



Norbord NV  
Eikelaarstraat 33  
3600 Genk  
Belgium

DoP ref: NGOSB3DoPv4

EN 13986:2004 +A1:2015

1161

08

E1

OSB/3 (EN300) 6mm to 32mm

Sterling OSB3 zero

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	0	90	0	90	0	90	0	90	0 - 90		0- 90		0-90	
<b>Characteristic Strength (N/mm<sup>2</sup>)</b>														
- Bending	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	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	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	6.8		6.8		6.8		NPD		6.8		6.8		6.8	
- Planar shear	1.0		1.0		1.0		NPD		1.0		1.0		1.0	
<b>Mean Stiffness (MOE) (N/mm<sup>2</sup>)</b>														
- Tension	3800	3000	3800	3000	3800	3000	NPD	NPD	3800	3000	3800	3000	3800	3000
-Compression	3800	3000	3800	3000	3800	3000	NPD	NPD	3800	3000	3800	3000	3800	3000
- Bending	4930	1980	4930	1980	4930	1980	NPD	NPD	4930	1980	4930	1980	4930	1980
- Panel Shear	1080		1080		1080		NPD		1080		1080		1080	
- PlanarShear	50		50		50		NPD		50		50		50	
<b>Characteristic strength under point load F<sub>max,k</sub> (kN)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		1.68/1.85/1.78		2.25		3.04	
<b>Mean stiffness under point load, R (N/mm<sup>2</sup>)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		190/333/514		269		445	
<b>Characteristic serviceability strength under point load F<sub>ser,k</sub> (kN)</b> <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		1.67/1.71/1.78		2.20		2.81	
<b>Racking resistance</b> <i>(for walls)</i>	NPD		NPD		NPD		NPD		NPD		NPD		NPD	
<b>Soft Body Impact resistance Floors/Roofs Walls</b>	NPD		NPD		NPD		NPD		Pass Floor		Pass Floor		Pass Floor	
<b>Embedment strenght <sup>(1)</sup></b>	NPD		NPD		NPD		NPD		NPD		NPD		NPD	

<b>Reaction to fire (excluding floorings)</b>	D-s2,d0 <sup>(2)</sup> D-s2,d2 <sup>(3)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>	D-s2,d0 <sup>(2)</sup> E <sup>(4)</sup>
<b>Reaction to fire (floorings)</b>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>	Dfl-s1 <sup>(2)</sup> Efl <sup>(4)</sup>
<b>Water vapour permeability <math>\mu</math></b>	NPD	NPD	NPD	NPD	NPD	NPD	NPD
<b>Release of formaldehyde</b>	E1	E1	E1	E1	E1	E1	E1
<b>Release (content) of pentachlorophenol (PCP)</b>	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm
<b>Airborne sound insulation (surface mass) (R)</b>	NPD	NPD	NPD	NPD	NPD	NPD	NPD
<b>Sound absorption</b> Frequency range 250Hz to 500Hz ( $\alpha$ )	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Sound absorption</b> Frequency range 1000Hz to 2000Hz ( $\alpha$ )	0.25	0.25	0.25	0.25	0.25	0.25	0.25
<b>Thermal conductivity <math>\lambda</math></b>	0.13	0.13	0.13	0.13	0.13	0.13	0.13
<b>Durability</b>							
<b>Internal bond (N/mm<sup>2</sup>)</b>	0.34	0.32	0.30	0.29	0.32	0.32	0.30
<b>Swelling in thickness (%)</b>	15	15	15	15	15	15	15
<b>Moisture resistance</b> Internal bond after boil test (%)	NPD	NPD	NPD	NPD	NPD	NPD	NPD
<b>Internal bond after cyclic test (N/mm<sup>2</sup>)</b>	NPD	NPD	NPD	NPD	NPD	NPD	NPD
<b>Bending strength after cyclic test – major axis (N/mm<sup>2</sup>)</b>	9	8	7	6	8	8	7
<b>Mechanical</b> (Creep $k_{def}$ ) <b>Service class 1</b>	1.5	1.5	1.5	1.5	1.5	1.5	1.5
<b>Mechanical</b> (Creep $k_{def}$ ) <b>Service class 2</b>	2.25	2.25	2.25	2.25	2.25	2.25	2.25
<b>Mechanical</b> (Duration of load $k_{mod}$ )	<b>Action Mode</b>						
	Permanent	Long Term	Medium Term	Short Term	Instantaneous		
<b>Service class 1</b>	0.4	0.5	0.7	0.9	1.1		
<b>Service class 2</b>	0.3	0.4	0.55	0.7	0.9		
<b>Biological</b>	<b>Use classes 1 &amp; 2</b>						

(1) Embedment strength can be calculated according to EN 1995-1-1, taking the OSB panel thickness and the diameter of the used fastener in account.

(2) Minimum thickness 18mm – with an open air gap behind the OSB. (End use of condition)

Minimum thickness 15mm – with a closed air gap behind the OSB. (End use of condition)

Minimum thickness 9mm – without an air gap behind the OSB. (End use of condition)

(3) Minimum thickness 9mm – with a closed or an open air gap not more than 22mm behind the OSB. (End use of condition)

(4) Minimum thickness 3mm – Any (End use of condition)