



DECLARATION OF PERFORMANCE

SAINT-GOBAIN

No.: Rigidur_Hsd_12,5_LE_0319

Product Type

EN 15283-2 : GF-C1-I-W2

Identification of the construction product

Rigidur Hsd 12,5

Batch identification consists of identification code of the production plant, production date and time printed on the back of the board

Intended use

SAINT-GOBAIN

Gypsum boards with fibrous reinforcement for lining of building elements

Manufacturer

**Saint-Gobain Rigips GmbH
Schanzenstraße 84
D-40549 Düsseldorf**

Systems of assessment and verification of constancy of performance

System 3

The Austrian Institute of Construction Engineering (OiB) issued according to the regulation (EU) No. 305/2011 the European Technical Assessment

ETA-08/0147

based on the European Assessment Document



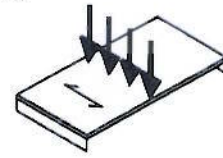
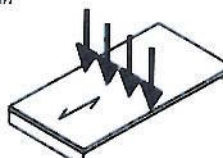
EAD 070006-00-0504





„Gypsum boards with fibrous reinforcement for lining of building elements.“

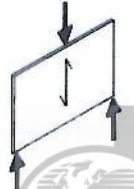



A factory production control system in compliance with EN ISO 9001 adapted to EN 15283-2 and ETA-08/0147 is established to ensure that the construction products conform with the declared performance characteristics.

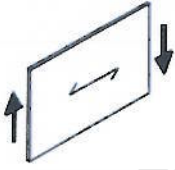
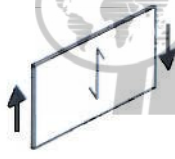
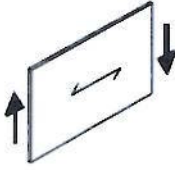
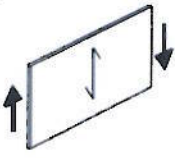


Declared performance




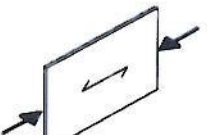
BWR	Essential characteristics	Assessment method	Level/Class/Description
1	Mechanical resistance and stability		
	1. Mechanical actions perpendicular to the gypsum board		
	Thickness		12,5 mm
	Bending strength		
	- in transverse direction $f_{m, 90, k}$	 EAD 070006-00-0504 2.2.1	5,5 MPa
	- in longitudinal direction $f_{m, 0, k}$	 EAD 070006-00-0504 2.2.1	5,5 MPa
Bending modulus of elasticity			
- in transverse direction $E_{m, 90, mean}$	 EAD 070006-00-0504 2.2.1	4500 MPa	
- in longitudinal direction $E_{m, 0, mean}$	 EAD 070006-00-0504 2.2.1	4500 MPa	

BWR	Essential characteristics	Assessment method	Level/Class/Description
	Thickness		12,5 mm
	Shear strength - in transverse direction $f_{r, k}$ 	EAD 070006-00-0504 2.2.2	1,2 MPa
	- in longitudinal direction $f_{p, k}$ 	EAD 070006-00-0504 2.2.2	1,2 MPa
	Shear modulus - in transverse direction $G_{r, mean}$ 	EAD 070006-00-0504 2.2.2	650 MPa
	- in longitudinal direction $G_{p, mean}$ 	EAD 070006-00-0504 2.2.2	650 MPa



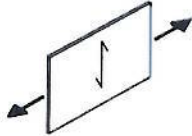

BWR	Essential characteristics	Assessment method	Level/Class/Description
2. Mechanical actions in plane of the gypsum board			
Thickness		12,5 mm	
Bending strength - in transverse direction $f_{m, 90, k}$  - in longitudinal direction $f_{m, 0, k}$ 		EAD 070006-00-0504 2.2.1 EAD 070006-00-0504 2.2.1	4,5 MPa 4,5 MPa
Bending modulus of elasticity - in transverse direction $E_{m, 90, mean}$  - in longitudinal direction $E_{m, 0, mean}$ 		EAD 070006-00-0504 2.2.1 EAD 070006-00-0504 2.2.1	3500 MPa 3500 MPa

BWR	Essential characteristics	Assessment method	Level/Class/Description
	Thickness 12,5 mm		
	Shear strength - in transverse direction $f_{v, 90, k}$ 	EAD 070006-00-0504 2.2.2	2,3 MPa
	- in longitudinal direction $f_{v, 0, k}$ 	EAD 070006-00-0504 2.2.2	2,3 MPa
	Shear modulus - in transverse direction $G_{v, 90, mean}$ 	EAD 070006-00-0504 2.2.2	1300 MPa
	- in longitudinal direction $G_{v, 0, mean}$ 	EAD 070006-00-0504 2.2.2	1300 MPa



