NORBORD Europe Ltd
Station Road
Cowie
Stirling
Scotland
FK7 7BQ

DoP ref: **NP4DoPv4**

EN13986:2004 +A1:2015

1224

04

E1

P4

10mm to 38mm

Structural use in dry conditions

Essential characteristics	**Performance**						
Thickness range	**>10 to 13**	**>13 to 20**	**>20 to 25**	**>25 to 32**	**>32 to 40**		**18 T&G 400 centres**
Characteristic Strength (N/mm^2)							
- **Bending** f_m	14.2	12.5	10.8	9.2	7.5		12.5
- **Compression** f_c	12.0	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
Mean Stiffness (MOE) (N/mm^2)							
- **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
Characteristic strength under point load $F_{max,k}$ (kN) *(for floors and roofs)*	NPD	NPD	NPD	NPD	NPD		5.4
Mean stiffness under point load, R (N/mm) *(for floors and roofs)*	NPD	NPD	NPD	NPD	NPD		840
Characteristic serviceability strength under point load $F_{ser,k}$ (kN) *(for floors and roofs)*	NPD	NPD	NPD	NPD	NPD		4.3
Racking resistance *(for walls)*	NPD	NPD	NPD	NPD	NPD		NPD
Soft Body Impact resistance **Floor/roofs** **Walls**	NPD	NPD	NPD	NPD	NPD		Pass Floors
Reaction to fire	D-2,d0	D-2,d0	D-2,d0	D-2,d0	D-2,d0		DFL-s1
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)	NPD	NPD	NPD	NPD	NPD		NPD
Sound absorption Frequency range 250Hz to 500Hz **(α)**	0.1	0.1	0.1	0.1	0.1		0.1
Sound absorption Frequency range 1000Hz to 2000Hz **(α)**	0.25	0.25	0.25	0.25	0.25		0.25
Thermal conductivity λ	NPD	NPD	NPD	NPD	NPD		NPD
Durability							
Internal bond (N/mm^2)	0.40	0.35	0.30	0.25	0.20		0.35
Swelling in thickness (%)	16	15	15	15	14		15
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**		
Service Class 1	0.3	0.45	0.65	0.85	1.1		
Biological	Use Class 1						