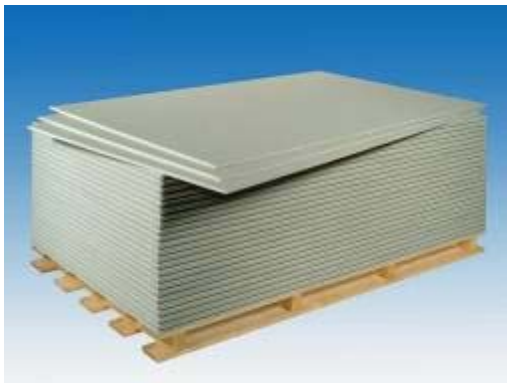
Rigidur H 12.5



Characteristics:
The Gypsum Fibreboard Rigidur contains gypsum, paper fibres and mineral additives

Application:
An ideal material for walls of wooden panel construction with semi-structural or stiffening facings of Rigidur H may be used for houses of timber construction

Installation:
According to Rigidur installation guide

Technical specifications

Product name	Rigidur H
Classification according ÖN EN 15283-2	GF-C1-I-W2
Reaction to fire rating according ÖN EN 13501-1	A1
Board thickness [mm]	12.5
Tolerance in board thickness [mm]	± 0,2
Density approx. [kg/m³]	1200
Area weight approx. [kg/m²]	15
Maximum tolerance in length [mm]	-1 / +0
Maximum tolerance in width [mm]	-1 / +0
Maximum tolerance in diagonal [mm]	2
Flexural strength [N/mm²]	6,9
Modulus of elasticity [N/mm²]	≥ 4050
Surface hardness according to Brinell [N/mm²]	≥ 35
Dilatation due to changing of relative humidity by 30% (20°C) [%]	0,045
Thermal conductivity λ according ÖN EN 12667 [W/(mK)]	0,202
Thermal dilatation [mm/(mK)]	0,015
Stable moisture content at 20°C, 65% relative humidity approx. [%]	1
Water vapour permeability μ	19
Water vapour diffusion-equivalent air layer thickness S_d [m]	0,24
Surface water absorption after 30 minutes [g/m²]	≤ 1500
Thickness dilatation after 24 hours immersion in water [%]	< 2
Content of chemical bounded water [%]	≥ 15

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Allowed tensions and characteristics of coefficients of elasticity for the application area of derived timber product class 20

Form of load	Rigidur H 12,5
Bending rectangular to board level [N/mm²]	1,1
Bending in board level [N/mm²]	0,9
Tension in board level [N/mm²]	0,4
Pressure in board level [N/mm²]	1,8
Shearing rectangular to board level [N/mm²]	0,5
Elasticity modulus Bending rectangular to board level [N/mm²]	4500
Elasticity modulus Bending in board level [N/mm²]	3500
Elasticity modulus Tension in board level [N/mm²]	4500
Elasticity modulus Pressure in board level [N/mm²]	4500
Shear modulus Pressure rectangular to board level [N/mm²]	1300

Characteristic strength parameters [MN/m²] for rating according ETA-08/0147 and Zulassung Z-9.-571

Strength values		Rigidur H 12,5
Bending rectangular to board surface	$f_{m,k}$	5,5
Bending in board surface	$f_{m,k}$	4,5
Tension in board surface	$f_{t,k}$	2,2
Compression in board surface	$f_{c,k}$	9,0
Shear rectangular to board surface	$f_{v,k}$	2,3
Shear in board surface	$f_{v,k}$	1,2

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Characteristic stiffness parameters [MN/m²] for rating according ETA-08/0147 and Zulassung Z-9.-571

Stiffness values		Rigidur H 12,5
Bending modulus of elasticity rectangular	$E_{m,mean}$	4500
Bending modulus of elasticity parallel	$E_{m,mean}$	3500
Tension modulus of elasticity parallel	$E_{t,mean}$	4500
Compression modulus of elasticity parallel	$E_{c,mean}$	4500
Shear modulus of elasticity rectangular	G_{mean}	1300
Shear modulus of elasticity parallel	G_{mean}	650

Characteristic embedding strength

Characteristic embedding strength for Rigidur H 12.5:
$f_{h,k} = 127 \cdot d^{-0,7}$
d = diameter of the connector (mm)

As design data of the modification factor K_{mod} according to Eurocode 5 bzw. der DIN 1052

Class of load duration	Service class 1
Permanent	0,20
Long	0,40
Average	0,60
Shortterm	0,80
Very short	1,10

As partial safety factor of the gypsum fibreboards γ_m = 1,3 is recommended