


# castle

## COMPOSITES

### Castlewood Polymer Capped Decking Boards Data Sheet

Photo	Dimension
	<p>138 x 22.5 mm (5.5 x 0.9 in)</p> <p>Weight 2.44m: 6kg 3.6m: 8.85kg</p>

NO.	Property	Test Method	Test results	Remark
1	Abrasion resistance	ASTM D4060-10	33mg(1000cycles)	
2	Brinell hardness	EN15534	8.2N/mm <sup>2</sup>	
3	Boiling test	EN15534	Water absorption in weight: 1.10%	
4	Bond Strength	EN319	Average Bond Strength>2.3MPa No obvious abruption and damage after test	
5	Coefficient Linear Thermal Expansion	ASTM D696	$38.9 \times 10^{-6}$ mm/mm °C	
		EN15534	$32.2 \times 10^{-6}$ K <sup>-1</sup>	
6	Creep behaviour	EN15534	Δ S:4.70mm, Δ Sr:2.81mm	Span:350mm
7	Content of pentachlorophenol	CE ( EN14041(2004) )	2.99ppm	
8	Creep Recovery	ASTM D7032	Creep Recovery after 24h: 93%	
9	Degree of chalking	EN15534	Rating 0, no chalking.	
10	Electrostatic behaviour	EN1815	Body-Voltage: 1.1kV This floor covering can be classified as antistatic	
11	Fire Resistance	BS476-7	Class 2	
		EN13501-1, EN ISO9239-1, EN ISO11925-2	Reaction to fire classification: Bfl-s1	On request, talk to the manufacturer

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11	Fire Resistance	EN ISO 9239-1 EN ISO11925-2	classification: Bfi-s1	On request, talk to the manufacturer
		GB8624, GB11785, GB8626, GB20286	Reaction to fire classification: GB8624B <sub>1</sub> (B-s1, t1)	
		ASTM E84	Flame Spread Index(FSI): 85 Smoke Developed Index(SDI): 300	
12	Falling mass impact resistance	EN15534	Max Crack length(mm): No crack. Max Residual Indentation(mm): 0.14	
13	Formaldehyde Content	EN717-1	Non Dectectable	
		ASTM D6007-14	Non Dectectable	
14	Flexural properties	EN15534	Bending Strength: 26.2Mpa, Modulus of elasicity: 3.10Gpa, Maximum load: 4537N, Deflection at 500N: 0.88mm	Span:350mm
		ASTM D6109	MOR:24.8MPa, MOE:3495MPa	Span:368mm
15	Heavy Metal Content	EPA3051	Sb:ND, As:ND, Se:ND, Sn:ND	
16	Heat reversion	EN15534 EN479	Test temperature: 100℃ :0.17%	
17	Heat build-up	EN15534	Δ T=-2.7℃	
18	Impact Resistance	ASTM D4226	MFE>396J	
19	Lead Content Test	EUNo.628/2015	Non Dectectable	
20	Mould resistance	ASTM G21	Rating 0	
21	Moisture Content	EN15534 EN322	0.83%	
22	Moisture resistance under cyclic test conditions	EN15534	Original MOR: 27.4Mpa After exposure, MOR: 24.8Mpa, Decrease: 9.6%.	
23	Neutral salt spray test	ASTM B117-2011	After 200 hours tests, there was no visible change appeared on the surface: Front surface: Δ E*=1.22, Grey Scale:4-5 Back surface: Δ E*=1.06, Grey Scale:4-5	
		EN15534 ISO9227	Δ E*=1.42, Grey Sale=4 (Exposure 96h)	
24	Pb, Cd, Hg, Cr <sup>6+</sup>	RoHs-IEC62321	Pb:ND, Cd:ND, Hg:ND, Cr <sup>6+</sup> :ND	

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25	Resistance to scratch test	ISO4586-2	Rate 2	
26	Resistance to indentation	EN15534	Apply 2000N load Brinell hardness: 72Mpa, Rate of elastic recovery: 65%	
27	Resistance to artificial weathering	EN15534 ISO4892-2	After 2000h exposure $\Delta E^*=1.09$ , Grey Sale=4-5	
28	Rockwell Hardness	ASTM D785	78.7R	
29	Slip Resistance	AS/NZS 4586	1. Wet Pendulum Testing: Longitudinal:30; Horizontal:42 2. Oil Ramp Testing: Longitudinal:Rating:R11; Horizontal:Rating:R11	
		CENTS12633(2014) CENTS16165(2012)	Pendulum Testing: Dry condition: PTV46 Wet condition: PTV34	
		EN15534-1, EN15534-4	Pendulum test:Longitudinal:44; Horizontal:56 Indination plan test:Angle:25.0°, Rating:Class C	
		DIN51130	Oil-wet ramp test: Angle:19.7° Rating:R11	
		DIN51097	Wet-load ramp test: Front View:Angle:31.2° Rating:C Back View:Angle:29.0° Rating:C	
		EN15534 CEN/TS15676	Pendulum test:Longitudinal:59; Horizontal:69 Indination plan test:Angle:38.2°, Rating:Class C	
30	Swelling and water absorption (24hours immersion)	EN15534	① Swelling: 0.06% in thickness, 0.03% in width, 0.03% in length. ② Water absorption: 0.49%	
31	Swelling and water absorption (28days immersion)	EN15534	① Swelling: 0.78% in thickness, 0.07% in width, 0.12% in length. ② Water absorption: 1.66%	
32	SRI Testing	ASTM C1549 ASTM C1371 ASTM E1980	19	
33	Surface Bond quality	EN319	>2.08MPa	

<b>NO.</b>	<b>Property</b>	<b>Test Method</b>	<b>Test results</b>	<b>Remark</b>
34	Thermal Resistance	ASTM C518-2010	Thermal conductivity: 0.1589W/(m·k) Thermal resistance: 0.0830(m <sup>2</sup> ·K)/W	
35	Thermal conductivity	CE ( EN14041(2004) )	0.19738W/m·K	
36	UV Weathering test	ASTM G154	After 3000 hours test, Grey Scale3, Δ E*=3.56	
37	Uplift Resistance	ICC-ES AC174 ASTM E330	Average ultimate load ≥427psf	
38	VOC&TVOC	ASTM D5116-11	Non Dectectable	
39	Water absorption	ASTM D1037-12B(24h)	Water absorption(24h): 0.2%	