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EN 13986:2004
MDF

Internal use as a non structural component in dry conditions
E1

DoP Ref: KC/QUAL/DOC/0094

<https://uk.kronospan-express.com/en/express-services/downloads>

Essential characteristics	Performance								
	Thickness(mm)								
	1.8 to 2.5	>2.5 to 4	>4 to 6	>6 to 9	>9 to 12	>12 to 19	>19 to 30	>30 to 45	>45
¹ Water vapour permeability μ	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Release of formaldehyde (class E1 or E2)	E1	E1	E1	E1	E1	E1	E1	E1	E1
Release (content) of pentachlorophenol (PCP)	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm	≤5ppm
² Airborne sound insulation (surface mass) R (dB)	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
³ Sound absorption factor Frequency range 250Hz to 500Hz (α)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
³ Sound absorption factor Frequency range 1000Hz to 2000Hz (α)	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
⁴ Thermal conductivity λ (W/mK)	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Air permeability V_0 (m ³ /h)	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Durability									
Internal bond (N/mm ²)	0.65	0.65	0.65	0.65	0.60	0.55	0.55	0.50	0.50
Swelling in thickness 24 h (%)	45	35	30	17	15	12	10	8	6
Bending Strength (N/mm ²)	23	23	23	23	22	20	18	17	15
Modulus of elasticity in bending (N/mm ²)	-	-	2700	2700	2500	2200	2100	1900	1700
Biological	Use class 1								

⁵ Reaction to fire (see notes to table for field of application details and associated documentation references)		Minimum thickness	Class (excluding floorings) ^g	Class (Flooring) ^h
	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/m ³ 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 A2-s1, d0 products with minimum density 10 kg/m ³ . 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 ³ . 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 ² 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