



West Fraser Europe nv
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DoP ref: UKOSB3DoPv1

EN 13986:2004 +A1:2015

0836

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E1

OSB/3 (EN300) 6mm to 32mm

SterlingOSB zero, OSB3

Structural use in humid conditions

Essential characteristics	Performance													
	6 to 10		>10 to <18		18 to 25		>25 to 32		15 T&G 600/400/300mm		18 T&G 600mm		22 T&G 600mm	
Thickness range (mm)	0	90	0	90	0	90	0	90	0 - 90		0- 90		0-90	
¹ Characteristic Strength (N/mm ²):														
- Bending f_m	18.0	9.0	16.4	8.2	14.8	7.4	NPD	NPD	16.4	8.2	14.8	7.4	14.8	7.4
- Compression f_c	15.9	12.9	15.4	12.7	14.8	12.4	NPD	NPD	15.4	12.7	14.8	12.4	14.8	12.4
- Tension f_t	9.9	7.2	9.4	7.0	9.0	6.8	NPD	NPD	9.4	7.0	9.0	6.8	9.0	6.8
- Panel Shear f_v	6.8		6.8		6.8		NPD		6.8		6.8		6.8	
- Planar shear f_r	1.0		1.0		1.0		NPD		1.0		1.0		1.0	
¹ Mean Stiffness (MOE) (N/mm ²):														
- Tension E_t	3800	3000	3800	3000	3800	3000	NPD	NPD	3800	3000	3800	3000	3800	3000
- Compression E_c	3800	3000	3800	3000	3800	3000	NPD	NPD	3800	3000	3800	3000	3800	3000
- Bending E_m	4930	1980	4930	1980	4930	1980	NPD	NPD	4930	1980	4930	1980	4930	1980
- Panel Shear G_v	1080		1080		1080		NPD		1080		1080		1080	
- Planar Shear G_r	50		50		50		NPD		50		50		50	
Punching Shear, Characteristic strength under point load $F_{max,k}$ (kN) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		1.68/1.85/1.78		2.25		3.04	
Punching Shear, Mean stiffness under point load, R (N/mm ²) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		190/333/514		269		445	
Characteristic serviceability strength under point load $F_{Ser,k}$ (kN) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		1.67/1.71/1.78		2.20		2.81	
Soft Body Impact resistance <i>(Floor/roofs/Walls)</i>	NPD		NPD		NPD		NPD		Impact Class 1 Pass Floor		Impact Class 1 Pass Floor		Impact Class 1 Pass Floor	

Racking resistance Characteristic Strength $F_{Rd,max,k}$ (N) (for walls)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Racking resistance Mean Stiffness R_{mean} (N/mm) (for walls)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
⁵ Embedment strength f_h (N/mm ²)	Calculation according to EN 1995-1-1 (8.22)						
Release of formaldehyde	E1	E1	E1	E1	E1	E1	E1
Release (content) of pentachlorophenol (PCP)	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm
Airborne sound insulation (surface mass) R (dB)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
³ Sound absorption, Frequency range 250Hz to 500Hz (α)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
³ Sound absorption, Frequency range 1000Hz to 2000Hz (α)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Thermal conductivity λ (W/m.K)	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Air Permeability ($\Delta p=50Pa$) according to EN 12114, V_0 (m³/h m²)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Durability							
Internal bond (N/mm²)	0.34	0.32	0.30	0.29	0.32	0.32	0.30
Swelling in thickness (%)	15	15	15	15	15	15	15
Moisture resistance Internal bond after boil test (N/mm²)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Internal bond after cyclic test (N/mm²)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Bending strength after cyclic test – major axis (N/mm²)	9	8	7	6	8	8	7
⁴ Mechanical (Creep k_{def}) service class 1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
⁴ Mechanical (Creep k_{def}) service class 2	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Mechanical (Duration of load k_{mod})	Action Mode						
	Permanent	Long Term	Medium Term	Short Term	Instantaneous		
⁴ Service Class 1	0.4	0.5	0.7	0.9	1.1		
⁴ Service Class 2	0.3	0.4	0.55	0.7	0.9		
Biological	Use classes 1 & 2						

Thickness range (mm)	6 to 10	>10 to <18	18 to 25	>25 bis 32
Avg. Dens. (kg/m³)	≥ 600			

Watervapourtransmission according to EN 12572:2001	
Thickness (mm)	15
μ Dry	125
μ Wet	82

² Reaction to fire (see notes to table for field of application details and associated documentation references)		Minimum thickness	Class (excluding floorings) ^g	Class (Flooring) ^h
	Without an air gap behind the panel ^{abef}	9	D-s2,d0	D _{fl} ,s1
	With a closed or open air gap ≤ 22mm behind the panel ^{cef}	9	D-s2,d2	-
	Closed air gap behind the panel ^{def}	15	D-s2,d0	D _{fl} ,s1
	With an open air gap behind the panel ^{def}	18	D-s2,d0	D _{fl} ,s1
	Any end use ^{ef}	3	E	E _{fl}
<p>a -Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m³ or at least class D-s2, d2 products with minimum density 400 kg/m³.</p> <p>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.</p> <p>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/m³.</p> <p>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/m³.</p> <p>e -Veneered, phenol- and melamine-faced panels are included for class excl. floorings.</p> <p>f -A vapour barrier with a thickness up to 0,4 mm and a mass up to 200 g/m² can be mounted in between the wood-based panel and a substrate if there are no air gaps in between.</p> <p>g -Class Provided for in Table 1 of the Annex to decision 2000/147/EC.</p> <p>h -Class Provided for in Table 2 of the Annex to decision 2000/147/EC .</p>				

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 strenght 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:

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