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 Scotland  
 FK7 7BQ

DoP ref: **NP5DoPv4**

EN13986:2004 +A1:2015

1224

04

E1

P5

8mm to 38mm

Structural use in humid conditions

Essential characteristics	Performance								
	Thickness(mm)								
	>6 to 10	>10 to 13	>13 to 20	>20 to 25	>25 to 32	>32 to 40	18 T&G 400 centres	22 T&G 600 centres	
<b>Characteristic Strength (N/mm<sup>2</sup>)</b>									
- Bending $f_m$	15.0	15.0	13.3	11.7	10.0	8.3	13.3	11.7	
- Compression $f_c$	12.7	12.7	11.8	10.3	9.8	8.5	11.8	10.3	
- Tension $f_t$	9.4	9.4	8.5	7.4	6.6	5.6	8.5	7.4	
- Panel Shear $f_v$	7.0	7.0	6.5	5.9	5.2	4.8	6.5	5.9	
- Planar shear $f_r$	1.9	1.9	1.7	1.5	1.3	1.2	1.7	1.5	
<b>Mean Stiffness (MOE) (N/mm<sup>2</sup>)</b>									
- Tension $E_t$	2000	2000	1900	1800	1500	1400	1900	1800	
- Compression $E_c$	2000	2000	1900	1800	1500	1400	1900	1800	
- Bending $E_m$	3500	3500	3300	3000	2600	2400	3300	3000	
- Panel Shear $G_v$	960	960	930	860	750	690	930	860	
<b>Characteristic strength under point load <math>F_{max,k}</math> (kN)</b> <i>(for floors and roofs)</i>	NPD	NPD	NPD	NPD	NPD	NPD	5.4	5.4	
<b>Mean stiffness under point load, R (N/mm)</b> <i>(for floors and roofs)</i>	NPD	NPD	NPD	NPD	NPD	NPD	840	560	
<b>Characteristic serviceability strength under point load, <math>F_{ser,k}</math> (kN)</b> <i>(for floors and roofs)</i>	NPD	NPD	NPD	NPD	NPD	NPD	4.3	4.3	
<b>Racking resistance</b> <i>(for walls)</i>	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	

<b>Soft Body Impact resistance</b>	NPD	NPD	NPD	NPD	NPD	NPD		Pass Floor	Pass Floor
<b>Floor/roofs</b>									
<b>Walls</b>									
<b>Reaction to fire</b>	NPD	D-s2,d0	D-s2,d0	D-s2,d0	D-s2,d0	D-2,d0		DFL-s1	DFL-s1
<b>Water vapour permeability <math>\mu</math></b>	NPD	NPD	NPD	NPD	NPD	NPD		NPD	NPD
<b>Release of formaldehyde</b>	E1	E1	E1	E1	E1	E1		E1	E1
<b>Release (content) of pentachlorophenol (PCP)</b>	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm		≤5ppm	≤5ppm
<b>Airborne sound insulation (surface mass) (R)</b>	NPD	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	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	0.25
<b>Thermal conductivity <math>\lambda</math></b>	NPD	NPD	NPD	NPD	NPD	NPD		NPD	NPD
<b>Durability</b>									
<b>Internal bond (N/mm<sup>2</sup>)</b>	0.45	0.45	0.45	0.40	0.35	0.30		0.45	0.40
<b>Swelling in thickness (%)</b>	13	11	10	10	10	9		10	10
<b>Internal bond after cyclic test (N/mm<sup>2</sup>)</b>	0.25	0.25	0.22	0.20	0.17	0.15		0.22	0.20
<b>Swelling in thickness after cyclic test (%)</b>	12	12	12	11	10	9		12	11
<b>Moisture resistance</b> Internal bond after boil test (%)	0.15	0.15	0.14	0.12	0.11	0.10		0.14	0.12
<b>Mechanical</b> (Creep $k_{def}$ ) <b>service class 1</b>	2.25	2.25	2.25	2.25	2.25	2.25		2.25	2.25
<b>Mechanical</b> (Creep $k_{def}$ ) <b>service class 2</b>	3	3	3	3	3	3		3	3
<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>	0.30		0.45		0.65		0.85	1.10	
<b>Service Class 2</b>	0.20		0.30		0.45		0.60	0.80	
<b>Biological</b>	<b>Use classes 1 &amp; 2</b>								