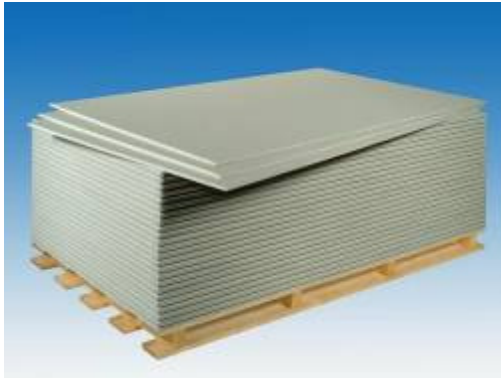


Rigidur H AK 12.5



Characteristics:

The Gypsum Fibreboard Rigidur contains gypsum, paper fibres and mineral additives. It is designed with tapered edges for installation with Rigidur self adhesive tape.

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 or for robust drywall constructions

Installation:

According to Rigidur installation guide

Technical specifications

Product name	Rigidur H AK 12.5
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

The information in this publication is based on our current technical knowledge and experience. In view of the many factors that may affect processing and application of our products, these data do not relieve the users of our products from the responsibility of carrying out their own inspections and tests, as they only represent general guidelines. They neither do imply any legally binding assurance of certain properties or of suitability for a particular application. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and regulations are observed. We reserve the right to modifications in the interests of technical advancement without prior notice.

Rigidur H AK 12.5

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

Form of load	Rigidur H AK 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 AK 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

The information in this publication is based on our current technical knowledge and experience. In view of the many factors that may affect processing and application of our products, these data do not relieve the users of our products from the responsibility of carrying out their own inspections and tests, as they only represent general guidelines. They neither do imply any legally binding assurance of certain properties or of suitability for a particular application. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and regulations are observed. We reserve the right to modifications in the interests of technical advancement without prior notice.

Rigidur H AK 12.5

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

Stiffness values		Rigidur H AK 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 AK 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

The information in this publication is based on our current technical knowledge and experience. In view of the many factors that may affect processing and application of our products, these data do not relieve the users of our products from the responsibility of carrying out their own inspections and tests, as they only represent general guidelines. They neither do imply any legally binding assurance of certain properties or of suitability for a particular application. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and regulations are observed. We reserve the right to modifications in the interests of technical advancement without prior notice.