SHERA™board

Product Benefit

- Weather resistant
- Immune to water damage
- Fire resistant
- Provides sound insulation
- Shatter resistant
- Low shrinkage
- Flexible
- High degree of workability
- Termite resistant
- Non-asbestos

Description

SHERA board is a non-asbestos fibre-cement product composed of Portland cement, cellulose fiber and refined sand. Using a special manufacturing process called **autoclave**, our board acquires the strength, durability of cement and easy workability of wood as well as dimensional stability.

A non-combustible multi-purpose application fibre-cement flat board, SHERA board comes with various thicknesses which are suit for various applications; ceiling, wall, and floor. It can be using both exterior and interior applications.

Standard References

Standard	Category	Title
ASTM	C1185, C1186-99	Flat Non-Asbestos Fibre-Cement sheets
ASTM	E90 – 97	Sound Transmission Lost of Building Partition
ISO	8336: 1993	Fibre-Cement Flat sheets
AS/NZS	2908.2: 2000	Cellulose Cement Product Part2: Flat sheets
JIS	A5430 – 1995	Fibre Reinforced Cement Boards
EN (BS, NEN)	12467: 2000	Fibre-Cement Flat sheets
TIS	1427 – 2540	Fibre-Cement Flat sheets

Application

Size (mm)	Thickness (mm)		Application
1200 x 2400 1220 x 2440	3.2, 4, 4.5	Square- cut edge	• Internal Ceiling
1200 x 2400 1220 x 2440	6	Square- cut edge/ Recessed edge	• Internal / External Ceiling
1200 x 2400 1220 x 2440	8	Square- cut edge/ Recessed edge	• Internal Partition • External wall cladding • Wet area and Tile backing • Floor underlay
1200 x 2400 1220 x 2440	9, 10	Square- cut edge	• External wall cladding • Wet area and Tile backing • Floor underlay

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1200 x 2400 1220 x 2440	12	Square- cut edge	• External wall cladding • Floor underlay
1200 x 2400 1220 x 2440	15, 18, 20	Square- cut edge	• Elevated Floor

Installation

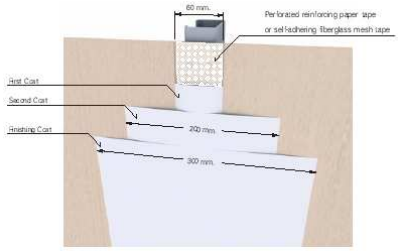
Tools: No special tools are required. The products can be attached using normal nails like wood work, fastened by normal or self-drilling screws and cut by an electric power saw with a diamond blade.

Fixing: SHERA board can be fixed to both timber (minimum size 1.5 x 3 inches) or steel frames (at least 0.55 mm thickness). The board must be supported at the edge at intermediate positions with centers not exceeding 600 mm. must be located more than 12 mm from edges and 50 mm from board corners.

Fastener: Fasteners can be both nails and screws. It can be nailed directly to timber supports with round wire nails. For metal screws, the size and length of the screw will depend on the thickness of the board and the gauge of framing. Pre-drilling the board is a must, otherwise, self-embedding, self-drilling head screws such as SHERA Fix-W32 (for fixing 8 – 12 mm. board to steel frame) , SHERA Fix-B20 (for fixing 4 – 6 mm. board to galvanized steel frame are preferred and SHERA Fix –W45G8 (for fixing 15 – 20 mm. board to steel frame)

Jointing: Since fibre-cement board is subject to slight dimensional changes, the butt joint can be used in dry partitioning areas or where an exposed joint appearance is acceptable. For better water protection, either flexible acrylic or polyurethane based sealant can be used to seal gaps of 3-5mm.

