



FOR FREE TECHNICAL ADVICE
 Call: 01268 597 212/213
 Email: technical@ecotherm.co.uk

Site work

HANDLING

- Do not drop boards
- Wear eye protection
- To cut use a fine tooth saw
- Damaged boards should not be used

Cutting plasterboard with power tools and sanding generates dust, so should be kept to a minimum. Ideally all operations which produce dust should be carried out in well ventilated conditions; where possible a dust mask selected in accordance with BS EN 149 should be worn.

The general approach to control of occupational exposure to airborne dust is outlined in Health and Safety.

Cut using a fine tooth saw, ensuring accurate trimming to achieve close butt joints and continuity of insulation.

For good drywall practice follow BS 8212:1995 Code of Practice for dry lining and partitioning using gypsum plasterboard and BS 8000-Part 8:1994 Workmanship

Typical fixing instructions for dot & dab

WALL LINING

- When bonding Eco-Liner using proprietary gypsum adhesive, please follow the gypsum adhesive manufacturers instructions.
- Apply a continuous perimeter ribbon of adhesive, 50mm wide, around any openings i.e. windows, electric plug sockets on the external walls to provide a seal.
- Apply 3 vertical rows of gypsum plasterboard adhesive dabs to the wall at 300mm vertical centres and a continuous bead at the bottom and top.
- Install board and ensure it is plumb, working to chalk lines on ceiling and floor by tamping the boards leaving a small gap of 10mm at the base by use of a foot-lifting tool.
- After the gypsum plasterboard adhesive has set, fix suitable nailable plugs (minimum of two) per board at mid-height, 25mm minimum depth into the masonry as a secondary fixing.
- The maximum height of this system is 3m high.
- For sound, existing plasterwork, an alternative is to bond directly using walnut sized dabs of proprietary adhesive at 300mm centres vertically/horizontally. Details are available from EcoTherm Technical Services.

on building sites, Code of practice for plasterboard partitions and dry linings. If required for acoustics and air tightness apply a suitable parge coat prior to lining.

STORAGE

Store boards in a flat, dry area off the ground away from mechanical and water damage and sources of ignition.

If temporary outdoor storage cannot be avoided then they must be completely protected by use of an opaque polythene sheet or tarpaulin.

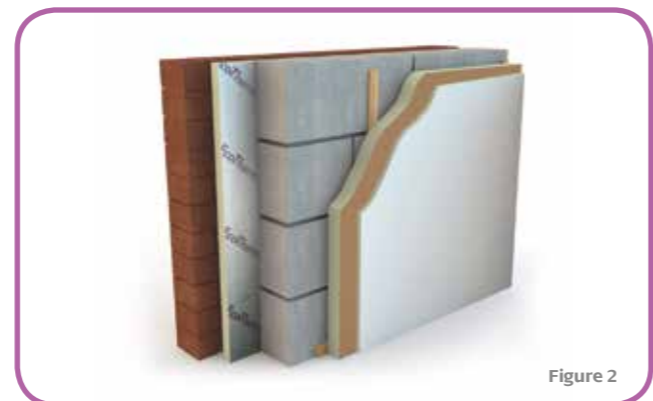
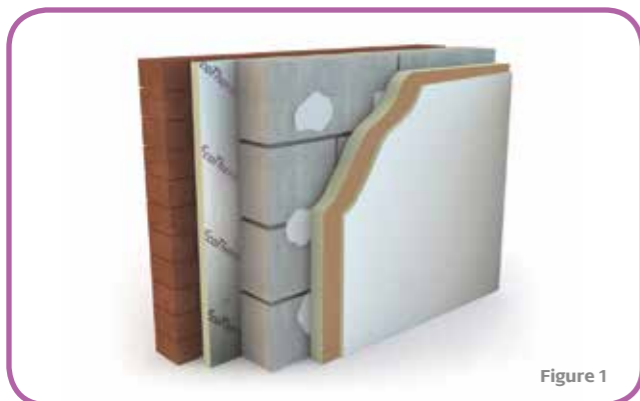
Boards that have been allowed to get wet should not be used.

