

# CE DECLARATION OF PERFORMANCE

DOP no.	DOP-506-04
1/2 Unique product identification code and type:	506 (recipe no.) 12 to 20 mm (panel thickness)
3 Use:	Use 1: rigid underlay for pitched roofs with overlapping cladding and walls acc. to EN 14964  Use 2: internal use as structural component (only for racking) in dry and humid conditions acc. to EN 13986
4 Name and Manufacturer Registered trade name or registered brand and contact adress of the manufacturer:	<b>EGGER DHF</b> EGGER Holzwerkstoffe Wismar GmbH & Co KG Am Haffeld 1 D-23970 Wismar web: <a href="http://www.egger.com">www.egger.com</a>
5 Not applicable	
6 System for the assessment and verification of constancy of performance of the building product:	System 4 (Use 1)  System 2+ (Use 2)
7 Harmonized standard:	EN 14964:2006 (Use 1)  EN 13986:2004+A1:2015 (Use 2)
Notified body for system 2+:	Nr. 0766  eph – Entwicklungs- und Prüflabor Holztechnologie GmbH Zellerscher Weg 24 D-01217 Dresden web: <a href="http://www.eph-dresden.com">www.eph-dresden.com</a>
8 Not applicable	

## 9 Declared performance:

Use 1: Rigid underlays für pitched roofs with overlapping cladding and walls acc. to EN 14964

Specification and characteristics		Unit	Panel thickness [mm] 12 - 20	Harmonized technical specification
Bending strength	acc. to EN 310	N/mm <sup>2</sup>	≥ 14,0	EN 14964:2006
Modulus of elasticity	acc. to EN 310	N/mm <sup>2</sup>	≥ 1600	
Internal bond	acc. to EN 319	N/mm <sup>2</sup>	≥ 0,30	
Internal bond	Boil test acc. to EN 319 + EN 1087	N/mm <sup>2</sup>	≥ 0,06	
Technical class	acc. to EN 622-5	-	MDF.RWH	
Type	acc. to 14964	-	IL – interlocking rigid underlay	
Performance roof	acc. to ZVDH product datasheet	-	UDP-A	
Performance wall	acc. to ZVDH product datasheet	-	UDP-A	
Reaction to fire	acc. to EN 13986	-	D-s2, d0	
Water vapour permeability	μ (dry / wet)	-	11 / 11	
Durability	Thickness swelling 24h	%	≤ 10	
	Internal bond - Option 2	N/mm <sup>2</sup>	≥ 0,06	
Thermal conductivity	λ <sub>R</sub>	W/mK	0,10	
Airborne sound insulation	Sound absorption coefficient	-	0,10 / 0,25 (frequency range 250 - 500 Hz / 1000 - 2000 Hz)	
	Sound insultaion R	dB	R = 13 * lg(m <sub>A</sub> ) + 14 (area mass m <sub>A</sub> , frequence range 1 bis 3 kHz)	

Use 2: internal use as structural component (only for racking) in dry and humid conditions

