

Technical Information for EDENBLOC³⁵



EDENBLOC³⁵ – made from a natural resource

EDENBLOC³⁵ insulation boards are ideal for use in both new-build and refurbishment projects. Applications include insulation of, walls, ground floors and intermediate floors.. The product is environmentally friendly and safe to handle. The sizes offered allow many combinations of thicknesses and widths to be selected.

EDENBLOC ³⁵ insulation boards from nbs				
Please note, boards can be used with either a VCL or a Low Emissivity membrane. Quantities shown below are supplied as palletised packs				
EDENBLOC ³⁵ board thickness mm	Number of boards per pack	Area per pack m ²	Nominal weight per pack kg	Product code
50	6	4.32	9.72	PEB50600
60	5	3.60	9.70	PEB60600
75	4	2.88	9.72	PEB75600
100	3	2.16	9.72	PEB100600
120	2	1.44	7.76	PEB120600
150	2	1.44	9.72	PEB150600
All EDENBLOC ³⁵ boards are 1200mm long x 600mm wide (0.72 m ²)				
Technical support and bespoke thicknesses available.				

Thermal conductivity of EDENBLOC³⁵ insulation board = 0.035 W/mK
Providing superior performance than other natural insulation.

Membranes and tapes for use with EDENBLOC³⁵ – refer nbs Installation Examples Data Sheet for applications

Why Control Vapour?

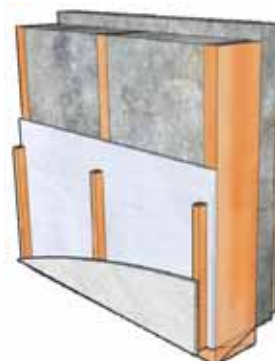
With the use of increased insulation within a construction, especially in internal lining system, roof voids and frame construction, the need to improve the efficiency and effectiveness of a vapour control layer must be considered as a priority, to ensure that VCL membranes remain damage free and provide a complete seal of vapour movement within the construction, otherwise interstitial condensation problems will occur when incomplete VCL, or where services penetrate through the VCL are allowed to go unchecked. A further design issues need to be addressed when using certain types of construction, as by increasing the Thermal performance of a structure without taking into consideration vapour movement within the structure, such as the use of a OSB/plywood racking board within a Timber Frame construction on the outside of the insulation (cold side of the timber frame), and the use of Vapour Check Plasterboards that will only check the passage of vapour, not seal to a high level, therefore allowing leakage of moisture to occur, allowing condensation will form on the OSB/plywood, increasing the risk of continuous water, as much as 4kg in winter to be present, if the VCL is not complete, therefore option is to provide either a complete Vapour Control Layer, or what is called a Low Emissivity Vapour Control Layer to the construction is essential.



EDEN Premium VCL Membrane (Vapour Control Layer)

Roll size 1500mm wide x 50m roll.

Second Nature Eden Premium Vapour Control Layer is designed purely as a VCL membrane to be used on the warm side, in front of the insulation, to control the passage of vapour through the structure. Manufactured from clear reinforced polythene membrane, the Second Nature Eden Premium Vapour Control Layer has a Moisture Vapour Resistance of 460 Mns/g. and a Moisture Vapour Permeability of 0.46 g/m²/24hr. The application of Second Nature Eden Premium Vapour Control Layer can range from use within Timber Frame, Rafter applications or where a vapour control layer is required and is supplied in roll.



EDEN LEC Membrane (Combined Low Emissivity, Vapour Control Layer)

Roll size 1000mm wide x 50m roll.

Eden LEC Membrane is an extremely effective vapour control layer and can be used as an efficient alternative to conventional vapour control membranes. The Eden low emissivity layers also act as highly heat reflective membranes which when placed against the warm side of the insulation with the reflective surface facing into a void created by using 25mm battens, this generates a low emissivity cavity providing additional insulation performance. The cavity also acts as a service void for encasing cables or pipes ensuring that the VCL is not penetrated by services. The Eden LEC Membrane is a low emissivity vapour control membrane comprising a glass reinforced aluminium reflective facing laminated to a waterproof bitumen coated kraft paper.



EDEN LEC Xtra Membrane (High performance, combined Low Emissivity, Vapour Control Layer)

Roll size 1250mm wide x 96m roll.

Eden Xtra BBA Approved low emissivity vapour control membranes are also extremely effective vapour barriers and can be used as an efficient alternative to conventional vapour control membranes. Eden Xtra low emissivity layers are highly heat reflective membranes. The primary function of a heat reflecting membrane is to block infrared energy radiating across air spaces. Infrared energy converts to conducted heat when it strikes a surface such as a wall or roof. that are placed against the warm side of the insulation with the reflective surface facing a void created using 25mm battens. This generates a low emissivity cavity providing additional insulation performance. The cavity also acts as a service void for encasing cables or pipes ensuring that the VCL is not penetrated by services.