Typical fixing instructions for mechanical fixing

Eco-Liner is ideal for insulating a solid brick or block wall via a timber frame or battens to the inside. It can be used with a metal framing system and directly to a timber frame system or brick/block cavity wall.

WALL LINING

- Fix pre-treated 50mm wide x 25mm deep timber battens at maximum 600mm centres with horizontal battens at ceiling and just above floor level.
 - Install Eco-Liner using drywall screws at 150mm centres ensuring that they penetrate the timber 25mm deep and not less than 10mm from the edge.
 - Screw heads should be driven just below the surface and care taken to ensure that they are not over driven.
- LINING PITCHED TIMBER RAFTERS**
- When installing the boards under rafters, they must be at right angles to the rafters and supported on all four edges. Therefore noggings must be used across the rafters.



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Eco-Liner

Insulated dry lining board for fix and dab applications



Fibre free rigid polyisocyanurate (PIR) insulation core faced with plasterboard for dry lining and insulating in a one board application





Applications

Room side insulation responds quickly to heating systems and applications include upgrading the thermal performance of existing walls, providing a cost effective means of reducing CO₂ emissions and for compliance with Building Regulations /Standards. Ideal for:

- Walls
- Pitched roofs/Cold flat roofs
- Room-in-the-roof applications
- Both new build and renovations

Description

Composite insulated panel comprising a fibre free polyisocyanurate (PIR) insulation core bonded to 12.5mm tapered edge gypsum plasterboard for internal dry lining applications.

Product properties

DIMENSIONS

- Width:** 1200mm
- Length:** 2400mm
- Thickness:** 37.5mm to 112.5mm (insulation + plasterboard)
- Weight:** See table 1 for board weights

RESISTANCE TO SOLVENTS

PIR insulation resists attack from alkalis, dilute acids, mineral oil and petrol. The fibre free insulation core is not resistant to ketonic solvents.

THERMAL CONDUCTIVITY

The thermal conductivity (lambda/λ - value) of the insulation is 0.022W/mK.
The 12.5mm gypsum plasterboard element has a thermal conductivity (lambda/λ - value) of 0.19W/mK.

The thermal resistances of the Eco-Liner range of laminates are shown in table 1. EcoTherm PIR insulation lambda and thermal resistance values stated in this datasheet are in accordance with BS EN 13165: 2012 Thermal insulation products for buildings – Factory made rigid polyurethane foam products – Specification.

WATER VAPOUR RESISTANCE

Eco-Liner has an integral vapour control layer to minimise the risk of interstitial condensation. If increased water vapour resistance is required, apply 2 coats of a proprietary sealer in drylined/taped/jointed systems.

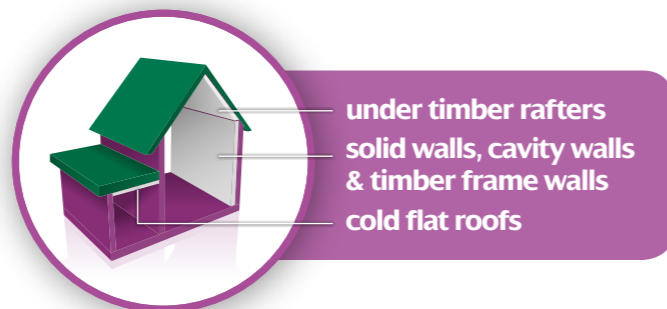
The insulation facing has a high water vapour resistance and will, therefore, provide a significant resistance to water vapour transmission.

COMPRESSIVE STRENGTH

The typical compressive strength of the insulation is 140 kPa when tested at 10% compression to BS EN 826: 1996 Thermal Insulating Products for Building Applications – Determination of Compression Behaviour.

DURABILITY

When correctly installed, Eco-Liner has an indefinite life and its durability depends on the background/supporting structure and conditions of its use. It should not be used to isolate dampness nor be used in continuously damp/humid conditions.



under timber rafters
solid walls, cavity walls
& timber frame walls
cold flat roofs



Design considerations

INTERNAL FINISHING

The ivory face of the tapered edge plasterboard enables a flat seamless finish using either skim coat plaster or seamless drywall jointing techniques in accordance with manufacturer's guidance.

