TEKWARM

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HD FLOORBOARD

1200 x 600 x 18mm

PRODUCT DETAILS

Tekwarm HD Floorboard is a structural, A2 Reaction to Fire rated, cement bonded particle board with tongue and groove edges.

Tekwarm HD Floorboard is highly moisture tolerant with high mass beneficial to noise reduction.

Tekwarm HD Floorboard is a flooring and decking board of 'limited combustibility' providing designers with the benefit of reduced risk of combustion compared to traditional wood based flooring boards.

Tekwarm HD Floorboard may also be used effectively as a non-structural overlay board for refurbishment and acoustic floor upgrades.

KEY FEATURES

- Conformity assessed for structural use in floors and decking (CE & UKCA) to BS EN 13986
- Limited combustibility: A2fl according to BS EN 13501-1
- High density helps noise control within a ceiling/floor system
- Will not rot or degrade in the presence of moisture
- Supplied with Tongue & Groove edges to four sides
- Standard dimensions 1200 x 600 x 18mm (laid size) for easy installation
- Provides a more solid feel due to higher density when compared with lighter wooden boards such as P5 particle board (P5 chipboard)
- Higher thermal conductivity and heat capacity compared with traditional wood flooring boards

TECHNICAL DATA

PARAMETER	VALUE	STANDARD
Reaction to Fire: EN 13501-1	A2	-
Density	1560 kg/m3	+/- 10%
Modulus of elasticity	4000 N/mm2	-
Bending strength	9 N/mm2	-
Surface alkalinity	11 - 13 pH	-
Moisture Content (ex-production %)	9%	+/- 3 %
Swelling in thickness (average), G%	0.7 %	-
Thermal Conductivity (tabulated design value)	0.55 λW/(m°K)	-
Water vapour transmission - wet - dry	30 μ 50 μ	-
Formaldehyde release	E1 class	-
Thickness*	18mm	+/- 1.2mm
Length and width	1200mm x 600mm	+/- 1.5mm
Number of boards per pallet	40	-

** During installation care must be taken regarding potential differences in height between adjacent panels which occur due to product thickness tolerances (max 3.0mm).*

When working with surface finishes such as vinyl it is recommended to loose lay boards prior to fixing to determine if levelling will be required between adjacent boards prior to laying the final finish.

STRUCTURAL FLOOR LOADING DESIGN DATA

derived from BS EN 12781:2013 test data

ESSENTIAL CHARACTERISTIC under 50 x 50mm square point load	400mm	600mm
Strength - $F_{max,k}$ (kN)	4.38	2.44
Serviceability - $F_{ser,k}$ (kN)	3.07	1.71
Stiffness - R_{mean} (N/mm)	1548	742

UNIFORMLY DISTRIBUTED LOADING LIMIT (kN/m²)	400mm	600mm
Single Span - Stress	5.9	2.5
Single Span - Deflection (span/500)	5.2	-
Continuous - Stress	7.4	3.2
Continuous - Deflection (span/500)	1.6	2.9

RECOMMENDED MODIFICATION FACTORS

for 18mm Tekwarm HD Floorboard in floor and roof applications

Service Class	k_{mod} (medium-term)	k_{mod} (short-term)	k_{def}	Y_m	Y_Q	k_{red}
1.0	0.65	0.85	2.55	1.25*	1.35**	0.89
2.0	0.45	0.60	3.00	1.25*	1.35**	0.89

* Only to be used for the determination of the point load resistance of Tekwarm HD Floorboard product

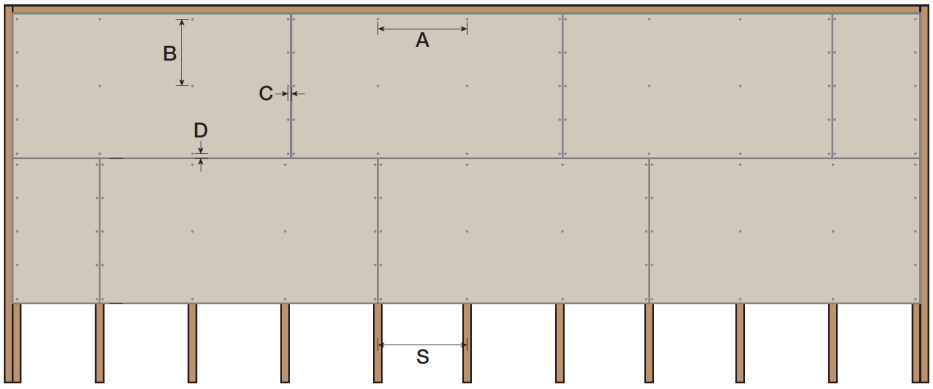
** Utilising kFL of 0.9 given in Annex B of BS EN 1990 for reliability Class RC1

Where:

k_{mod} - Modication factor, dependent on the duration of load and service class
k_{def} - Deformation factor, dependent on the service class
Y_m - Partial factor to account for the variability in material properties
Y_Q - Partial factor to account for the variability in the variable action from national annex to BS EN 1990
Y_Q - Partial factor to account for the variability in the variable action from national annex to BS EN 1991
k_{red} - Reduction factor for local types of failure

All testing was carried out with the board applied on to 45mm wide timber joists. However, it is reasonable to assume that the point load resistance of the board would be equivalent for other joist materials as long as the bearing width is greater or equal to 45mm and the centre to centre span between joists is not greater than the measurements shown above (400mm or 600mm).