Flush Joint for SHERA board, Recessed Edge

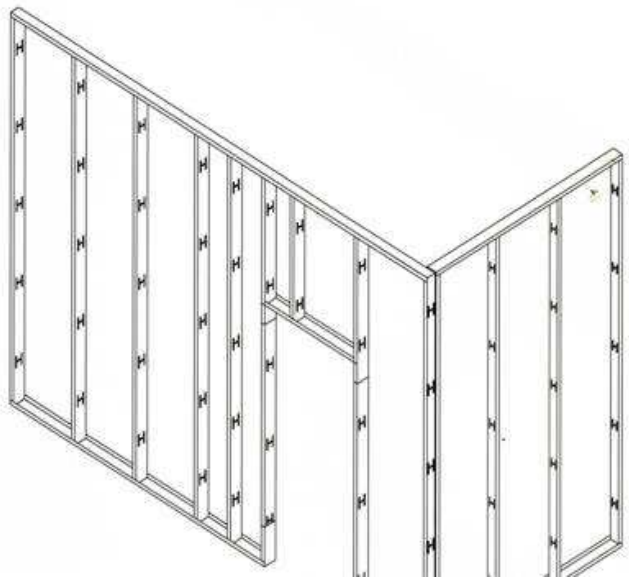


First coat: Fill the recessed area to the face of the sheet by using a Jointing Compound then embeds the fiberglass mesh tape into the joint.

Second coat: Apply second coat at 200 mm width. Allow it to dry thoroughly before applying a finishing coat.

Finishing coat: Apply third coat at 300 mm width. Allow it to dry completely before sanding.

Recommended Frame Specification – For Internal Partition



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Galvanized steel frame No.24 (0.55 BMT) is recommended to be used as stud for internal partition using SHERA board. Stud shall be fixed at the spacing of 600 x 2,400 mm. Details of ideal stud size are shown as follows.

 C 0.55 x 50 x 38 x 3000 mm.	 U 0.55 x 52 x 38 x 3000 mm.

Framing and Fixing SHERA board - Floor

Framing: SHERA board – floor can be fixed with either steel frame or timber frame. Frame and method of framing must comply with relevant building regulations and standards in each country. Joist spacing for each degree of design load must be installed according to the following table.

Fixing: When fixing SHERA board – floor to mind steel frame, SHERA Fix-W45 screw is recommended to be used as fastener. When fixing to hard wood timber frame, SHERA Fix-T1¾" is recommended to be used. Both SHERA Fix-W45 and SHERA Fix-T1 ¾" are countersunk head and high corrosive resistance screw complying with ASTM B117 – Class 3

Fastener must locate at more than 12 mm from board edges and 50 mm from board corners. Maximum fastener spacing is 300 mm.

Load Table for SHERA board, Floor – used in "WET / DAMPED AREA" condition

Grid Support Spacing (mm)	300 x 300	400 x 400	400 x 600	600 x 600	400 x 1200
Uniform Distribution Load (kN/m^2)					
15 mm. Thickness	24.7	13.9	10.5	6.2	9.7
18 mm. Thickness	35.6	20	15.1	8.9	14
20 mm. Thickness	43.9	24.7	18.7	10.9	16.9

Remark: Safety factor used for load table calculation is 2.5
2.Always place longitudinal side of board across shorter span of structure.

Load Table for SHERA board, Floor – used in "DRY AREA" condition

Grid Support Spacing (mm)	300 x 1200	400 x 1200	600 x 1200
Uniform Distribution Load (kN/m^2)			
15 mm. Thickness	17.3	9.7	4.2
18 mm. Thickness	24.9	14	6.1
20 mm. Thickness	3	16.9	0.75

Remark: Safety factor used for load table calculation is 2.5
2.Always place longitudinal side of board across shorter span of structure

