CE DECLARATION OF PERFORMANCE

according to Regulation (EU) No. 305 of the European Parliament and the Council of 9 March 2011

	DOP no.	DOP-745-01
1	Unique product identification code:	745 (recipe no.) 8 to 40 mm (panel thickness)
2	Use:	Structural or load-bearing components for indoor use in dry and humid conditions
3	Name and Manufacturer Registered trade name or registered brand and contact address of the manufacturer:	**EGGER OSB 4 TOP** **EGGER OSB HDX** EGGER Holzwerkstoffe Wismar GmbH & Co KG Am Haffeld 1 D-23970 Wismar web: www.egger.com
4	not applicable	
5	System for the assessment and verification of constancy of performance of the building product:	System 2+
6	Harmonized standard:	EN 13986:2004+A1:2015
	Notified body:	no. 0765 Wilhelm-Klauditz-Institute (WKI) Bienroder Weg 54 e D-38108 Braunschweig Germany

7 Declared performance:

Specification		unit	Panel thickness [mm] › 8 - 10	› 10 - ‹ 18	18 - 25	› 25 - 30	› 30 - 40	
Bending strength	acc. to EN 310 - 0° major axis o°	N/mm²	≥ 30	≥ 33	≥ 31	≥ 29	≥ 25	
	acc. to EN 310 – 90° minor axis	N/mm²	≥ 16	≥ 20	≥ 18	≥ 16	≥ 15	
Modulus of Elasticity	acc. to EN 310 - 0° major axis o°	N/mm²	≥ 4800	≥ 5300	≥ 5200	≥ 5000	≥ 4800	
	acc. to EN 310– 90° minor axis	N/mm²	≥ 1900	≥ 2500	≥ 2300	≥ 2100	≥ 1900	

Essential characteristics		unit	Panel thickness [mm] › 8 - 10	› 10 - ‹18	18 - 25	› 25 - 30	›30 - 40	Harmonized technical specification
Durability	thickness swelling 24h	%	≤ 12	≤ 10	≤ 10	≤ 10	≤ 10	EN 13986:2004+A1:2015
	Internal bond - option 1	N/mm²	≥ 0,17	≥ 0,16	≥ 0,13	≥ 0,10	≥ 0,08	
	bending - major axis - option 1	N/mm²						
	mechanical		k_{def}	k_{mod} permanent	k_{mod} long	k_{mod} medium	k_{mod} short	k_{mod} instantenous
		SC1	1,50	0,40	0,50	0,70	0,90	1,10
		SC2	2,25	0,30	0,40	0,55	0,70	0,90
	biological (use class)		UC 1 & 2					
Release of Formaldehyde	acc. to EN 717-1	ppm	‹ 0,03 (no added formaldehyde) – emission class E1					
Release of PCP		ppm	‹ 3,0					
Density		kg/m³	≥ 600	≥ 620	≥ 620	≥ 600	≥ 600	
Water vapour permeability	μ (dry / wet)	-	200/150	200 / 200				
Thermal conductivity		W/mK	0,13					
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_A) + 14 (area mass related m_A, frequency range 1 to 3 kHz)					
Air permeability	acc. to EN 12114 (at 50Pa pressure difference)	m³/(m² * h)	NPD	≤ 0,12				
Reaction to fire *)		**class**	**class floor covering**	**Minimum thickness [mm]**				
	without air gap behind OSB [a,b,e,f]	D-s2, d0	$D_{fl,s1}$	9mm				
	with closed air gap or open air gap ≤ 22 mm behind OSB[c,e,f]	D-s2, d0	-	9mm				
	with closed air gap behind OSB[d,e,f]	D-s2, d0	$D_{fl,s1}$	15mm				
	with open air gap behind OSB[d,e,f]	D-s2, d0	$D_{fl,s1}$	18mm				
	without restriction [e,f]	E	E_{fl}	3mm				

