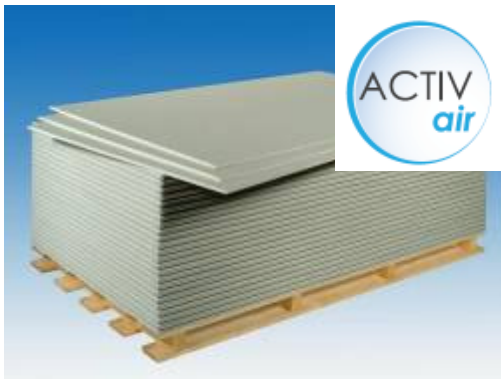


Rigidur H 12.5 Activ'Air



Characteristics:

The Rigidur H 12.5 Activ'Air contains gypsum, paper fibres, mineral additives and a special air cleaning substance that converts pollutants in the air into inert components

Application:

Virtually no other drywall construction material is as stable as Rigidur. Public buildings in particular require extremely high levels of stability. An ideal material for rigid drywall construction with excellent properties in sound absorption and fire resistance.

Installation:

According to Rigidur installation guideline

Technical specifications

Product name	Rigidur H 12.5 Activ'Air
Classification according EN 15283-2	GF-C1-I-W2
Reaction to fire rating according EN 13501-1	A1
Board thickness [mm]	12.5
Tolerance in board thickness [mm]	± 0,2
Density approx. [kg/m ³]	1200
Area weight approx. [kg/m ²]	15
Maximum tolerance in length [mm]	-1 / +0
Maximum tolerance in width [mm]	-1 / +0
Maximum tolerance in diagonal [mm]	2
Flexural strength [N/mm ²]	6,9
Modulus of elasticity [N/mm ²]	≥ 4050
Surface hardness according to Brinell [N/mm ²]	≥ 35
Dilatation due to changing of relative humidity by 30% (20°C) [%]	0,045
Thermal conductivity λ according 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/m ²]	≤ 1500
Thickness dilatation after 24 hours immersion in water [%]	< 2
Content of chemical bounded water [%]	≥ 15

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Rigidur H 12.5 Activ'Air

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/mm ²]	1,1
Bending in board level [N/mm ²]	0,9
Tension in board level [N/mm ²]	0,4
Pressure in board level [N/mm ²]	1,8
Shearing rectangular to board level [N/mm ²]	0,5
Elasticity modulus Bending rectangular to board level [N/mm ²]	4500
Elasticity modulus Bending in board level [N/mm ²]	3500
Elasticity modulus Tension in board level [N/mm ²]	4500
Elasticity modulus Pressure in board level [N/mm ²]	4500
Shear modulus Pressure rectangular to board level [N/mm ²]	1300

If the boards are used in the application area of derived timber product class 100 according to DIN 68800-2, the values for allowed tensions have to be reduced by 25%, values for the coefficients of elasticity by 35 %.

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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Rigidur H 12.5 Activ'Air

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 $\gamma_m = 1,3$ is recommended

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