ENVIRONMENTAL

EcoTherm insulation is manufactured with a blowing agent that is CFC/HCFC free and has zero Ozone Depletion Potential (ODP) with a low Global Warming Potential (GWP).

The fibre free insulation core corresponds to the BRE Global Green Guide generic specification which achieves a summary rating of A. Eco-Liner with a certified BRE Green Guide Rating of A+ is available subject to enquiry.

EcoTherm Insulation is manufactured under an ISO 14001 Environmental Management System (LPCB certificate - 388 - 7EMS).

Eco-Liner is approved as a Listed Energy Savings Trust (EST) product.

EU Directives set limits on plasterboard to landfill.

SPANNING

When fixed to timber framing, metal channels, rafters or battens, the maximum board span should be 600mm.

STANDARDS AND APPROVALS

Standard gypsum plasterboard complies with BS EN 520: 2004 Gypsum plasterboards. Definitions, requirements and test methods.

Manufacturing process based upon BS EN 13950: 2005.

EcoTherm PIR Insulation is manufactured under an ISO 9001 Quality Management System (LPCB certificate 388 – 7QMS), ISO 14001 Environmental Management System (LPCB certificate - 388 – 7EMS) and BS OHSAS 18001 Occupational Health and Safety Management System (LPCB certificate 388 – 7HS). All certificates are available for download from www.ecotherm.co.uk

Eco-Liner is covered by BBA Agrément Certificate No 14/5157, Product Sheet 3



All EcoTherm insulation products have a CE Declaration of Performance available for download from www.ecotherm.co.uk

Eco-Liner is approved as an Energy Saving Trust (EST) Recommended product.

FIRE

The plasterboard component is Class 0 or 'low risk' in accordance with BS 476-6: 1989 and BS 476-7: 1997. When properly installed, the insulation will be contained between the wall and internal lining board until one is destroyed. Therefore, the insulation will not contribute to the development of a fire or present a smoke or toxic hazard as the fire develops.

Further details on the fire performance of Eco-Liner may be obtained from EcoTherm Technical Services.

Table 1

Insulation thickness (mm)	Total thickness (mm)	Total weight per board (kg)	R-value (m ² K/W)	Typical U-value - Mechanically Fixed to Timber Battens (W/m ² K)	Typical U-value - Dot & Dab Application (W/m ² K)
25	37.5	27.0	1.212	0.55	0.57
30	42.5	27.4	1.440	0.49	0.51
35	47.5	27.9	1.667	0.44	0.45
40	52.5	28.3	1.894	0.40	0.41
45	57.5	28.8	2.121	0.37	0.37
50	62.5	29.2	2.349	0.34	0.35
55	67.5	29.7	2.576	0.31	0.32
60	72.5	30.1	2.803	0.30	0.30
65	77.5	30.6	3.031	0.28	0.28
70	82.5	31.0	3.258	0.26	0.26
75	87.5	31.5	3.485	0.25	0.25
80	92.5	31.9	3.712	0.23	0.23
90	102.5	32.8	4.167	0.21	0.21
100	112.5	33.7	4.621	0.19	0.19

Calculations are based on a 215mm thick solid brickwork wall and includes a 2mm plaster skim coat. Timber battens are 25x50mm at 600mm Centres

The U-values quoted above are for guidance only. Detailed U-value calculations should be complete for each project by EcoTherm Technical Services. For instant U-value calculations 24/7 visit EcoTherm's online U-value calculator at www.ecotherm.co.uk

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Eco-Liner is approved as an Energy Saving Trust (EST) Listed product.

The EST offers impartial advice to communities and households on how to reduce carbon emissions, use water more sustainably and save money on energy bills. Only products that meet strict criteria on energy efficiency can carry the coveted 'EST Listed' label and Eco-Liner is one of a number of EcoTherm's product range to achieve the approval.

