



**QINGDAO SANHUAN COLORCHEM CO., LTD.**

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## TECHNICAL DATA SHEET

### HANJOIN® CO-EXTRUDED WPC DECKING

#### Material specification

Test Items	Results	Test parameter	Verdict
Density	Average value:1.28g/cm Max. value: 1.28g/cm Min. value: 1.27g/cm (No declare value)	Test method: Clause 6.2 of EN 15534-1:2014 and Method A of EN ISO 1183-1-2012 Requirements of client: Declare value $\pm 50\text{kg/m}^3$	-
Moisture content	Average value: 0.25% Max. value: 0.26% Min. value: 0.24%	Test method: Clause 6.3 of EN 15534-1:2014 and EN 322-1993 Requirements of client: Moisture content $< 0.5\%$	Pass
*Slipperiness - Inclination plan test	Test on face:The angle of inclination:25.5° Rating group: Class C Test on back: The angle of inclination:26.3° Rating group: Class C	Test method: Clause 6.4.3 of EN 15534-1:2014 Requirements of EN 15534-4: 2014:Class C ( $\geq 24^\circ$ )	Pass
Falling mass impact resistance	None of 10 test specimens showed a crack. Maximum depth of residual indentation: 0.26mm	Test method: Clause 7.1.2.1 of EN 15534-1:2014 Requirements of EN 15534-4: 2014 Hollow profiles: None of 10 test specimens shall show a failure with a crack length $\geq 10\text{ mm}$ or a depth of residual indentation $\geq 0,5\text{ mm}$ . In case of one failure, 10 additional test specimens shall be tested and no failure with a crack length $\geq 10\text{mm}$ or a depth of residual indentation $\geq 0,5\text{ mm}$ shall occur.	Pass
Tensile properties	Average tensile strength:18.6MPa Average tensile modulus: 3879MPa	Test method: Clause 7.2 of EN 15534-1:2014 and EN ISO 527-2:2012 Specimen: Type 1B Gage length: 50mm Testing speed: 5mm/min	-
Flexural properties	Average Fmax: 3562N Minimum Fmax: 3421N Average deflection under 500N: 0.65mm Maximum deflection under 500N: 0.67mm Average bending strength:26.4MPa Average modulus of elasticity: 4317MPa	Test method: Clause 7.3.2 of EN 15534-1:2014 Requirements of EN 15534-4: 2014 F'max $\geq 3\ 300\text{ N}$ (arithmetic mean value) F'max $\geq 3\ 000\text{ N}$ (individual values) Deflection under a load of 500 N $\leq 2,0\text{ mm}$ (arithmetic mean value) Deflection under a load of 500 N $\leq 2,5\text{ mm}$ (individual values) Span: 370mm(Client declare)	Pass

Resistance to indentation	Brinell hardness: 58 N/mm <sup>2</sup> Rate of elastic recovery: 56.2%	Test method: Clause 7.6 of EN 15534-1:2014 Requirements of client:Brinell hardness>50N/mm <sup>2</sup>	pass
Pull-through resistance	Nail f: 17.5N/mm <sup>2</sup>	Test method: Clause 7.7 of EN 15534-1:2014 and EN 1383:1999 Diameter of nail: 2.84mm	-
Resistance to artificial weathering	$\Delta E^*$ : 0.34 Grey scale: 4/5	Test method: Clause 8.1 of EN 15534-1:2014 and Cycle 1 of EN ISO 4892-2: 2013 Duration: 720hours Requirements of EN 15534-4: 2014: $\Delta L^*$ , $\Delta a^*$ , $\Delta b^*$ shall be declared. $\Delta E < 15$ & Grey scale $\geq 3$ (Client declare)	Pass
Swelling and water absorption	Average : Water absorption: 1.40% Length change: 0.16% Width change: 0.06% Thickness change: 0.44% Individual maximum : Water absorption: 1.78% Length change: 0.23% Width change: 0.11% Thickness change: 0.63%	Test method: Clause 8.3.1 of EN 15534-1:2014 Requirements of EN 15534-4: 2014:1) Means welling: $\leq 4$ % in thickness $\leq 0,8$ % in width $\leq 0,4$ % in length 2) Individual swelling: $\leq 5$ % in thickness $\leq 1,2$ % in width $\leq 0,6$ % in length 3) Mean water absorption $\leq 7$ % in weight 4) Individual water absorption $\leq 9$ % in weight	Pass
Moisture resistance - Boiling test	Water absorption: Average value: 1.51% Max. value: 1.55%	Test method: Clause 8.3.3 of EN 15534-1:2014 Requirements of client: Mean water absorption $\leq 4\%$ Individual water absorption $\leq 5\%$	pass
*Resistance against discolouring micro-fungi	Rating: 0	Test method: Clause 8.5.5 of EN 15534-1:2014 and ISO 16869:2008 Requirements of client: Acceptable level: Rating 0 or 1.	pass
Linear thermal expansion	Average linear thermal expansion: 38 x 10 K	Test method: Clause 9.2 of EN 15534-1:2014 Requirements of EN 15534-1:2014 Linear thermal expansion $\leq 50 \times 10^{-6} K^{-1}$	pass
Heat reversion	Average length change: 0.02%	Test method: Clause 9.3 of EN 15534-1:2014 Requirement of client: Length change $\leq 0.1\%$	pass
Heat build-up	Refer to below Table 1 for test results.	Test method: Clause 9.4 of EN 15534-1:2014 Infrared heat lamp: 300W Use specific black control panel which provided by manufacturer.	-



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*Single flame source test	Fs: 44mm No flaming droplets or particles were found.	Test method: Clause 9.6.1 of EN 15534-1:2014 and EN ISO 11925-2:2010 Exposure = 15 s	-
*Radiant heat source test	Critical flux(transverse): 6.4kW/m <sup>2</sup> Critical flux (longitudinal): 6.3kW/m <sup>2</sup> Smoke production: 139% minutes	Test method: Clause 9.6.3 of EN 15534-1:2014 and EN ISO 9239-1:2010	-

\*The data is based on the test for 138H23 and 138S23.

Maximun Joist Span and Deck Loading(for Commercial)		
DECKING	JOIST SPAN	LOADING
138*23mm	400mm(16")	200kg(110lbs) at .092903 square meter(1square foot) with straight floorboards.
138*23mm	300mm(12")	250kg(110lbs) at .092903 square meter(1square foot) with angled floorboards.

Maximun Joist Span and Deck Loading(for residential)		
DECKING	JOIST SPAN	LOADING
138*23mm	400mm(16")	170kg(110lbs) at .092903 square meter(1square foot) with straight floorboards.
138*23mm	300mm(12")	220kg(110lbs) at .092903 square meter(1square foot) with angled floorboards.