Specification and characteristics		Unit	Panel thickness [mm] 12 - 20						Harmonized technical specification
Durability	Thickness swelling 24h	%	≤ 6,5						EN 13986: 2004+A1:2015
	Internal bond – Option 2	N/mm <sup>2</sup>	≥ 0,06						
	mechanical		$k_{def}$	$k_{mod}$ permanent	$k_{mod}$ long	$k_{mod}$ medium	$k_{mod}$ short	$k_{mod}$ instantaneous	
		SC 1	3,0	0,2	0,4	0,6	0,8	1,1	
		SC 2	4,0	-	-	-	0,45	0,8	
biological	Use classes GK 1 & 2								
Release of Formaldehyde	acc. to EN 717-1	ppm	< 0,03 (formaldehyde free bonding) - E1						
Release of PCP		ppm	< 3,0						
Rad density		kg/m <sup>3</sup>	> 600						
Water vapour permeability	μ (dry / wet)	-	11 / 11						
Thermal conductivity		W/mK	0,10						
Airborne sound insulation	Sound absorption coefficient	-	0,10 / 0,25 (frequency range 250 - 500 Hz / 1000 - 2000 Hz)						
	Sound insulation R	dB	R = 13 * lg(m <sub>A</sub> ) + 14 (area mass m <sub>A</sub> , frequency range 1 bis 3 kHz)						
Air permeability	acc. to EN 12114 (at 50 Pa difference)	m/(m <sup>2</sup> * h)	≤ 0,14						
Reaction to fire *)		<b>class</b>	<b>Minimum thickness [mm]</b>						
	Without air gap behind MDF <sup>a,b,e,f</sup>	D-s2, d0	9 mm						
	Without closed air gap or open air gap ≤ 22mm behind MDF <sup>c,e,f</sup>	D-s2, d0	9 mm						
	With closed air gap behind MDF <sup>d,e,f</sup>	D-s2, d0	15 mm						
	With open air gap behind MDF <sup>d,e,f</sup>	D-s2, d0	18 mm						
Embedding strength			37,4 N/mm <sup>2</sup> d <sub>n</sub> ≤ 3 mm fastener diameter 18,0 N/mm <sup>2</sup> d <sub>n</sub> > 3 – 8 mm fastener diameter						
Racking resistance		N/mm <sup>2</sup>	EN 1995-1-1						
Performance wall EN 12871 / EN 596	Soft body impact	-	Pass						
	Panel thickness	mm	≥ 12						
<b>Racking resistance</b>									
Bending strength f <sub>m</sub>	0° / 90°	N/mm <sup>2</sup>	11						
Tension f <sub>t</sub>	0° / 90°	N/mm <sup>2</sup>	11,7						
Compression f <sub>c</sub>	0° / 90°	N/mm <sup>2</sup>	9,6						
Shear f <sub>v</sub>	0° / 90°	N/mm <sup>2</sup>	3,4						
Bending E <sub>m</sub>	0° / 90°	N/mm <sup>2</sup>	2000						
Tension E <sub>t</sub>	0° / 90°	N/mm <sup>2</sup>	2100						
Compression E <sub>c</sub>	0° / 90°	N/mm <sup>2</sup>	2000						
Shear G	0° / 90°	N/mm <sup>2</sup>	600						
<b>Load-bearing (load on horizontal panel)</b>									
Bending strength f <sub>m</sub>	0° / 90°	N/mm <sup>2</sup>	19						
Shear f <sub>v</sub>	0° / 90°	N/mm <sup>2</sup>	1,1						
Bending E <sub>m</sub>	0° / 90°	N/mm <sup>2</sup>	3000						
Shear G	0° / 90°	N/mm <sup>2</sup>	100						

The 5% characteristic values for stiffness should be taken as 0,85 times the mean value given in Table 12. Other properties not given in Table 12 shall comply with the requirements given in EN 622-5 for MDF.RWH.

Note to use 2:

Pin-shaped fasteners shall be used as fasteners for which a general technical approval has been granted for use with the wood fibre boards "EGGER DHF". Alternatively, nails, staples or screws with a diameter of up to 8 mm can be used, which are suitable for joining wood-based materials. For these fasteners, regardless of the thickness of the panel, the value of the intrados strength may be assumed as follows:

Diameter of fastener  $d \leq 3,0\text{mm}$   $f_{h,k} = 37,4\text{N/mm}^2$

Diameter of fastener  $d > 3,0 \leq 8,0 \text{ mm}$   $f_{h,k} = 18,0\text{N/mm}^2$

The slip modulus  $k_{ser}$  must be determined using Table 7.1 of DIN EN 1995-1-1. The bulk density of the material shall be assumed to be  $\rho_m = 615 \text{ kg/m}^3$ .


For wood-based materials - wood - nail joints, the value  $\beta = 1.0$  may be used for the factor  $\beta$  after dimensioning according to DIN EN 1995-1-1 in conjunction with the National Appendix, provided the required thickness  $t_{req}$  according to the following table is adhered to:

Factor $\beta$	Required thickness $t_{req}$ for external panels (single-shear connection)	Required thickness $t_{req}$ for internal panels (double-shear connection)
1,0	6 x d	4 x d
d = diameter of the fastener		

Fasteners in the planking must not be subject to pulling out or pulling through the head.

- 10 The product performance according to number 1 and 2 corresponds to the declared performance according to number 7. Solely the manufacturer is responsible for drafting the declaration of performance according to number 3.

Signed for the manufacturer and in the name of the manufacturer by:



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Raimund Hagspiel  
Head of EFP Technical/Production

Wismar, 07.01.2025

\*) Note:

- a Without air gap installed directly on products in classes A1 or A2-s1,d0 with a minimum raw density of 10 kg/m<sup>3</sup> or at least products of class D-s2, d2 with a minimum raw density of 400 kg/m<sup>3</sup>.
- b An underlayment made of cellulose thermal insulation material of at least class E may be used if installed directly behind the wood-based material; however, this does not apply to flooring.
- c Installed with air gap behind the product bordering with its rear side the empty space must correspond at least to class A2-s1,d0 with a minimum raw density of 10 kg/m<sup>3</sup>.
- d Mounted with an air gap behind. The reverse face of the cavity shall be at least class D-s2, d2 products with minimum density 400 kg/m<sup>3</sup>.
- e Veneered, phenol- and melamine-faced panels are included for class excl. floorings.
- f A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m<sup>2</sup> can be mounted in between the woodbased panel and a substrate if there are no air gaps in between.