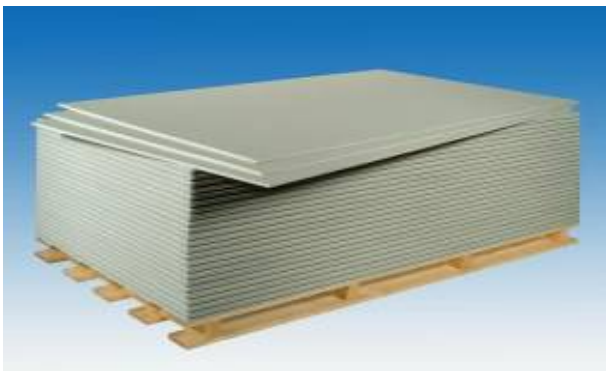
Product data sheet

Rigidur H_{sd} 12,5



- Suitable for loadbearing timber frame construction
- Particularly suitable for load attachment to walls

- With a maximum in sound insulation and fire resistance performance

- made from natural ingredients
- Certified system solutions with Rigidur H: Durable and sustainable

- Integrated water vapour retardant
- As inner layer of exterior timber frame wall constructions

Installation	The Gypsum Fibreboard Rigidur H_{sd} 12,5 contains gypsum, paper fibres and mineral additives.
Application	An ideal material for rigid drywall construction with excellent properties in sound absorption and fire resistance.
Installation	According to Rigidur installation guide

Technical data

Type	GF-C1-I-W2				as per DIN EN 15283-2
	non-combustible European Classification: A2-s1, d0				as per DIN EN 13501-1
Edges	Longitudinal edges		SK		
	Transverse edges		SK		
Dimensions	Board thickness	12.5	[mm]		
	Width x Lengths	For possible dimensions please consult our delivery programme.			
		Special lengths (intermediate sizes, overlength) and sheet cutting possible - delivery time on request.			
	Dimensional tolerances	Thickness	±0.2	[mm]	
		Width	+0/-2	[mm]	
		Length	+0/-2	[mm]	as per DIN EN 15283-2
		Squareness: deviation per m width	≤ 2.0	[mm/m]	

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Plasterboard marking	On rear side	The marking in longitudinal direction in black contains: - Rigidur H_{sd} 12,5 - CE-marking - EN 15283-2 GF-C1-I-W2 - non-combustible A2-s1, d0 - ETA 08/0147 // KOMO K23110 // Ü-VHT Z-9.1-571 - Production date and/or shift number		
Weight	Weight per unit area	ca. 15	[kg/m²]	as per DIN EN 15283-2
	Apperent densitiy	ca. 1200	[kg/m³]	as per DIN EN 15283-2
Strengths	Flexural strength	6.9	[N/mm²]	as per DIN EN 15283-2
	Modulus of elasticity	4050	[N/mm²]	as per DIN EN 15283-2
	Surface hardness as per Brinell	35	[N/mm²]	as per DIN EN ISO 6506-1
Characteristic strength parameters [N/mm2] for rating according Z-9.1-571	Bending $f_{m,k}$	5.5 4.5	⊥ [MN/m²] || [MN/m²]	
	Tension $f_{t,k}$	2.2	|| [MN/m²]	
	Compression $f_{c,k}$	9.0	|| [MN/m²]	
	Shear $f_{v,k}$	2.3 1.2	⊥ [MN/m²] || [MN/m²]	
	Bending modulus of elasticity $E_{m,mean}$	4500 3500	⊥ [MN/m²] || [MN/m²]	
	Tension modulus of elasticity $E_{t,mean}$	4500	|| [MN/m²]	
	Compression modulus of elasticity $E_{c,mean}$	4500	|| [MN/m²]	
	Shear modulus of elasticity G_{mean}	1300	⊥ [MN/m²]	
	Characteristic embedding strength $f_{h,k}$	$f_{h,k}$= 127 x $d^{-0,7}$ d = diameter of the connector The characteristic load bearing value of connectors shall be determined by using the following formula (Board thickness t ≥ 7d): $R_k = 0.7 \times \sqrt{2 \times M_{y,k} \times f_{h,1,k} \times d}$ [N] With My,k = characteristic value of yield moment from connector [Nmm]	[N/mm²]	

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calculation value		Class of load duration	Service Class 1	Service Class 2	according to Z-9.1-571
	modification factor K_{mod}	permanent long average Shortterm Very short	0.20 0.40 0.60 0.80 1.10	0.15 0.30 0.45 0.60 0.80	
	Deformation value k_{def}	permanent long average Shortterm	3.0 2.0 1.0 0.35	4.0 2.5 1.25 0.5	
	partial safety factor γ_m	1.3			
Heat	Thermal conductivity λ_R $\lambda_{10,dry}$	0.350 0.202	[W/(m x K)]		as per DIN EN 12667
	Thermal dilatation	0.015	[mm/(m x K)]		referring to DIN EN 318
	Thermal threshold stress (long-term load)	max. 50	[°C]	short-term load 60°C	
Humidity	Water vapour permeability µ	1.423	[–]		as per DIN EN 12524
	Water vapour diffusion-equivalent air layer thickness s_d	4,6	[m]		as per DIN EN ISO 12527
	Surface water absorption	≤ 1500	[g/m²]	after 30 minutes	as per DIN EN 15283-2
	Thickness dilatation after 24h immersion in water	≤ 2	[%]		referring to DIN EN 317
	Dilatation due to changing of relative humidity by 30% (20°C)	0.045	[%]		as per DIN EN 318
	Stable moisture content at 20°C, 65% relative humidity	1-1.3	[%]		as per DIN EN 322
Sign	The values given in this product data sheet solely describe the performance characteristics of the products. Rigips-Systems also have far-reaching structural-physical and static properties, which can be found in our system documentation (e.g. Planen und Bauen).				