Eden LEC Xtra Membrane is a low emissivity VCL membrane for use where high performance low emissivity cavity and high performance vapour control are required. The Eden LEC Xtra low emissivity vapour control layer membrane works by reflecting back most of the radiating infrared energy striking its bright non-tarnish surface (reflectance) and by not radiating heat (emittance). What is Emissivity Emissivity is a measure of the amount of heat a surface can either absorb or emit. For instance, an emissivity value of 1.0 represents a perfect absorber or emitter of infrared energy. Typical building materials have an emissivity value of between 0.85 and 0.95. The Eden range of low emissivity membranes provide complete vapour control and enable insulation performance to be achieved in service voids by the formation of low emissivity cavities. Eden LEC Xtra low emissivity vapour control layer has an emissivity of at least 0.05 so 95% of radiant heat is reflected back. Whether stated as reflectance or emittance, the performance is the same. Eden Xtra effectively blocks the passage of most infrared energy through structures. Eden LEC Xtra is manufactured using high reflective membranes incorporate layers of aluminium foil and vacuum-metallised polymer. These are cross laminated to produce a product for use within the fabric of domestic and commercial building components, including portable and modular structures. At least 95% of infrared energy that would otherwise be absorbed by the insulation is reflected. The membrane is used in conjunction with Second Nature Eden Double-Sided Butyl VCL Tape and Eden Self adhesive foiled tape which are used to seal the membrane as a continuous VCL layer. Performance Eden LEC Xtra BBA Membrane provides moisture vapour resistance of 3420 Mmsg and moisture vapour permeability of 0.06 g/m²/24hr.

EDEN BBA Breather Membrane

Roll size 1500mm wide x 50m roll or 1000mm wide x 50m roll.

EDEN Double-sided Butyle VCL tape

Roll size 30mm wide x 30m roll. Please note, this tape is 1.5mm thick.

To ensure that all joint are sealed to stop the leakage of vapour through the structure, it is required that the Second Nature Eden Premium Vapour Control Layer is sealed at all joint, including the detail to the head and sole plate of a frame with Second Nature Eden Double-Sided Butyl VCL Tape. The tape is a double-sided black butyl jointing and sealing tape, for use with Second Nature Eden Premium Vapour Control Layer Nature Premium Vapour Control which maintain the complete sealing of all overlapping joints (min of 100mm), and to include the head and sole plate of a frame detail.

EDEN Low Emissivity self adhesive FOIL tape

Roll size 50mm wide x 100m roll.

To ensure that all joint are sealed to stop the leakage of vapour through the structure, it is required that the Second Nature Eden LEC and LEC Xtra Low Emissivity Vapour Control Layer is sealed at all joint, including the detail to the head and sole plate of a frame. The FOIL tape is Low E to match the **EDEN LEC Xtra Membrane** and has a high performance acrylic adhesive protected by a removable paper backing. Completely seals all overlapping joints (min of 50mm), and to include the head and sole plate of a frame detail.

Experience a cooler home in summer – warmer home in winter



EDENBLOC³⁵ makes your home cool in summer

When the outside temperature increases and begins to heat the wool, it releases moisture; that has a cooling effect on the fibre which reduces the flow of heat to the inside of the building. This can reduce peak temperature by up to 7°C when compared to buildings in which alternative forms of insulation are installed.

EDENBLOC³⁵ makes your home warm in winter

In the winter the absorption of moisture by wool insulation can increase peak temperature by up to 4°C when compared to buildings in which alternative forms of insulation are installed.

Condensation Control

Wool generates heat when it absorbs moisture from the air. That energy is known as the heat of sorption and accounts for the warmth felt by wearers of woollen clothes in winter conditions. When the air is saturated with water vapour, wool absorbs some 40% of its dry weight in moisture, producing 960 kilojoules of heat energy for every kilogram of dry wool. This warmth is not noticeable inside the building but it acts to prevent condensation in loft cavities by maintaining the temperature above the dew-point in damp conditions.

Energy Efficient and Totally Safe

The cleaning, air-laying and thermal bonding processing during the manufacture of all ThermoFleece, PB20 and EDENBLOC35 insulation products consumes minimal energy. The products are harmless and can be handled without gloves or protective clothing. It is not irritating to the skin, eyes or respiratory tract and causes no discomfort to site workers during installation. Being a natural material any fibres which happen to reach the living space will present no hazard to health. The necessary insect proofing and fire resistance rating is achieved by the inclusion of naturally derived additives.

SAFETY NOTE: Lofts in old building can be very dusty, so it is wise to wear a breathing mask and protective clothing when installing the product in confined areas. Where EDENBLOC35 boards are being installed over existing fibrous insulation it is essential a dust mask is worn to prevent inhalation of existing dust particles.

Extremely Durable

EDENBLOC35 adapts to the shape of rafters, joists and stud-work to provide a permanently tight fit. Properly installed, the product will retain its low density and thermal performance - with a life expectancy similar to that of the construction in which it is installed.

Recyclable

At the end of its useful life, EDENBLOC35 boards can be recycled for other environmentally friendly applications. The product contains no permethrin, pyrethroids, pesticides or formaldehydes.

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EDENBLOC35 insulation is conveniently available from:

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build
shop