Climate IWI

Internal Wall Insulation

Climate Internal Wall Insulation is graphite enhanced expanded polystyrene with excellent insulation performance and easy installation.

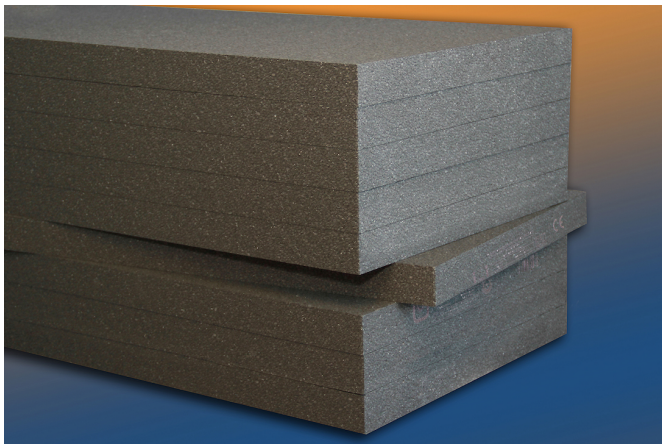
Sometimes it is necessary to insulate existing buildings on the inside to improve energy efficiency. Where cavity fill or external wall insulation cannot be achieved due to the type or condition of the wall construction insulating internally can provide the same benefits in reducing heat loss through the walls.

Whilst the installation of internal wall insulation may be more disruptive it is significantly less expensive to install compared to external wall insulation.

Standard Sizes Available			
	Length	Width	Thickness
Dimensions (mm)	1200	600	20 - 300

EPS Benefits

- Excellent thermal properties
- Lightweight and easy to install
- Flame Retardant
- ODP = 0 GWP = <5
- Rated A+ in BRE Green Guide
- Fully Recyclable



The excellent thermal performance of Climate Internal Wall Insulation allows thinner insulation to achieve energy saving targets within existing solid masonry walls.

The insulation is installed either between timber battens mechanically fixed to the wall or applied with adhesive with the minimum 12.5mm plasterboard mechanically fixed through the insulation into the masonry. EPS is simple to cut with a fine toothed saw or cored with a sharp knife and snapped to fit between the timber battens. It is also very lightweight and easy to handle. Supplied in smaller sized sheets for ease of transport and less offcuts.

Climate Internal Wall Insulation is supplied with a flame retardant additive to reduce the risk of ignition during installation. Once installed the insulation boards will be protected from fire by the minimum 12.5mm plasterboard applied to the inside of the insulation.

Sundolitt Climate IWI - Physical Properties		
	CE70	CE100
Thermal Conductivity (W/mK)	0.031	0.030
Compressive Strength at 1% nominal Compression (kPa)	20	45
Compressive Strength at 10% nominal Compression (kPa)	70	100
Bending Strength (kPa)	115	150
Water Absorption by Immersion (vol %)	< 5	
Dimensional Stability at 23°C and 50% RH	± 0.5	
Reaction to Fire	Euroclass E	

CONTACT US

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Sundolitt Climate External Wall Insulation provides excellent thermal performance. Achieving energy savings up to £375/year dependent on property type with a thickness of 120mm. Information on the energy saving potential of external wall insulation can be found on Energy Saving Trust website.

Passive House standards can also be achieved with the application of 300mm. Using external wall insulation reduces energy required for heating and cooling reducing the building's ecological footprint.

Expanded polystyrene is not harmful to the environment either in manufacture or use. With an Ozone Depletion Potential of Zero and Global Warming Potential of < 5 the material meets the requirements of environmental design parameters.

It is environmentally a good choice with excellent energy saving per kg of material achieving an A+ rating within the BRE Green Guide.

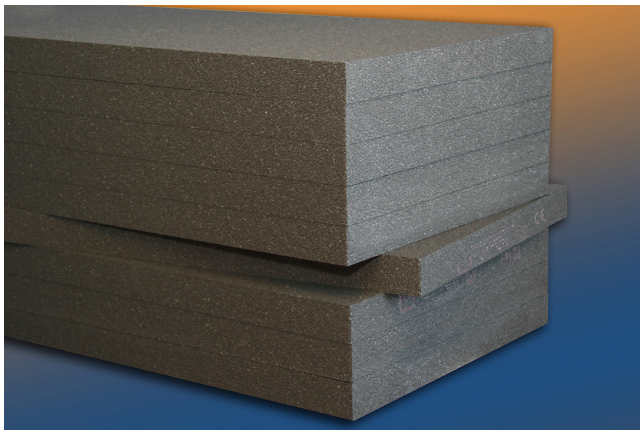
Sundolitt Climate EWI - Thermal Resistance (m^2K/W)		
Thickness (mm)	CE70	CE100
50	1.613	1.613
75	2.419	2.419
100	3.226	3.226
110	3.548	3.548
120	3.871	3.871
150	4.839	4.839
200	6.452	6.452
250	8.065	8.065
300	9.677	9.677

Accreditation

Sundolitt Climate EWI is manufactured in accordance with BS EN ISO 13163.

✓ QMS
ISO 9001
Registered Company

✓ EMS
ISO 14001
Registered Company



EPS is fully recyclable, clean waste can be ground to smaller granules and mixed with raw materials to produce new insulation panels.

The material can also be melted down and is used in the manufacture of wood-effect panels to create long life park benches. EPS also has a high calorific value when used in energy recovery.

Installation

Climate IWI is usually installed in two sheets, the first between timber battens with the second layer placed over the battens to reduce thermal bridging.

Timber battens are mechanically fixed to the wall vertically at 600mm centres. Horizontal battens are fixed at the top and base of the wall with intermediate battens necessary for fixing of the plasterboard.

The first layer of insulation is cut to fit tightly and push fit between the battens. The second layer in placed over the battens with a suitable vapour control layer on the inside of the insulation.

The vapour control layer may be 500 gauge polythene sheet or foil backed plasterboard with all joints sealed.

The plasterboard is then mechanically fixed through the insulation into the timber battens.

The vapour control layer is a critical part of the installation. This reduces the amount of moisture from within the building passing through the new insulation and condensing on the cold wall behind. This is known as interstitial condensation and can cause problems in the future if not carried out correctly.

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