Essential characteristics		Einheit	Panel thickness [mm] › 8 - 10	› 10 - ‹ 18	20 - 25	› 25 - 30	› 30 - 40	Harmonized technical specification
Characteristic Strength								
Bending f_m	0° - major axis	N/mm²	24.5	25	25	25	20	EN 13986:2004+A1:2015
	90° - minor axis	N/mm²	13	15	15	15	15	
Tension f_t	0° - major axis	N/mm²	11.9	12	12	12	10	
	90° - minor axis	N/mm²	8.5	10	10	10	10	
Compression f_c	0° - major axis	N/mm²	18.1	19	19	17	15	
	90° - minor axis	N/mm²	14.3	16	16	15	14	
Shear f_v ⊥ panel surface	0° - major axis / 90° - minor axis	N/mm²	-	10	10	10	10	
Shear f_r in panel surface	0° - major axis / 90° - minor axis	N/mm²	6.9	9	9	8	6	
Bending f_m	0° - major axis	N/mm²	1.1	1.6	1.6	1.6	1.6	
Mean stiffness values								
Bending E_m	0° - major axis	N/mm²	6780	7000	7000	7000	6000	
	90° - minor axis	N/mm²	2680	3000	3000	3000	3000	
Tension E_t	0° - major axis	N/mm²	4300	4300	4300	4300	4000	
	90° - minor axis	N/mm²	3200	3200	3200	3200	3200	
Compression E_c	0° - major axis	N/mm²	4300	4300	4300	4300	4000	
	90° - minor axis	N/mm²	3200	3200	3200	3200	3200	
Shear G_v ⊥ panel surface	0° - major axis / 90° - minor axis	N/mm²	1090	1500	1500	1300	1200	
Shear G_r in in panel surface	0° - major axis / 90° - minor axis	N/mm²	60	160	160	160	160	
Impact resistance		N/mm²	NPD	NPD	NPD	NPD	NPD	
Embedding strength		N/mm²	EN 1995-1-1, paragraph 8					
Racking resistance		N/mm²	EN 1995-1-1					
Performance wall EN 12871	soft body impact acc. to EN 596		Pass					
	Panel thickness	mm	≥ 9					
Performance Floor EN 12871 (major axis, 0°)	load category			A	A	D / C3		
	panel thickness	mm		15	18 / 22	30 / 30		
	cc-span	mm		≤ 410	≤ 625	≤ 600/≤ 800		
Performance roof EN 12871 (major axis, 0°)	load category			H	H			
	panel thickness	mm		12 / 15	18/22			
	cc-span	mm		≤ 625	≤ 833			

DIN EN 1995-1-in conjunction with the national annex or according to the a national technical approval, ETA or similar granted for the respective fastener.

In particular the following requirements apply:

The design value for the load-carrying capacity of nails, staples, screws and dowels in the side surfaces shall be determined in accordance with DIN EN 1995-1- in conjunction with the national annex at a load

- perpendicular to the central axis of the fastener with characteristic values for the embedment strength in N/mm²

  for holes that were not pre-drilled: $f_{h,k} = 65 * d^{-0,7} * t^{0,1}$

  for pre-drilled holes: $f_{h,k} = 50 * d^{-0,6} * t^{0,2}$

Here d is the fastener diameter in mm and t is the board thickness in mm.

- In the shank direction with a characteristic pullout value, where:

  $f_{1,k} = f_{ax,k}$ (in accordance with DIN EN 1995-1-1)

  for smooth-shank nails: $f_{1,k} = 2$ N/mm²

  for special nails with load-carry capacity class I: $f_{1,k} = 3$ N/mm²

  for staples and special nails with load-carrying capacity class II: $f_{1,k} = 4$ N/mm²

  for special nails with load-carrying capacity class III: $f_{1,k} = 5$ N/mm²

  for screws: $f_{1,k} = 10$ N/mm²

For loading for head pull-through of nails or screws through EGGER OSB 4 TOP of thickness t ≥ 20 mm the characteristic value for the head pull-through parameter in N/mm² is: $f_{2,k} = 15*d_k^2$

Here d_k is the head diameter in mm. For smaller board thicknesses of 12 mm ≤ t ‹ 20 mm the characteristic value for the head pull-through parameter shall be reduced by a factor of t/20.

