

Board test results



Product		Archival Boxboard (2 layered grey/brown)	Premier Archival Boxboard BDAFBD1000	Archival Boxboard (2 layered white/grey)	Archive Box Board (4 layered board)	Archival Boxboard (2 layered white/grey)	Green Elephant Millboard
Manufacturer/Supplier		Banner (UK)	Conservation by Design (UK)	Klug (Germany)	Nuttals (UK)	John Purcell (UK)	Conservation By Design (UK)
Grammage (g/m ²)		1004.9	776.38	918.8	1215.1	847.4	1377.3
Thickness (µm)		1300	984.5	1120		994	
Chemical tests	Ash test	21.2%	10.89%	7.6%		9.3%	
	Fibre furnish	Grey layer: 57% mech. softwd 30% chem. hardwd 13% chem. softwd Brown layer: 60% mech. softwd 25% chem. hardwd 15% chem. softwd	Inner single white ply: 52% chemically pulped hardwd 48% chemically pulped softwd Middle white plies: 59.5% chemically pulped hardwd 40.5% chemically pulped softwd Outer grey plies: 28.5% chemically pulped hardwd 71.5% chemically pulped softwd	White layer: 98% chem. hardwd Grey layer: 87% chem. hardwd 13% chem. softwd	Multi-ply board, 2 outer brown and 2 inner grey layers Ply 1: Outer layer, unbleached sulphate (Kraft), pine Ply 2: Inner grey, 62.5% mech. softwd 24.2% chem. pulped hardwd 13.3% chem. pulped softwd Ply 3: Inner grey, as per ply 2 Ply 4: Outer layer, unbleached softwood sulphate pine as in ply 1	White layer: 43% chem. softwd 57% chem. hardwd Grey layer: 65% chem. softwd 35% chem. hardwd	This board comprises 12 layers
	Alkaline reserve	8.52%	4.4%	6.38%	11.335%	7.66	3.81%
	Cobb tests	Side 1: 35.6 Side 2: 26.0	Grey side: 20.37 White side: 20.40	White layer: 38.8 Grey layer: 36.0	Side A: 30.0 gsm; 30.9gsm Side B: 30.6 gsm	White layer: 38.8 Grey layer: 36.0	
	Cold extraction pH	7.7	9.3	7.5	10.7	7.8	6.6
	Reducible sulphur	0.00041%	0.0028%	0.000078%	0.00077%	0.00030%	0.000104%
	Tensile strength (MD)	24.47 kN/m	40.879 kN/m	36.44 kN/m	28.3 kN/m	53.63 kN/m	
Mechanical tests	Tensile index (MD)	24.35 Nm/g	52.66 Nm/g	39.66 Nm/g	23.37 Nm/g	63.29 Nm/g	
	Burst strength (MD)	1953.5 kPa	1879.59 kPa	1896.1 kPa		2222.4 kPa	
	Burst index (MD)	1.944 kPam ² g ⁻¹	2.421 kPam ² g ⁻¹	2.064 kPam ² g ⁻¹		2.542 kPam ² g ⁻¹	
	Breaking load	367.1 N	613.24 N	570.8 N	425.9 N	804.5 N	In excess of 1000 N