Coldbuster Insulation Boards

Technical & Installation Guide

For any assistance, please contact Coldbuster

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Coldbuster offers 2 types of Insultaion Boards: Rigid and Foam.

Coldbuster Rigid Insulation Boards consist of an extruded polystyrene core, with a fibre-reinforced cement coating applied to both sides. Coldbuster Rigid Boards are highly recommended for use in bathrooms or any room with waterproofing, as they offer the durability and stability needed in moisture-prone areas. These boards are also ideal for use on timber subfloors, as they are easy to screw down and provide additional lateral stability to the subfloor.

Coldbuster Foam Insulation Boards are made from extruded polystyrene and are designed for use on concrete substrates. Unlike the rigid version, these boards do not provide lateral stability, making them suitable for concrete substrates or already stable subfloors. The foam boards are ideal for applications where additional stability is not required.

Technical Specifications

	Rating	
Property	**Foam**	**Rigid**
Bond Strength	0.55 N/mm^2	-
Flexural Strength	2.05 ± 0.02 Mpa	-
Water Vapour Permeability (Svd)	2.5m	-
Resistance to body Impact	3 x 120N/m	-
Bending Stiffness, E (20mm)	399KNmm^2	-
Coefficient of linear expansion	30 x 10^-6 K^-1	70 x 10^-6 K^-1
Flammability	Class E	-
Shear Bond Strength	3.32kg/cm^2	-
EU Controlled Substances Content	None	None
Size	1200 x 600 x 6 mm* 1200 x 600 x 10 mm*	1200 x 600 x 6 mm* 1200 x 600 x 10 mm*
R-Value	6mm: R-0.15 10mm: R-0.27	6mm: R-0.18 10mm: R-0.3
Density	-	36 ± 0.02 kg/m^3
Thermal Conductivity	-	0.035 Watt/mK
Compressive Strength (10% deflection)	-	300kN/m^2
Water Absorption	-	<0.2 vol%
Water Vapour Diffusion Resistivity	-	110 - 225 μ

Things to Note –

1. Coldbuster Insulation Boards are not intended to replace a subfloor. They must be installed on top of solid, stable substrates.
2. Avoid screwing into pipes, electrical cables or any other obstacles in the floor when installing.
3. If installing over waterproofing, do not use screws and washers. Instead, use a tile adhesive for secure installation.
4. Always use rigid boards in wet areas. Waterproofing can be applied directly on top of the rigid boards.
5. Ensure all seams are flush with the floor and free of air gaps. Use tape provided to seal the joints properly.

Required Tools:

1. Tape Measure
2. Sharp Blade or Saw
3. Tile Adhesive (for zones with waterproofing)
4. Power Drill (for Timber substrate)

Important Note*

When sticking down insulation boards, please allow additional height to accommodate the tile adhesive.

Installation Procedure

Step 1 - Calculating the Number of Boards Needed

When preparing to install, it is essential to first measure the floor space and calculate how many boards will be required. If Coldbuster has provided an insulation board plan and quote, the total number of boards required will be provided on the quote.

Step 2 – Cutting the Boards to Size

Once the boards are on site, cut them to size as you are laying them. Try to use the full boards as much as possible and keep the cutting for edges to reduce wastage. Coldbuster boards are easy to cut using a sharp blade or a wood saw, but it's important to take appropriate care when using sharp tools to avoid injury.

Step 3 - Preparing the Substrate

Before proceeding with installation, ensure that the substrate is secure, clean, and free from dust and loose particles.

Step 4 – Laying Out the Boards

The cut boards should be laid out on the area in an offset brick /brick bond pattern, to provide additional stability.

Step 5 – Installing the Boards

Once the boards are properly arranged, they must be fixed securely to the substrate.

a. Concrete subfloor
In the case of a concrete substrate, Coldbuster boards (either rigid or foam) should be secured using a full bed of flexible cement-based tile adhesive. This method is particularly useful for creating a strong bond between the substrate and the board, ensuring that the floor remains firmly in place.

b. Timber subfloor
For timber substrates, the Coldbuster rigid boards should be fixed in place using fixing screws and washers at 300mm spacing. It is recommended to use 10 fixings per full board, with screws placed both in the centre and along the perimeter of the board. This placement maximises the strength and lateral stability of the floor. Tile adhesive can also be used to secure the insulation boards in place. It's important to note that Coldbuster foam boards are not suitable for use on timber substrates.

Guidelines for Gluing Boards with Flexible Adhesive
When gluing down the boards with a flexible cement-based tile adhesive, there are a few key considerations to ensure proper adhesion. It's vital to mix the adhesive according to the manufacturer's specified powder-to-water ratio, which is typically wetter than usual. This slurry is essential because the boards will absorb some moisture, and a drier adhesive may result in weaker adhesion. Use a notched trowel to spread the adhesive evenly over the substrate, making sure to apply enough adhesive as you install each board. This helps prevent the adhesive from drying and forming a skin, which could interfere with proper bonding. After spreading the adhesive, the Coldbuster boards should be carefully placed onto the adhesive, with attention paid to squeezing out any air pockets that may form.

Recommendations for Wet Areas
In areas such as bathrooms or wet rooms, it is recommended to use Coldbuster Rigid boards. When installing the boards over a waterproofed substrate, the boards must be glued down with a full bed of flexible cement-based tile adhesive (using fixing screws and washers would damage the waterproofing).

Step 6 - Securing the Finish with Reinforcing Tape

Finally, for a more secure finish, it is important to ensure that all boards are flush with one another. Reinforcing tape should be applied over the seams between the boards to further secure them and ensure a stable, smooth surface for the finished floor.