The design value for the load-carrying capacity of nails, staples and screws in the narrow surfaces shall be determined in accordance with DIN EN 1995-1-1 in conjunction with the national annex at a load

- perpendicular to the central axis of the fastener and normal to the board plane with characteristic values for the embedment strength in N/mm²

  for holes that were not pre-drilled: $f_{h,k} = 52 * d^{-0,7} * t^{0,1}$

  for pre-drilled holes: $f_{h,k} = 40 * d^{-0,6} * t^{0,2}$ k

  Here d is the fastener diameter in mm and t is the board thickness in mm.

  perpendicular to the central axis of the fastener and in the board plane with characteristic values for the embedment strength in N/mm²

  for holes that were not pre-drilled: $f_{h,k} = 16 * d^{-0,7} * t^{0,1}$

  for pre-drilled holes: $f_{h,k} = 12 * d^{-0,6} * t^{0,2}$

- in the shank direction for screws, staples and special nails with a characteristic pullout value, where: $f_{1,k} = f_{ax,k}$ (in accordance with DIN EN 1995-1-1)

  for special nails with load-carry capacity class I: $f_{1,k} = 2$ N/mm²

  for staples and special nails with load-carry capacity class II: $f_{1,k} = 2.5$ N/mm²

  for special nails with load-carrying capacity class III: $f_{1,k} = 3.5$ N/mm²

  for screws: $f_{1,k} = 8$ N/mm²

If the distance a between the fastener farthest away from the loaded edge and the edge is less than 70% of the thickness of the component made from EGGER OSB 4 TOP a transverse reinforcement with full-thread self-tapping screws shall be implemented.

DIN EN 1995-1-1 in conjunction with the national annex shall apply for the design of connections between EGGER OSB 4 TOP boards as well as between EGGER OSB 4 TOP and solid timber or glued laminated timber.

The minimum distances of the fasteners in the side surfaces of EGEGR OSB 4 TOP shall be determined according to DIN EN 1995-1-in conjunction with the national annex or according to a national technical approval, ETA or similar granted for the respective fastener as for structural plywood.

The minimum distances of the fasteners in the narrow surfaces of EGGER OSB 4 TOP t › 10 mm are, irrespective of the chip alignment in the covering layer, as follows:

Minimum distance from each other in the board plane:	a_1 = 12 d
Minimum distance from each other perpendicular to the board plane:	a_2 = 5 d
Minimum distance from the edge in the board plane:	a_3 = 15 d
Minimum distance from the edge perpendicular to the board plane:	a_4 = 5 d

The minimum distances of the staples in the narrow surfaces of EGGER OSB 4 TOP t › 10 mm are, irrespective of the chip alignment in the covering layer, as follows:

Minimum distance from each other in the board plane:	a_1 = 35 d
Minimum distance from each other perpendicular to the board plane:	a_2 = 5 d
Minimum distance from the edge in the board plane:	a_3 = 35 d
Minimum distance from the edge perpendicular to the board plane:	a_4 = 5 d

8 not applicable

The product performance according to number 1 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 and in the name of the manufacturer by:

Thomas Schlund

EGGER Building Products - Head of Division Technology/Production

Wismar, 01.02.2018

---

*) Note:

a Without air gap installed directly on products in classes A1 or A2-s1, d0 with a minimum raw density of 10 kg/m³ or at least products of class D-s2, d2 with a minimum raw density of 400 kg/m³.

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/m³.

d Installed with air gap behind, the product bordering with its rear side the empty space must correspond at least to class D-s2, d2 with a minimum raw density of 400 kg/m³.

e With the exception of flooring, the class also corresponds to veneered, phenol and melamine-faced boards.

f A vapour barrier with a thickness of up to 0.4 mm and a mass of up to 200 g/m² may be installed between the wood-based material and the underlayment if there is no air gap in between.