INSTALLATION INSTRUCTIONS



FIXING CENTRES
(example shown 400mm)

S =	Support Centres
A =	400 or 600mm dependant on centres of support
B =	nominal 300mm
C =	25mm
D =	50mm

ALL Tongue & Grooved edges should be bonded with a PUD4 adhesive.

The underside of the boards are clearly marked and must all be face down to joist/substrate.

For fixing to timber joists 4.5 x 62mm self drilling, self countersinking screws should be used.

Note:

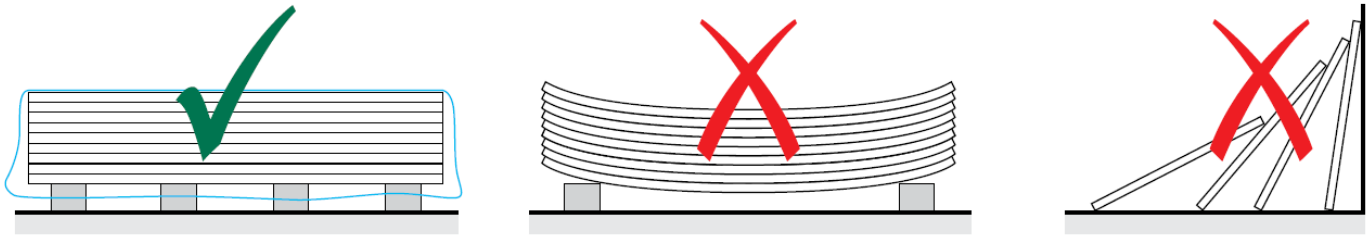
A 10mm perimeter gap should be allowed around the edge of the floor to wall junction.

Boards should not be installed with a moisture content over 12%, measurements should be taken prior to laying of Tekwarm HD Floorboard to ensure that this is the case.

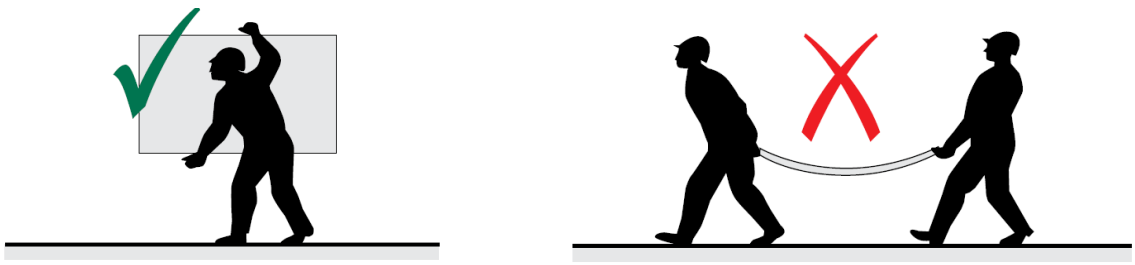
Please read these installation instructions in conjunction with BS 8201 Code of practice for installation of flooring of wood and wood based panels.

DELIVERY AND STORAGE

- Boards should be received in a dry state with pallets protected from weather with plastic sheeting or similar.
- Boards should be stored on flat, dry pallets elevated on skids/battens sufficiently from ground level to prevent board wetting.
- If boards are stored on site for a long period of time they must be kept under cover/indoors.



- When manually moving boards they should be carried in a vertical orientation.
- A manual handling risk assessment should be undertaken prior to handling the product.



IMPORTANT NOTE

Tekwarm HD Floorboard has an ex-works moisture content of 9% +/- 3% and is in equilibrium when the temperature is 20°C with a relative air humidity of 50-60%.

Tekwarm HD Floorboard adapts to the ambient humidity level, therefore to adjust to its working conditions it should be allowed to acclimatise for 24-48 hours prior to fixing.

HANDLING SAFETY

COMPONENT	CAS	EC	% W/W
Portland Cement*	65997-15-1	266-043-4	40 - 50
Wood Particle	9004-34-6	232-674-9	15 - 20
Inorganic Material	-	-	20 - 30
Binding Agent	-	-	<1
Water (moisture content)	7732-18-15	231-791-2	5 - 10

** Portland Cement is present in its hydrated form as a finished article.*

Prolonged contact by exposed skin may show mild irritation at site of contact - long sleeved work clothing and abrasion resistant gloves are recommended for manual handling.

Dry working (drilling, sanding, cutting) can release dusts which may irritate eyes and airways unless controlled.

Positive ventilation is recommended. Tooling should have high efficiency particulate filtering (HEPA) extraction fitted where possible.

CUTTING

Equipment:

- Portable circular saw
- Fixed saw for dimensioning (vertical or horizontal)

Type of blade:

- Alternative or trapezoidal teeth

DIAMETER (mm)	250	300	350	400
Number of teeth	36	48	54	60
Revolutions (rpm)	3000/4500	3000	3000	3000/1500