



West Fraser Europe nv  
Eikelaarstraat 33  
3600 Genk  
Belgium

DoP ref: UKOSB2DoPv1

EN 13986:2004 +A1:2015

0836

21

E1

OSB/2 (EN300) 6mm to 32mm

SterlingOSB zero, OSB 2

Structural use in dry conditions

Essential characteristics	Performance									
	Thickness range (mm)									
	6 to 10		>10 to <18		18 to 25		>25 to 32		>32 to 40	
	0	90	0	90	0	90	0	90	0	90
<sup>1</sup> Characteristic Strength (N/mm <sup>2</sup> ):										
- Bending $f_m$	18.0	9.0	16.4	8.2	14.8	7.4	NPD	NPD	NPD	NPD
- Compression $f_c$	15.9	12.9	15.4	12.7	14.8	12.4	NPD	NPD	NPD	NPD
- Tension $f_t$	9.9	7.2	9.4	7.0	9.0	6.8	NPD	NPD	NPD	NPD
- Panel Shear $f_v$	6.8		6.8		6.8		NPD		NPD	
- Planar shear $f_r$	1.0		1.0		1.0		NPD		PD	
<sup>1</sup> Mean Stiffness (MOE) (N/mm <sup>2</sup> ):										
- Tension $E_t$	3800	3000	3800	3000	3800	3000	NPD	NPD	NPD	NPD
- Compression $E_c$	3800	3000	3800	3000	3800	3000	NPD	NPD	NPD	NPD
- Bending $E_m$	4930	1980	4930	1980	4930	1980	NPD	NPD	NPD	NPD
- Panel Shear $G_v$	1080		1080		1080		NPD		NPD	
- Planar Shear $G_r$	50		50		50		NPD		NPD	
<b>Punching Shear, Characteristic strength under point load <math>F_{max,k}</math> (kN)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
<b>Punching Shear, Mean stiffness under point load, R (N/mm<sup>2</sup>)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
<b>Characteristic serviceability strength under point load <math>F_{Ser,k}</math> (kN)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
<b>Soft Body Impact resistance</b> <i>(Floor/roofs/Walls)</i>	NPD		NPD		NPD		NPD		NPD	
<b>Racking resistance</b> <b>Characteristic Strength <math>F_{Rd,max,k}</math> (N)</b> <i>(for walls)</i>	NPD		NPD		NPD		NPD		NPD	
<b>Racking resistance</b> <b>Mean Stiffness <math>R_{mean}</math> (N/mm)</b> <i>(for walls)</i>	NPD		NPD		NPD		NPD		NPD	
<sup>5</sup> Embedment strength $f_h$ (N/mm <sup>2</sup> )	Calculation according to EN 1995-1-1 (8.2.2)									

Water vapour permeability $\mu$	NPD	NPD	NPD	NPD	NPD
Release of formaldehyde	E1	E1	E1	E1	E1
Release (content) of pentachlorophenol (PCP)	$\leq 5$ ppm	$\leq 5$ ppm	$\leq 5$ ppm	$\leq 5$ ppm	$\leq 5$ ppm
Airborne sound insulation (surface mass) R (dB)	NPD	NPD	NPD	NPD	NPD
<sup>3</sup> Sound absorption, Frequency range 250Hz to 500Hz ( $\alpha$ )	0.1	0.1	0.1	0.1	0.1
<sup>3</sup> Sound absorption, Frequency range 1000Hz to 2000Hz ( $\alpha$ )	0.25	0.25	0.25	0.25	0.25
Thermal conductivity $\lambda$ (W/m.K)	0.13	0.13	0.13	0.13	0.13
Air Permeability ( $\Delta p=50$ Pa) according to EN 12114, $V_0$ ( $m^3/h m^2$ )	NPD	NPD	NPD	NPD	NPD
<b>Durability</b>					
Internal bond (N/mm <sup>2</sup> )	0.34	0.32	0.30	0.29	0.26
Swelling in thickness (%)	20	20	20	20	20
<sup>4</sup> Mechanical, (Creep $k_{def}$ ) service class 1	2.25	2.25	2.25	NPD	NPD
Mechanical (Duration of load $k_{mod}$ )	<b>Action Mode</b>				
	Permanent	Long Term	Medium Term	Short Term	Instantaneous
<sup>4</sup> Service Class 1	0.3	0.45	0.65	0.85	1.1
Biological	Use class 1				

Thickness range (mm)	6 to 10	>10 to <18	18 to 25	>25 to 32
Avg. Density (kg/m <sup>3</sup> )	>= 600			

<sup>2</sup> Reaction to fire  (see notes to table for field of application details and associated documentation references)		Minimum thickness	Class (excluding floorings) <sup>g</sup>	Class (Flooring) <sup>h</sup>
	<b>Without an air gap behind the panel</b> <sup>abef</sup>	9	D-s2,d0	D <sub>fi</sub> ,s1
	<b>With a closed or open air gap <math>\leq 22</math>mm behind the panel</b> <sup>cef</sup>	9	D-s2,d2	-
	<b>Closed air gap behind the panel</b> <sup>def</sup>	15	D-s2,d0	D <sub>fi</sub> ,s1
	<b>With an open air gap behind the panel</b> <sup>def</sup>	18	D-s2,d0	D <sub>fi</sub> ,s1
	<b>Any end use</b> <sup>ef</sup>	3	E	E <sub>fl</sub>
a -Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m <sup>3</sup> or at least class D-s2, d2 products with minimum density 400 kg/m <sup>3</sup> . b -A substrate of cellulose insulation material of at least class E may be included if mounted directly against the wood-based panel, but not for floorings. c -Mounted with an air gap behind. The reverse face of the cavity shall be at least class A2-s1, d0 products with minimum density 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 wood-based panel and a substrate if there are no air gaps in between. g -Class Provided for in Table 1 of the Annex to decision 2000/147/EC. h -Class Provided for in Table 2 of the Annex to decision 2000/147/EC .				

## NOTES TO TABLE

1-Taken from EN 12369-1:2001

2-Reaction to fire classes from Table 1 of Commission Decision 2003/43/EC of January 2003 (OJEU L13 of 18.1.2003) corrected by Corrigendum (OJEU L33 of 8.2.2003) and amended by Commission decision 2007/348/EC of May 2007 (OJEU L131 of 23-05-2007); also reproduced in Table three of EN 13986:2004+A1:2015 for wood-based panels installed according to CEN/TR 12872

3-Taken from Table 10 of EN 13986:2004+A1:2015

4-Taken from Eurocode 5 EN 1995-1-1 2004+A2:2014

5-Embedment strength can be calculated according to EN 1995-1-1 2004+A2:2014, by taking the OSB panel thickness (t) and the diameter of the used fastener (d) in account:

$$f_{h,k} = 65 t^{-0,7} d^{0,1}$$