CE	
NORBORD Europe Ltd	
Station Road	
Cowie	
Stirling	
Scotland	
FK7 7BQ	
DoP ref: NMDFDoPv5	
EN13986:2004 +A1:2015	
04	
E1	
MDF	
>4mm to 38mm	
Non-Structural use in dry conditions	

Essential characteristics	Performance							
Thickness range	>4 to 6	>6 to 9	>9 to 12	>12 to 19	>19 to 30	<>30 to 45		
<sup>1</sup> 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		
<sup>2</sup> Airborne sound insulation (surface mass) R (dB)	NPD	NPD	NPD	NPD	NPD	NPD		
<sup>3</sup> Sound absorption Frequency range 250Hz to 500Hz (α)	0.1	0.1	0.1	0.1	0.1	0.1		
<sup>3</sup> Sound absorption Frequency range 1000Hz to 2000Hz (α)	0.2	0.2	0.2	0.2	0.2	0.2		
<sup>4</sup> Thermal conductivity λ (W/m.K)	NPD	NPD	NPD	NPD	NPD	NPD		
Air Permeability V <sub>0</sub> (m3/h)	NPD	NPD	NPD	NPD	NPD	NPD		
Durability								
Internal bond (N/mm²)	0.65	0.65	0.60	0.55	0.55	0.50		
Swelling in thickness (%)	30	17	15	12	10	8		
Biological	Use Class 1							

		Minimum thickness	Class (excluding floorings) <sup>g</sup>	Class (Flooring) <sup>h</sup>
<sup>5</sup> Reaction to fire  (see notes to table for field of application details and associated documentation references)	Without an air gap behind the panel	9	D-s2,d0	D <sub>fl</sub> ,s1
	With a closed or open air gap ≤ 22mm behind the panel <sup>cef</sup>	9	D-s2,d2	-
	Closed air gap behind the panel def	15	D-s2,d0	D <sub>fl</sub> ,s1
	With an open air gap behind the panel <sup>def</sup>	18	D-s2,d0	D <sub>fl</sub> ,s1
	Any end use ef	3	F	Ef

- 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  $kg/m^3$ .
- 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 A2s1, 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 Ds2, d2 products with minimum density 400 kg/m<sup>3</sup>.
- e Veneered, phenol- and melamine-faced panels are included for class excl. floorings. fA 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

## **NOTES TO TABLE**

1 Taken from Table 9 of EN 13986:2004+A1

- 2 Calculated according to clause 5.10 of EN 13986:2004+A1
- 3 Taken from Table 10 of EN 13986:2004+A1
- 4 Taken from Table 11 of EN 13986:2004+A1
- 5 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