


# Tech Data Sheet - Shadowline Cladding US31

Model	Photo	Dimension
US31		142 x 13 mm (5.5 x 0.5 in)

NO.	Property	Test Method	Test results	Remark
1	Abrasion Resistance	ASTM D4060	33mg(1000cycles)	
2	Brinell hardness	EN15534	8.2N/mm <sup>2</sup>	
3	Boiling test	EN15534	Water absorption in weight: 0.49%	
4	Bond Strength	EN319	Average Bond Strength>2.3MPa No obvious abruption and damage after test	
5	Coefficient Linear Thermal Expansion	ASTM D696	35.6×10 <sup>-6</sup> mm/mm °C	
		EN15534	34.0×10 <sup>-6</sup> K <sup>-1</sup>	
6	Content of pentachlorophenol	CE ( EN14041(2004) )	2.99ppm	
7	Degree of chalking	EN15534	Rating 0, no chalking.	
8	Fire Resistance	BS476-7	Class 2	On request, talk to the manufacturer
		EN13501-1, EN ISO9239-1, EN ISO11925-2	Reaction to fire classification: Bfl-s1	
		EN ISO 9239-1 EN ISO11925-2	classification: Bfl-s1	
		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	
		AS/NZS 1530.3-1999	Ignitability Index: 13 Range 0-20 Spread of Flame Index: 6 Range 0-10 Heat Evolved Index: 4 Range 0-10 Smoke Developed Index: 3 Range 0-10	
9	Formaldehyde Content	EN717-1	Non Dectectable	
		ASTM D6007-14	Non Dectectable	
10	Heavy Metal Content	EPA3051	Sb:ND, As:ND, Se:ND, Sn:ND	
11	Heat reversion	EN15534 EN479	Test temperature:100°C :0.17%	
12	Heat build-up	EN15534	Δ T=-2.7°C	
13	Lead Content Test	EUNo.628/2015	Non Dectectable	

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14	Mould resistance	ASTM G21	Rating 0	
15	Moisture Content	EN15534 EN322	0.83%	
16	Neutral salt spray test	ASTM B117-2011	After 200 hours tests, there was no visible change appeared on the surface: Front surface: $\Delta E^*=1.22$ , Grey Scale: 4-5 Back surface: $\Delta E^*=1.06$ , Grey Scale: 4-5	
		EN15534 ISO9227	$\Delta E^*=1.42$ , Grey Sale=4 (Exposure 96h)	
17	Pb, Cd, Hg, Cr <sup>6+</sup>	RoHs-IEC62321	Pb:ND, Cd:ND, Hg:ND, Cr <sup>6+</sup> :ND	
18	Resistance to scratch test	ISO4586-2	Rate 2	
19	Resistance to indentation	EN15534	Apply 2000N load Brinell hardness: 60Mpa, Rate of elastic recovery: 64%	
20	Resistance to artificial weathering	EN15534 ISO4892-2	After 2000h exposure $\Delta E^*=1.09$ , Grey Sale=4-5	
21	Rockwell Hardness	ASTM D785	78.7R	
22	Swelling and water absorption (24hours immersion)	EN15534-1 EN15534-4	① Swelling: 0.43% in thickness, 0.02% in width, 0.03% in length. ② Water absorption: 0.11%	
23	Swelling and water absorption (28days immersion)	EN15534	① Swelling: 0.67% in thickness, 0.04% in width, 0.07% in length. ② Water absorption: 0.27%	
24	SRI Testing	ASTM C1549 ASTM C1371 ASTM E1980	19	
25	Surface Bond quality	EN319	>2.08MPa	
26	Thermal Resistance	ASTM C518-2010	Thermal conductivity: 0.1589W/(m·k) Thermal resistance: 0.0830(m <sup>2</sup> ·K)/W	
27	Thermal conductivity	CE ( EN14041(2004) )	0.19738W/m·K	
28	UV Weathering test	ASTM G154	After 3000 hours test, Grey Scale3, $\Delta E^*=3.56$	
29	VOC&TVOC	ASTM D5116-11	Non Dectectable	

NO.	Property	Test Method	Test results	Remark
30	Water absorption	ASTM D1037	Water absorption(24h): 0.12%	
31	Installation Span	Manufacturers Specification	500mm on center	