



Technical Properties

STILE BOARD is made of high-performance waterproof extruded polystyrene, it has a 1mm coating on either side comprising a glass fibre mesh embedded in a polymer-cement mortar.

PROPERTIES OF THE FOAM COMPONENT

Property	Assessed to	Rating
XPS Density	DIN 53420	33 ± 2 kg/m ³
Thermal Conductivity (initial)	DIN 52612	0.034 Watt/mK
Thermal Conductivity (>5yrs)	ASTM C518	0.036 Watt/mK
Compressive Strength (10% deflection)	DIN 53421	Minimum of 0.25N/mm ²
Flexural Strength	ASTM C203	0.30 ± 0.02 MPa
Water Absorption (2-day immersion)	ISO2896	0.2% by volume
Water Absorption (Capillary)	DIN 53428	Zero
Coefficient of linear expansion	N/A	70 x 10 ⁻⁶ K ⁻¹
Water Vapour Diffusion Resistivity (μ)	DIN 52615	110 - 225 μ
Water Vapour Permeability	ASTM E-96	0.028 ng/Pa.m.s
EU controlled substances content	N/A	none

PROPERTIES OF THE TILE BACKER BOARD

Property	Assessed to	Rating
Load and water spray test	IAPMO PS 106-2015 5.1 NATA accredited to AS4284	pass
Compressive Strength (10% deflection)	AS/NZS 1170.1:2002	2kPa +
Bond Strength	BS EN 1384	0.3N/mm ²
Maximum Tile Loading Weight	CERAM121107	62kg/m ²
Flexural Strength	ASTM C203	2.05 ± 0.02 MPa
Water Vapour Permeability [Sd]	DIN EN 12086	3.2m
Impact load test	ASTM E695-03 NCC Vol1	3 x 120N/m
Bending Stiffness, E[20mm / 30mm]	EN 12089	601KNmm ² / 1285 kN/mm ²
Coefficient of linear expansion	N/A	30 x 10 ⁻⁶ K ⁻¹
Flammability	AS/NZS 1530.3	0
Smoke development	AS/NZS 1530.3	4
Impact Sound Reduction	BS-IS0140-8	dLw = 21
Shear Bond Strength	EN 1448	3.32kg/cm ²
EU controlled substances content	N/A	none

- Working temperature range: -50 to +80°C

STILE BOARD SIZE, WEIGHT AND DENSITY				
XPS DENSITY IS 33KG/M ³				
Product	Size	Unit N.W./pc(kg)	Package	GW/ctn (kg)
Wall Panel	2400x900x8	7.1		
	2400x900x12.5	8.3		
	2400x1200x15.5	10		
	2400x1200x20	11.9		
Floor Panel	1800x900x40	7.2		
	1800x900x30	7		
	1800x900x50	7.4		
Single Slope Panel	1200x300x(24.8-21)	2	4 pcs/ctn	9
	1200x600x(28.5-21)	4	4 pcs/ctn	17
	1200x900x(32.3-21)	4	4 pcs/ctn	17
	1200x1200x(36-21)	10.4	4 pcs/ctn	42.6
	1200x1200x(36-51)	8.73	4 pcs/ctn	35.9
	1200x1200x(51-66)	10.7	4 pcs/ctn	43.8
Four Way Slope Panel	600x600x40	1.8	3 pcs/ctn	6.4
	600x600x30	1.77	3 pcs/ctn	6.3
	900x900x40	4.67	3 pcs/ctn	15
	900x900x30	4.1	3 pcs/ctn	13.3
	1200x1200x40	8.5	3 pcs/ctn	26.5
	1200x1200x30	7.1	3 pcs/ctn	21.7
	1100x1800x30	11.2	3 pcs/ctn	34.5
Niche Box	350x350x100	1	1 pc/ctn	1.3
	600x350x100	1.5	1 pc/ctn	2
	900x350x100	2.1	1 pc/ctn	2.9
	1200x350x100	2.7	1 pc/ctn	3.5
Tool		0.37	25 pcs/ctn	9.5
Washer		0.0035	1000 pcs/bucket	1.68
Self-Adhesive Fiberglass Mesh	50mmx45m	0.081	50 rolls/ctn	4.35
mechanical fixing	8x50mm	0.005	400 pcs/bucket	2.28
Linear support	1250x256x23	0.76	20 pcs/carton	17.1

- Dimensional tolerances for standard boards: Thickness +/- 2mm, Width +/- 2mm, Length +/- 2mm
- The boards should be stored dry and flat. Slight bowing caused by incorrect storage or transport, for example, is not permanent and does not represent a technical defect. Slight curving can be rectified through storing the boards flat.

THERMAL INSULATION VALUES OF THE STILE BOARD				
Board thickness in mm	Net thickness xps in mm	R-value (m ² .K) /W	U-value W/m ² x K	λd Rated value
10	8	0.21	2.62	0.0378
12	10	0.28	2.23	0.0378
20	18	0.49	1.55	0.0378
30	28	0.74	1.10	0.0378
50	48	1.27	0.69	0.0378

- STILE BOARD offer thermal insulation that in most constructions satisfies the U-value requirements of different regions building regulations. The nonconductive surface reduces condensation by masking any cold bridging from the substrate beneath.
- The cementitious surface is resistant to heat and the chemicals within the sheathing around electric underfloor heating elements making it safe to use with these types of systems.