

## DECLARATION OF PERFORMANCE

1. Product-type:

**EN 312 P5 18 mm & 22 mm Particleboard (T&G ) Fast Shield**

2. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

**Internal use as structural components in humid conditions**

3. Name and contact address of the manufacturer :

**Kronospan Limited  
Holyhead Road  
Chirk  
Wrexham  
LL14 5NT**

4. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V of the CPR:

**System 2+**

5. Approved Body information:

**WIP**

**Harmonised standard EN 13986:2004+A1:2015**

6. Declared performance

Essential characteristics	Performance			
	Thickness(mm)			
	>13 to 20	>20 to 25	18mm T&G 400mm centres	22mm T&G 600mm centres
<sup>1</sup> Characteristic strength (N/mm <sup>2</sup> )	13.3	11.7	13.3	11.7
- Bending $f_m$				
- Compression $f_c$	11.8	10.3	11.8	10.3
- Tension $f_t$	8.5	7.4	8.5	7.4
- Panel Shear $f_v$	6.5	5.9	6.5	5.9
- Planar shear $f_r$	1.7	1.5	1.7	1.5
<sup>1</sup> Mean stiffness (MOE) (N/mm <sup>2</sup> )	1900	1800	1900	1800
- Tension $E_t$				
- Compression $E_c$	1900	1800	1900	1800
- Bending $E_m$	3300	3000	3300	3000
- Panel Shear $G_v$	930	860	930	860
Punching Shear Characteristic strength under point load $F_{max,k}$ (kN) (for floors and roofs)	NPD	NPD	5.4	5.4
Punching Shear Mean stiffness under point load, $R_{mean}$ (N/mm) (for floors and roofs)	NPD	NPD	NPD	NPD

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Racking resistance (for walls) Characteristic Strength $F_{Rd,max,k}$ (N),	NPD	NPD	NPD	NPD
Racking resistance (for walls), Mean Stiffness $R_{mean}$ (N/mm)	NPD	NPD	NPD	NPD
Impact resistance (soft body) (Impact Class I or II (floors & roofs) or III for walls)	NPD	NPD	Impact Class 1 Pass Floor	Impact Class 1 Pass Floor
Embedment strength $f_h$ (N/mm <sup>2</sup> )	NPD	NPD	NPD	NPD
<sup>2</sup> Water vapour permeability $\mu$	NPD	NPD	NPD	NPD
Release of formaldehyde (class E1 or E2)	E1	E1	E1	E1
Release (content) of pentachlorophenol (PCP)	NPD	NPD	NPD	NPD
<sup>3</sup> Airborne sound insulation (surface mass) $R$ (dB)	NPD	NPD	NPD	NPD
<sup>4</sup> Sound absorption factor Frequency range 250Hz to 500Hz ( $\alpha$ )	0.1	0.1	0.1	0.1
<sup>4</sup> Sound absorption factor Frequency range 1000Hz to 2000Hz ( $\alpha$ )	0.25	0.25	0.25	0.25
<sup>5</sup> Thermal conductivity(density) $\lambda$ (W/mK)	NPD	NPD	NPD	NPD
Air permeability $V_0$ (m <sup>3</sup> /h)	NPD	NPD	NPD	NPD
<b>Durability</b>				
Internal bond (N/mm <sup>2</sup> )	0.45	0.40	0.45	0.40
Swelling in thickness (%)	10	10	10	10
Moisture resistance	0.22	0.2	0.22	0.25
Internal bond after cyclic test (N/mm <sup>2</sup> )				
Moisture resistance Swelling in thickness after cyclic test (%)	12	11	12	11
<sup>6</sup> Mechanical (creep factor $k_{def}$ ) service class 1	2.25	2.25	2.25	2.25
<sup>6</sup> Mechanical (creep factor $k_{def}$ ) service class 2	3	3	3	3

		Minimum thickness	Class (excluding floorings) <sup>g</sup>	Class (Flooring) <sup>h</sup>
	<b>Without an air gap behind the panel</b> <sup>abef</sup>	9	D-s2,d0	D <sub>fi</sub> ,s1

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<b>7 Reaction to fire</b>  (see notes to table for field of application details and associated documentation references)	<b>With a closed or open air gap ≤ 22mm behind the panel <sup>ef</sup></b>	9	D-s2,d2	-	
	<b>Closed air gap behind the panel <sup>def</sup></b>	15	D-s2,d0	D <sub>fi</sub> ,s1	
	<b>With an open air gap behind the panel <sup>def</sup></b>	18	D-s2,d0	D <sub>fi</sub> ,s1	
	<b>Any end use <sup>ef</sup></b>	3	E	E <sub>fi</sub>	
a -Mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10kg/m <sup>3</sup> or at least class D-s2, d2 products with minimum density 400 kg/m <sup>3</sup> . 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 <sup>3</sup> . 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 <sup>3</sup> . 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 <sup>2</sup> 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					
<b>6 Mechanical (duration of load factor <math>k_{mod}</math>)</b>	<b>Action mode</b>				
	<b>Permanent</b>	<b>Long Term</b>	<b>Medium Term</b>	<b>Short Term</b>	<b>Instantaneous</b>
<b>6 Service class 1</b>	0.3	0.45	0.65	0.85	1.1
<b>6 Service class 2</b>	0.2	0.3	0.45	0.6	0.8
<b>Biological</b>	<b>Use classes 1 &amp; 2</b>				
NOTES TO TABLE  1 Taken from EN 12369-1:2001 2 Taken from Table 9 of EN 13986:2004+A1 3 Calculated according to clause 5.10 of EN 13986:2004+A1 4 Taken from Table 10 of EN 13986:2004+A1 5 Taken from Table 11 of EN 13986:2004+A1 6 Taken from Eurocode 5 EN 1995-1-1 2004+A2:2014 7 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 8 of EN 13986:2004+A1:2015 for wood-based panels installed according to CEN/TR 12872 8. Declaration is combination of product types and thicknesses.					

The performance of the product identified is in conformity with the declared performances.

This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011 as it has effect in the United Kingdom in respect of Great Britain, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by: