear strength - parallel to the surface approx.		2.5-4.0	N/mm²	Gypsum data book
Compressive strength - perpendicular to the surface approx.		10-15	N/mm²	Gypsum data book
Surface hardness - according to Brinell		30 (±3)	N/mm²	EN ISO 6506-1
Improved structural cohesion at high temperatures		approved		EN 520
Heat				
Thermal conductivity	λ_R	0.25	W/m.K	EN ISO 10456
Specific heat capacity c at 20°C	c	0.96	kJ/(kg.K)	Gypsum data book
Specific heat capacity	c	960.00	kJ/(kg.K)	EN 12524
Coefficient of thermal expansion at 60% relative humidity approx.		0.013-0.020	mm/(m·K)	Gypsum data book
Limit load by heat (long-term exposure)		max. 50 (short term 60)	°C	Gypsum data book

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Parameters	Sign	Value	Unit	Certification
Humidity				
Moisture expansion when the RH changes by 30% (20°C)		0.015	%	EN 318
Moisture absorption at 20°C, 80% rel. h. approx.»		1.0-2.0	mass-%	Gypsum data book
Moisture absorption at 20°C, 60% rel. humidity approx.		0.6-1.0	mass-%	Gypsum data book
Moisture absorption at 20°C, 40% rel. humidity approx.		0.3-0.6	mass-%	Gypsum data book
Capillary rise of water / immersion time approx. 24 h		1.5-2.0	cm	Gypsum data book
Capillary rise of water / diving time approx. 2 h		0.5	cm	Gypsum data book
Capillary rise of water / dive time approx. ½ h		0	cm	Gypsum data book
Drying time after 2 h water storage approx.		15	hour(s)	Gypsum data book
(total) water absorption after 2 h storage under water		≤10	mass-%	Gypsum data book
Water vapour diffusion equivalent air layer thickness (wet)	sd_{wet}	0.06	m	Calculated
Water vapour diffusion equivalent air layer thickness (dry)	sd_{dry}	0.15	m	Calculated
Water vapour diffusion resistance factor	μ_{wet}	4		EN ISO 10456
Water vapour diffusion resistance factor	μ_{dry}	10		EN ISO 10456
Miscellaneous				
Air permeability		$1.4 \cdot 10^6$	$m^3/(m^2 \cdot s \cdot Pa)$	EN 520
pH value		6-9	ph	
Notes				
Storage		Dry Flat and level Shady Air access		
Shelf Life		Unlimited		
Form of delivery		According to Pricelist		
Wast key		170802		

The values listed in this product data sheet only reflect the performance characteristics of the products. In addition, gypsum plaster systems have structural and structural properties, which can be found in our system documentation (e. g. Planen und Bauen).