Ref: HY-MW/***U
V1 01/04/2026

Bitumen Waterproofing
Liquid Waterproofing
Single Ply Waterproofing

Product Data Sheet

HYTHERM MW UNDERLAY

Insulation

Hytherm MW Underlay is a non-combustible, stone wool insulation board primarily for use as a base layer alongside Hytherm MW in Axter warm roof systems, particularly where there are further considerations for fire and/ or acoustic performance. This includes either thermally-activated adhesive or self-adhesive bitumen, single ply membranes or cold-applied liquids. Hytherm MW Underlay boards can also be used in isolation for mechanically-fixed roof systems.

Hytherm MW Underlay is made from natural materials which can be recycled and reprocessed reducing landfill costs. It does not contain gases that have ozone depletion potential (ODP) or Global Warming Potential (GWP) resulting in an ODP of zero and a GWP of less than 5.

Hytherm MW Underlay is available in a range of flat board thicknesses for used on new roofs or existing roofs under refurbishment to upgrade the thermal performance.

A manufacturers BBA certificate is available.

Key benefits

- Presents no smoke hazard and will not contribute to fire growth in any stage of a fire (including the fully developed stage of fire).
- Non-combustible and achieves a Euroclass reaction to fire classification of A1.
- Manufacturers BBA certificate available.
- Solutions to meet all BB93 (Education) and HTM08-01 (Healthcare) acoustic requirements.
- Contributes to reducing airborne sound and impact (rain) noise.
- Sustainable materials – can be recycled and reprocessed helping to reduce construction waste going to landfill.

Technical information

Properties	Unit of measure	Value	Standard
Dimensions			
Length	mm	1200	BS EN 1604
Width	mm	1000	BS EN 1604
Thickness	mm	120, 150	BS EN 1604
Facing type, side 1	-	No facing	-
Compressive strength	kPa	CS(10)70	BS EN 13162
Long term water absorption	kg/m²	WL(P)	BS EN 120871
Short term water absorption	kg/m²	WS	BS EN 1609
Declared thermal conductivity	W/mK	0.039	BS EN 12667
Reaction to fire	Euroclass	A1	BS EN 13501-1

Thermal performance

When calculating the U-value of a tapered roof, Building Regulations require that the entire roof is taken into account. Please contact Axter Ltd for project specific U-value calculations.

Water resistance and moisture

Whilst Hytherm MW insulation board is not waterproof, it is non-hygroscopic, meaning it will not absorb water from the surrounding air and it can repel limited amounts of moisture. It retains thermal performance even in humid conditions, helping to support the durability of the building fabric.

Dimensional stability

Hytherm MW Underlay insulation boards are dimensionally stable when tested to EN 1604 and therefore do not exert any undesirable stress on the fixings or waterproof membrane.

Fire performance

Hytherm MW Underlay insulation boards have been tested in accordance with EN 1365-2: 2014 and have a fire resistance classification of REI 120 in accordance with EN 13501-2: 2016 (Classification Report - PCA10677A).

Compression table

The tables below are based on fore pedestals per m^2. In extrapolating to different arrangements, note that the total load applied should not exceed 500kg/m^2.

Pedestals			
Square		Circular	
Side (mm)	Max. weight (kg)	Diameter (mm)	Max. weight (kg)
170	70	170	55
200	97	200	76
220	118	220	92
305	125	305	125
455	125	455	125
Maximum load 500kg/m^2			

The loadings have been determined through testing and allow for up to 2% deflection within the elastic limit.

Support load

The information below is based on pedestal size and number of pedestals per m^2 to not exceed the maximum load of 500kg/m^2.

Square		
Diameter (mm)	Kg	No. of feet /m^2
170 x 170	74.8	7
220 x 220	83.7	6
305 x 305	94.8	5
Maximum load 500kg/m^2		

Circular		
Diameter (mm)	Kg	No. of feet /m^2
170	74.8	7
220	80.7	6
305	88.7	5
Maximum load 500kg/m^2		

Durability

Hytherm MW Underlay, when used as prescribed, do not require any regular maintenance and will remain effective for a life at least as long as that of the roof waterproof covering.

Hytherm MW Underlay is vapour permeable, reducing the risk of condensation, which can lead to rot, mould, and humidity damage.

Installation

Care should always be taken to clean off all surfaces prior to the laying of the boards and membrane.

For dual-layer systems, installing both the Hytherm MW and Hytherm MW Underlay, place the 150mm Hytherm MW Underlay boards down first as a base layer, and then add the fleece-faced Hytherm MW insulation boards above, with the fleece facing upwards, to receive the bitumen. The Hytherm MW Underlay insulation boards are to be laid staggered and tightly butt jointed and either fully bonded with an approved adhesive or mechanically fastened through the vapour control layer to the deck. They can be cut to size using a fine-toothed saw or panel saw. Appropriate stop battens should be installed to protect the boards open edges during installation. Day joints must be formed at the conclusion of each section of work to seal exposed edges and prevent damage. In designated walkways or in areas of high foot traffic, a supporting layer should be placed on the roof both during installation and upon completion.

For systems that are only mechanically-fixed, either multiple layers of Hytherm MW Underlay boards can be used or in combination with Hytherm MW. It is recommended that a minimum of one mechanical fixing is used centrally per board to secure the boards during installation. Axter offer a range of mechanical fixings and recommends the use of plastic tube washers when mechanically fixing roofing boards to the structure to reduce the impact of thermal bridging through the fasteners which would impact the overall thermal performance.

In designated walkways or in areas of high foot traffic, a supporting layer should be placed on the roof both during installation and upon completion.

Design considerations for profiled metal decks

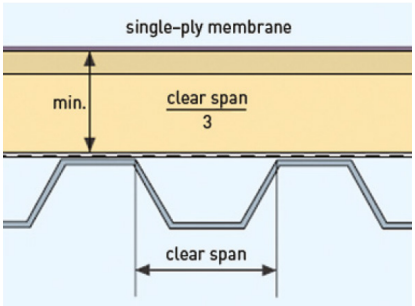
Crown and trough position

Hytherm MW Underlay must be laid with the long edge at right angles to the profiles of the metal deck. Butt joints should occur at the mid-crown position, except where cantilevering is applicable.

Free spanning capability

For free spanning, the minimum board thickness is equal to the maximum trough width divided by 3. The maximum trough width suitable for free-spanning Hytherm MW Underlay is 300mm.

Where installed trough widths exceed the maximum spanning capability of the board, provision must be made to provide full support for the insulation.



Note that the span to be measured is across the clear width of the trough, and not from the centre to centre of the crowns.

Cantilevering

- Boards of 60mm or greater thickness may cantilever over a trough.
- For cantilevering the minimum board thickness is equal to the maximum trough width divided by 2.

Handling, cutting and storage

Hytherm MW Underlay insulation boards must be protected from prolonged exposure to sunlight and should be stored either under cover or protected with opaque polythene sheeting. Where possible, packs should be stored inside. If outside, packs should be raised off the ground, not in contact with ground moisture.

The polythene wrapping is not considered adequate protection for outside exposure.

Insulation boards can be readily cut using a fine-toothed saw or panel saw. Ensure that insulation boards are cut square to achieve continuity of insulation without cold gaps between edges.

Appropriate PPE should be worn when handling insulation. Please refer to corresponding Safety Data Sheet on the Axter website.

Environmental

Made from natural materials, Hytherm MW can be recycled and reprocessed reducing landfill costs. It does not contain gases that have ozone depletion potential (ODP) or global warming potential (GWP). It is approximately 97% recyclable. Refer to the Safety Data Sheet for more details.