ONBOARD
TILE BACKER SYSTEM

TECHNICAL PROPERTIES

Onboard backer boards are made of high-performance waterproof extruded polystyrene, with 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
Density	DIN 53420	34 ± 2 kg/m^3
Thermal Conductivity (initial)	DIN 52612	0.032 Watt/mK
Thermal Conductivity (>90 days)	ASTM C518	0.036 Watt/mK
Compressive Strength (10% deflection)	DIN 53421	Minimum of 0.3N/mm^2
Flexural Strength	ASTM C203	0.30 ± 0.02 MPa
Water Absorption (2-day immersion)	ISO2896	0.2% by volume
Thermal Conductivity (>5yrs)	DIN 53428	Zero
Coefficient of linear expansion	N/A	70 x 10^{-6} K^{-1}
Water Vapour Diffusion Resistivity (μ)	N/A	Approx. 110 - 225 μ
Water Vapour Permeability	N/A	Approx. 0.028 ng/Pa.m.s
EU controlled substances content	N/A	N/A

PROPERTIES OF THE TILE BACKER BOARD

PROPERTY	ASSESSED TO	RATING
Bond Strength	BS EN 1384	0.3N/mm^2
Maximum Tile Loading Weight	CERAM121107	62kg/m^2
Resistance to body Impact	ETAG 003	3 x 120N/m
Coefficient of linear expansion	N/A	30 x 10^{-6} K^{-1}
Flammability	EN 13501-1	Class E
Impact Sound Reduction	BS-ISO140-8	dLw = 21
Shear Bond Strength	EN 1448	Approx. 3.32kg/cm^2
EU controlled substances content	N/A	N/A

WORKING TEMPERATURE RANGE: -50 TO +80°C

TECHNICAL PROPERTIES

BOARD WEIGHTS AND DIMENSIONS

THICKNESS	DENSITY (KG/M³)	WEIGHT (KG)	WEIGHT (KG)
		600 X 1200MM	600 X 2400MM
6MM	425	1.87	----
10MM	297	2.08	4.15
12MM	297	2.18	4.36

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 BOARD

BOARD THICKNESS	NET THICKNESS XPS IN MM	R-VALUE (M^2.K) /W	U-VALUE W/M^2 X K	λD RATED VALUE
6mm	4mm	0.11	3.63	0.0378
10mm	8mm	0.21	2.62	0.0378
12mm	10mm	0.28	2.23	0.0378

Onboard boards offer thermal insulation that in most constructions satisfies the U-value requirements of different regions building regulations.
The non-conductive 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.