DECLARATION OF PERFORMANCE

DoP Reference Number: - **NP4DoPv5**

Norbord Europe Ltd

Station Road

Cowie

Stirling

FK7 7BQ

Unique Identification code of the product type*	Intended Use	Systems of AVCP	Notified Body	Harmonised standard
P4 >10mm to 40mm*	Internal use as structural components in dry conditions	2+	2812	EN13986:2004 +A1:2015
*The unique identification code of the product type is a combination of the technical class and the individual product's nominal thickness				

Declared performance (covering a range of product-types P4 >10mm to 40mm*)

Essential characteristics	Performance									
	Thickness(mm)									
	>10 to 13	**>13 to 20**	**>20 to 25**	**>25 to 32**	**>32 to 40**			**18 T&G 400mm centres**		
[1]Characteristic Strength (N/mm²)										
- **Bending** f_m	14.2	12.5	10.8	9.2	7.5			12.5		
- **Compression** f_c	12	11.1	9.6	9.0	7.6			11.1		
- **Tension** f_t	8.9	7.9	6.9	6.1	5.0			7.9		
- **Panel Shear** f_v	6.6	6.1	5.5	4.8	4.4			6.1		
- **Planar shear** f_r	1.8	1.6	1.4	1.2	1.1			1.6		
[1]Mean Stiffness (MOE) (N/mm²)										
- **Tension** E_t	1800	1700	1600	1400	1200			1700		
- **Compression** E_c	1800	1700	1600	1400	1200			1700		
- **Bending** E_m	3200	2900	2700	2400	2100			2900		
- **Panel Shear** G_v	860	830	770	680	600			830		
Punching Shear Characteristic strength under point load $F_{max,k}$ (kN) *(for floors and roofs)*	NPD	NPD	NPD	NPD	NPD			5.4		
Punching Shear Mean stiffness under point load, R_{mean} (N/mm) *(for floors and roofs)*	NPD	NPD	NPD	NPD	NPD			840		
Racking resistance *(for walls)* **Characteristic Strength $F_{Rd,max,k}$** (N)	NPD	NPD	NPD	NPD	NPD			NPD		
Racking resistance *(for walls)* **Mean Stiffness R_{mean} (N/mm)**	NPD	NPD	NPD	NPD	NPD			NPD		
Soft Body Impact resistance Floor/roofs Walls	NPD	NPD	NPD	NPD	NPD			Impact Class 1 Pass Floor		
Embedment strength f_h (N/mm2)	NPD	NPD	NPD	NPD	NPD			NPD		

		Minimum thickness	Class (excluding floorings)[g]	Class (Flooring)[h]
[2]Reaction to fire **(see notes to table for field of application details and associated documentation references)** -	**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}
	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. 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/m3. 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. 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/m² 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			

	>10 to 13	**>13 to 20**	**>20 to 25**	**>25 to 32**	**>32 to 40**			**18 T&G 400 centres**		
Water vapour permeability μ	NPD	NPD	NPD	NPD	NPD			NPD		
Release of formaldehyde	E1	E1	E1	E1	E1			E1		
Release (content) of pentachlorophenol (PCP)	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm			≤5ppm		
Airborne sound insulation (surface mass) R (dB)	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		
[3]Sound absorption Frequency range 1000Hz to 2000Hz **(α)**	0.25	0.25	0.25	0.25	0.25			0.25		
Thermal conductivity λ (W/m.K)	NPD	NPD	NPD	NPD	NPD			NPD		
Air Permeability V_0 (m3/h)	NPD	NPD	NPD	NPD	NPD			NPD		
Durability										
Internal bond (N/mm²)	0.45	0.45	0.40	0.35	0.30			0.45		
Swelling in thickness (%)	11	10	10	10	9			10		
[4]Mechanical (Creep k_{def}) **service class 1**	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	0.30		0.45		0.65		0.85		1.10	
Biological	**Use class 1**									

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

The performance of the product identified is in conformity with the declared performance.
This declaration of performance is issued in accordance with regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Nick Fedo

At: - Cowie, Scotland On: - 10-03-2020