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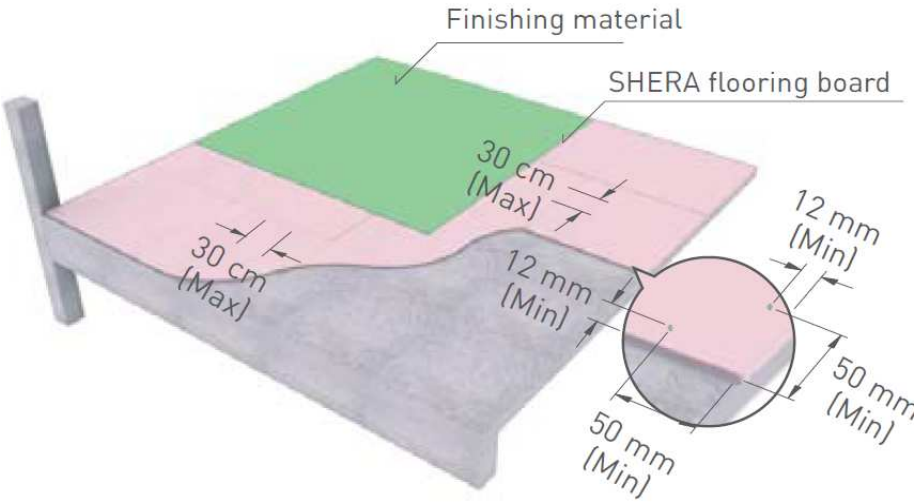
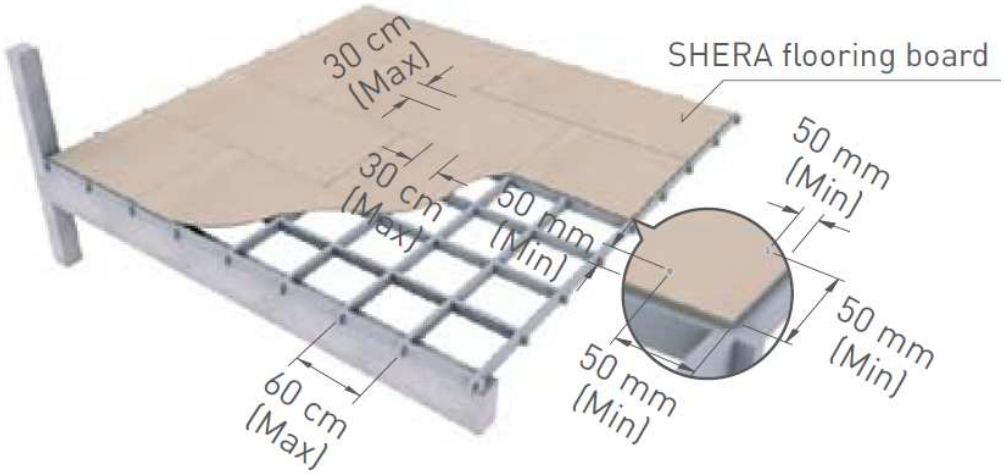
Recommended Frame Specification for Raise Floor / False Floor

Structural mild steel frame is recommended to be used as structure for SHERA board, floor. Recommended frame sizes are shown in the following table.





Span Length of Main Support / Beam (meter)	**Grid Support Spacing 600 x 1200 mm.**
<2.00	C 100 x 50 x 20 x 3.2
> 2.00 – 3.00	C 100 x 50 x 20 x 3.2
> 3.00 – 4.00	C 150 x 75 x 20 x 3.2
> 4.00 – 5.00	C 200 x 75 x 20 x 3.2

Remark: Safety factor used for load table calculation is 2.5
Design load for frame for residential and commercial usage at 300 kg./m^2 or 3.0 kN/m^2

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Technical Data

Physical properties

Thickness Tolerance	± 0.6 mm
Density	1250 – 1350 kg/m3
Modulus of Rupture	> 7 MPa (Wet)
Modulus of Elasticity	5500 ± 500 MPa (Wet)
Water Absorbtion	≤ 35%
Moisture Content	≤ 12%
Water tightness	Pass
PH Value	7-8
Thermal Conductivity	0.15 W/m.K
Acoustic Insulation	STC = 30 dB (6 mm single board) STC = 50 - 60 dB (10 mm composite wall)
Moisture Movement	± 0.5%

Fire resistance properties

Ignitibility	Pass
Fire propagation index	I = 0
Surface spread of flame	Class 1

Durability properties

Freeze/Thaw resistance	Pass
Warm water resistance	Pass
Heat/Rain resistance	Pass
Soak/Dry resistance	Pass

Conditions

Transportation, Handing and Storage: Deliver SHERA board to the project site in the original, unopened package and store them in fully enclosed space where they will be protected against damage from humidity, direct sunlight, surface contamination and other causes of damage. Handle SHERA board carefully to avoid chipping the edges or damaging units in any way. Handling and storage practices should follow the manufacturer's recommended suggestions at all times.

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