

Product physical and chemical data sheet of PU decking							
Serial number	Test items	Unit	Test requirements	Basis for testing indicators	Basis for testing methods	Testing data	
1	Density	g/cm <sup>3</sup>				0.601	
2	Moisture content	%	≤0.6	GB/T24508-2009 5.5 Table 5	BS EN 322 : 1993	1.14	
3	Three-point bending (Normal temperature 23℃)	Bending damage load	N	≥2500	Foreign product standards	GB/T 17657	420mm span: 4256 500mm span: 3207
		Bending strength	MPa	≥22MPa		GB/T 17657	420mm span: 28.90 500mm span: 21.87
		Flexural modulus of elasticity	MPa	≥2000		GB/T 17657	420mm span: 851 500mm span: 488
4	Three-point bending (High temperature 80℃)	Bending damage load	N	≥2500	Foreign product standards	GB/T 17657	420mm span: 4023 500mm span: 2853
		Bending strength	MPa	≥22MPa		GB/T 17657	420mm span: 26.55 500mm span: 17.50
		Flexural modulus of elasticity	MPa	≥2000		GB/T 17657	420mm span: 756 500mm span: 304
5	Boil at high temperature/ Low-temperature freezing and thawing	Water absorption	%	Water absorption ≤10	LVT 2565-2015 wood plastic composite material	LVT 2565-2015 wood plastic composite material	1.21
		Lengthwise expansion rate	%	Lengthwise ≤0.5			0.19
		Widthwise expansion rate	%	Widthwise ≤1.0			0.09
		Expansion in the thickness direction	%	Thickness direction ≤3.0			0.89
		Surface quality	—	No surface cracks, no bubbles			Anomaly-free
6	Surface abrasion resistance	Abrasion resistant RPM	Revolutions	≥4000	GB/T18102-2007 5.4	>8000	
		100 rpm wear value	g	≤0.13, with no abrasion on the coating.	GB/T24508-2009 5.5	GB/T18102-2007 6.3.11	0.039
7	Slipperiness	/	≥35	GB/T24508-2009 5.5	GB/T24508-2009 6.5.16	40	
8	Surface scratch resistance	N	≥4, with no abrasion on the surface decorative pattern.	GB/T24508-2009 5.5 Table 5	GB/T17657-1999 4.29	7.00	
9	Surface bonding strength	MPa	≥0.6	GB/T24137 WPC decorative board	GB/T24137 WPC decorative board	2.50	
10	Freeze-thaw resistance	Bending damage load retention	%	≥80%	GB/T24508-2009 5.5 Table 5	108	
		Surface quality		No skinning, bubbles or cracks on the surface of the boards.	GB/T24508-2009 5.5 Table 5	GB/T24508-2009 WPC decking 6.5.10	Anomaly-free
11	Boiling water resistance (72h)	-	No bubbles, no cracks	Q/STMS001-2017 4.4	EN 15534-1:2014 8.3.3 WPC material: Products and formulation performance test methods.	Slightly cracked on the side	
12	The rate of swelling and water absorption	%	<0.2	Foreign product standards	BS EN 317 : 1993	0.27	
13	Linear thermal expansion	℃ <sup>-1</sup>	≤5.0X10 <sup>-5</sup>	EN 15534-4: 2014 4.5.6 Wood plastic composite material: Flooring, tiling specific requirements.	IS011359-2	2.7X10 <sup>-5</sup>	
14	Nail and screw withdrawal	N	≥800	CB/T24508-2009 5.5 Table 5	ASTM D 6117-97 Prescribed method testing	Board surface: 1288 Board sides: 1132	
15	Surface contamination resistance	-	The specimen surface is not allowed to have residual color, cracking, softening and obvious discoloration and gloss changes.	GB/T34440-2017 6.3	GB/T17657-1999 4.37	Saddle oil: residual Red ink: residual Wines: no residual Vinegar: no residual	



16	Cylindrical beam impact strength		Kj/m <sup>3</sup>	≥12	GB/T24508-2009 5. 5 Table 5	GBT 1043.1-2008 Plastic The first part of cylindrical beam impact performance testing: Non-instrumented impact test.	Unbreakable	
17	Impact resistance	Normal temperature drop hammer impact	-	Crack length≤10mm Indentation depth≤0. 5mm All 10 samples tested met the standard	GB/T24508-2009 5. 5 Table 5	EN 15534-1 7. 1.2. 1	No cracks Indentation depth: <b>0. 05mm</b> Indentation length: <b>12.35mm</b>	
		Low temperature drop hammer impact	-	5 samples tested with no cracks	GB/T24508-2009 5. 5 Table 5	GB/T 24508-2009 6.5.6	Uncracked	
18	Flame retardant properties		-	No less than <b>B<sub>1</sub>-s1</b>	Foreign product standards	EN 13501-1 : 2007 + A1 :2009	>V2	
19	Surface hardness		HD	30-60	GB/T24508-2009 5. 5 Table 5	GB-T 2411-2008 Plastic Shore hardness tester(decorative board-Shore hardness)	35	
20	Color fastness to light	Under xenon lamp	-	ΔE<3 (2000h)	GB/T8814-2004	ISO 4892-2	2000 hours greyΔE=2.06	
		Under ultraviolet ray	-	ΔE<3 (3000h)	Domestic co-extrusion enterprise standard	ASTM G154-06-7 Nonmetallic material Xenon UV exposure test	2000 hours.blackΔE=1.34, "grey"ΔE=2.17	
21	Quantitative impact test	Repeated impacts on the φ26MM ball head	-	Indentation depth≤10mm	Bamtech material standards	Force of impact≥6500N, 500impacts	Indentation depth: 4.89mm, unlaminated	
22	Quantitative bending fatigue test	Bending damage load retention	%	≥80%	Bamtech material standards		85.59	
		Surface quality	-	No cracks			Number of repeated bends: 110,000times	No cracks on all sides
		Surface tooling indentation	mm	≤ 2mm, with no damage on the coating			Span: 450mm, Stresses : 2200N	Indentations: 0.51mm . No damage to the coating.
		Screwing degree	-	No looseness, no breakage, no oval screw holes				No looseness, no breakage,no oval screw holes
		Board bending degree	mm	≤ 5mm				2mm