BWR	Essential characteristics	Assessment method	Level/Class/Description
	Thickness SAINT-GOBAIN		12,5 mm
	Compression strength - in transverse direction $f_{c, 90, k}$  - in longitudinal direction $f_{c, 0, k}$ 	EAD 070006-00-0504 2.2.3 EAD 070006-00-0504 2.2.3 SAINT-GOBAIN	9,0 MPa 9,0 MPa
	Compression modulus of elasticity - in transverse direction $E_{c, 90, mean}$  - in longitudinal direction $E_{c, 0, mean}$ 	EAD 070006-00-0504 2.2.3 EAD 070006-00-0504 2.2.3 SAINT-GOBAIN	4500 MPa 4500 MPa



BWR	Essential characteristics	Assessment method	Level/Class/Description
	Thickness		12,5 mm
	Tensile strength - in transverse direction $f_{t, 90, k}$ 	EAD 070006-00-0504 2.2.4	2,2 MPa
	- in longitudinal direction $f_{t, 0, k}$ 	EAD 070006-00-0504 2.2.4	2,2 MPa
	Tensile modulus of elasticity - in transverse direction $E_{t, 90, mean}$ 	EAD 070006-00-0504 2.2.4	4500 MPa
	- in longitudinal direction $E_{t, 0, mean}$ 	EAD 070006-00-0504 2.2.4	4500 MPa

BWR	Essential characteristics	Assessment method	Level/Class/Description
	3. Other mechanical actions		
	Mechanical characteristics at increased moisture content	EAD 070006-00-0504 2.2.5	Reduction factor for loss of racking strength and stiffness: $k_{red} = 0,65$
	Racking strength and stiffness	EN 594	Calculation acc. to EN 1995-1-1
	Density	EN 15283-2	$1000 \text{ kg/m}^3 \leq \rho \leq 1350 \text{ kg/m}^3$ Nominal density 1200 kg/m^3
	Creep and duration of load	EAD 070006-01-0504 2.2.8	see Annex 3 of ETA-08/0147
	Dimensions	EN 15283-2	board thickness $\leq 15 \text{ mm}$: t: $\pm 0,5 \text{ mm}$ b: $+0/-4 \text{ mm}$ l: $+0/-5 \text{ mm}$ squareness : $\leq 2,5 \text{ m/mm}$
	Dimensional stability		
	Shrinkage and swelling	EN 318	per 30 % variation in rel. humidity: $\leq 0,45 \text{ mm/m}$
	Moisture content during service shall not change to such an extent that adverse deformation will occur.		
	Surface hardness	EN 15283-2	Pass for board type GF-I
	Fasteners	EN 1995-1-1	
	- Embedment strength $f_{h, k}$	EAD 070006-00-0504 2.2.12	see Annex 3 of ETA-08/0147
	- Head pull-through parameter $f_{head, k}$	EAD 070006-00-0504 2.2.13	see Annex 3 of ETA-08/0147
	Shear strength ($\uparrow\downarrow$)	EN 15283-2	1143 N
	Flexural strength (F)	EN 15283-2	fulfilled



BWR	Essential characteristics	Assessment method	Level/Class/Description	
2.	Reaction to fire			
	Rigidur Hsd $\rho \geq 1200 \text{ kg/m}^3$	EN 13501-1	Euroclass A2-s1, d0	
3.	Hygiene, health and environment			
	Water vapour permeability – water vapour transmission		Water vapour resistance factor, μ	Water vapour diffusion- equivalent air layer thickness s_d in m
	- Rigidur Hsd 12,5 mm $\rho = 1237 \text{ kg/m}^3$	EN ISO 12572	1423	4,6
	Water absorption		Pass for board type GF-W2 < 30 %	
- board surface	EN 15283-2			
- board	EN 15283-2	IR = 27 mm/mm		
Hard body impact	EN 1128			
6.	Energy economy and heat retention			
	Thermal conductivity, $\lambda_{10, trocken}$	EN 12664	0,202 W/(m*K)	

The performance of the product for which this DoP has been issued is in conformity with the declared performance.
This declaration of performance is issued under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer by:

Dr. Winfried Spickermann, Head of Product Development
(name and function)

Ladenburg, 06.03.2019
(place and date of issue)

Saint-Gobain Rigips GmbH
Dr. Winfried Spickermann
(signature)

