



Norbord NV
Eikelaarstraat 33
3600 Genk
Belgium

DoP ref: **NGOSB2DoPv5**

EN 13986:2004 +A1:2015

1161

08

E1

OSB/2 (EN300) 6mm to 32mm

Sterling OSB2 zero

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
¹ Characteristic Strength (N/mm ²):										
- 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	
¹ Mean Stiffness (MOE) (N/mm ²):										
- 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	
Punching Shear, Characteristic strength under point load $F_{max,k}$ (kN) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
Punching Shear, Mean stiffness under point load, R (N/mm²) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
Characteristic serviceability strength under point load $F_{Ser,k}$ (kN) <i>(for floors and roofs)</i>	NPD		NPD		NPD		NPD		NPD	
Soft Body Impact resistance <i>(Floor/roofs/Walls)</i>	NPD		NPD		NPD		NPD		NPD	
Racking resistance Characteristic Strength $F_{Rd,max,k}$ (N) <i>(for walls)</i>	NPD		NPD		NPD		NPD		NPD	
Racking resistance Mean Stiffness R_{mean} (N/mm) <i>(for walls)</i>	NPD		NPD		NPD		NPD		NPD	
⁵ Embedment strength f_h (N/mm ²)	Calculation according to EN 1995-1-1 (8.2.2)									

Water vapour permeability μ	NPD	NPD	NPD	NPD	NPD
Release of formaldehyde	E1	E1	E1	E1	E1
Release (content) of pentachlorophenol (PCP)	≤ 5 ppm	≤ 5 ppm	≤ 5 ppm	≤ 5 ppm	≤ 5 ppm
Airborne sound insulation (surface mass) R (dB)	NPD	NPD	NPD	NPD	NPD
³ Sound absorption, Frequency range 250Hz to 500Hz (α)	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
Thermal conductivity λ (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
Durability					
Internal bond (N/mm ²)	0.34	0.32	0.30	0.29	0.26
Swelling in thickness (%)	20	20	20	20	20
⁴ Mechanical, (Creep k_{def}) service class 1	2.25	2.25	2.25	NPD	NPD
Mechanical (Duration of load k_{mod})	Action Mode				
	Permanent	Long Term	Medium Term	Short Term	Instantaneous
⁴ 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 ³)	>= 600			

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 _{fi} ,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 _{fi} ,s1
	With an open air gap behind the panel ^{def}	18	D-s2,d0	D _{fi} ,s1
	Any end use ^{ef}	3	E	E _{fl}
a -Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m ³ or at least class D-s2, d2 products with minimum density 400 kg/m ³ . 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 ³ . 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 ³ . 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 ² 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:

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