

Plantroom Wall Lining Panel

Acoustic insulation boards for plant rooms

Plantroom Wall Lining Panels consist of borosilicate mineral fibres impregnated with a suitable resin binder faced with black or white Type E Alkali Glass Cloth.

Advantages

- Excellent sound absorption
- Light reflective
- Good thermal insulation
- Easy to handle, install and clean
- Cost effective sound
- High quality finish
- Fire rated

Applications

Plantroom Wall Lining Panels provide an effective means of controlling reverberation time and reflected sound in plant rooms. They have an aesthetically pleasing appearance and are typically suitable for industrial applications such as engine enclosures, test cells and workshops.

Physical Information

Thickness (mm)	Weight (kg/m ²)	Sheet Size (mm)
25	2.2	600 x 1200
50	3.2	600 x 1200
75	3.2	600 x 1200
100	4.2	600 x 1100

The above sizes and weights are nominal figures

Fire Performance

The borosilicate mineral fibres impregnated with a suitable resin binder core and its facing, Type E Alkali Glass Cloth, are non-combustible when tested to BS 476 : Part 4. When tested to BS 476: Part 6 & 7, the system will comply with a Class 'O' Surface Spread Of Flame.



Toxicity and Oxygen Index

The finished liner has passed the tests in NES 713 (toxic) and NES 714 (oxygen).

Water Resistance

The borosilicate mineral fibres repel water due to the presence of water repellent additives. Moisture condensing from the air within the core is less than 0.02% by volume at 95% relative humidity.

Thermal Conductivity

When tested in accordance with BS 874

Thickness (mm)	Thermal Conductivity W/mC at 50°C
25	0.038
50	0.039
75	0.040
100	0.040

Resistance to Vibration

When tested in accordance with BS 2972, the liner (all thickness) is free from fibre fall out and delamination.

Acoustic Performance

The Noise Reduction Coefficient (NRC) is expressed as a factor between 0.0 and 1.0. The more sound that a material absorbs, the higher the NRC.

Plantroom Wall Lining Panel works in two distinct ways to reduce noise; by impeding the transmission of sound through an element of the structure and by absorption of sound at the surface. The sound absorption coefficients for Plantroom Wall Lining Panels, as tested to BS EN 20354 : 1993, ISO 354 : 1985 and BS EN ISO 11654 : 1997 are:

Frequency/ Thickness	125	250	500	1k	2k	4k
25mm	0.10	0.50	0.90	0.95	0.80	0.65
50mm	0.30	0.85	1.00	1.00	0.95	0.85
100mm	0.70	1.00	1.00	1.00	1.00	0.90

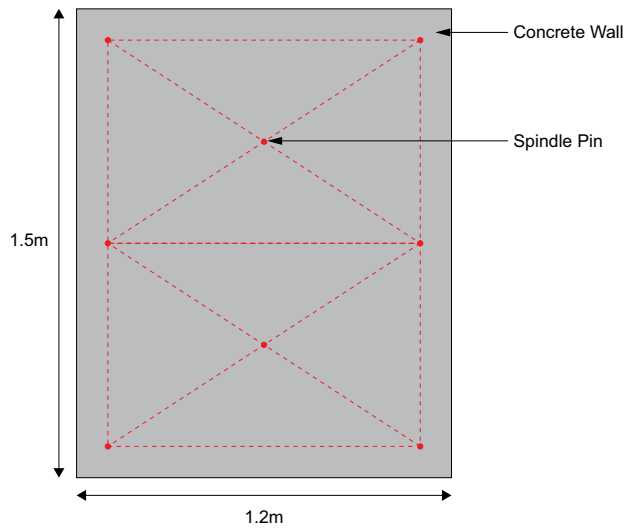
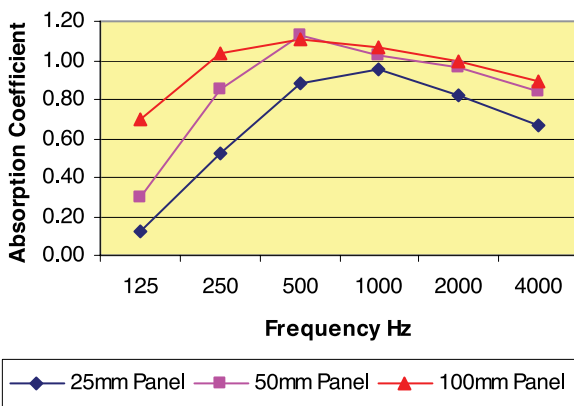


Diagram A

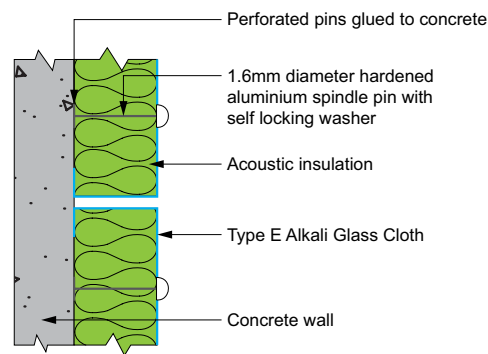
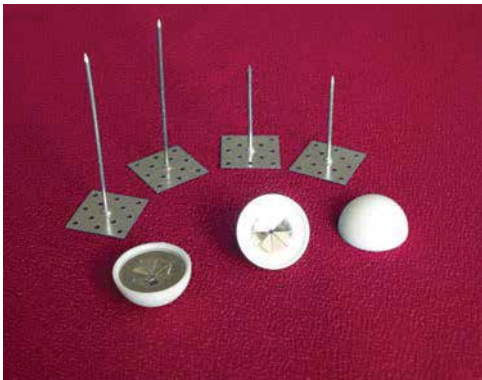


Diagram B

Installation

1. Perforated spindle pins being adhesively bonded to the existing plastered wall in the pattern shown in Diagram A (for 25mm thick panels). Self locking or button washers are used to secure the panels.
2. For ceiling applications or where the panels are to be used in a plant room exposed to return air, perforated spindle pins are again bonded to the existing plastered wall and adhesive is applied to 90% of the wall or ceiling surface.
3. The wall surface should be flat and of sound structure. Alternatively, timber battens can be used to level the walls or create an air gap. It is important to keep hands clean when working with the panels or wear gloves to avoid soiling them.



Pins and washers

The pins and button washers are supplied loose with the Plantroom Wall Lining Panels.

1. Apply adhesive to pin and push to wall ensuring excess adhesive flows through the perforations in the pattern shown on Diagram A.
2. Allow the adhesive to cure.
3. Randomly test the bond strength of the glued pins prior to installing Plantroom Wall Lining Panels.
4. Push the panels on and apply the self locking washers as shown in Diagram B.
5. Where bespoke size panels are required, peel back the Type E Alkali Glass Cloth facing; cutting the acoustic insulation to the correct size and laminate the Type E Alkali Glass Cloth facing with general purpose adhesive overlapping the rear of the panel.

Maintenance

Plantroom Wall Lining Panels can be cleaned with a vacuum cleaner. Do not use water to clean the panels.

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