

# Product Data Sheet

## HYTHERM MW TAPERED Insulation

**Hytherm MW Tapered is a non-combustible, stone wool tapered insulation board faced with a mineral-coated white fleece, for use in Axter warm roof systems including either thermally-activated adhesive or self-adhesive bitumen, single ply membranes or cold-applied liquids where there are further considerations for fire and/ or acoustic performance, along with a need to instill falls to a flat support structure.**

Hytherm MW Tapered 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 Tapered 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

- Non-combustible and achieves a Euroclass reaction to fire classification of A2-s1,d0.
- 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.
- Suitable for new build and refurbishment.
- Sustainable materials – can be recycled and reprocessed helping to reduce construction waste going to landfill.

## Technical information

Properties	Unit of measure	Value	Standard
<b>Dimensions</b>			
Length	mm	1200	BS EN 1604
Width	mm	1000	BS EN 1604
Thickness	mm	To suit a range of falls	-
Facing type, side 1	-	Mineral-coated white fleece	-
Compressive strength	kPa	CS(10)70	BS EN 13162
Point load	N	PL(5)750	BS EN 12430
Long term water absorption	kg/m <sup>2</sup>	WL(P)	BS EN 120871
Short term water absorption	kg/m <sup>2</sup>	WS	BS EN 1609
Declared thermal conductivity	W/mK	0.039	BS EN 12667
Reaction to fire	Euroclass	A2-s1,d0	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.

## Fire performance

Hytherm MW insulation board has been tested in accordance with EN 13501-1, achieving a reaction to fire Class A2-s1,d0 (classification report - 231002030-3).

Additionally, Hytherm MW 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).

## Installation

Care should always be taken to clean off all surfaces prior to the laying of the boards and membrane. The Hytherm MW Tapered insulation boards are delivered to site individually marked with a positional code which corresponds to the detailed layout drawing provided. The board layout should strictly follow that shown on the drawing, and boards

should be temporarily in position prior to attachment to avoid errors.

Once laid in accordance with the tapered design the Hytherm MW Tapered boards can be either fully bonded with an approved adhesive or mechanically fastened through the vapour control layer to the deck. 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.

For mechanically fixed systems, it is recommended that a minimum of one mechanical fixing is used centrally per board to secure the boards during installation. Axter offers a range of mechanical fixings and recommends the use of plastic tube washers when mechanically fixing roofing boards to the structure.

For fully or partially adhered systems using an adhered PVC membrane or self-adhesive bituminous membrane, the fleece facing of the board encourages a strong bond between membrane and insulation.

Where the membrane is fully bonded to the insulation surface, the number of fixings per board (if required) should be determined by wind load calculations (contact Axter for more information).

For torch applied bituminous membranes, when applying the bituminous membrane always torch with minimum heat at all times. Torch the roll of waterproofing membrane using appropriate flame/edge guards at all times.

For dual layer systems, installing both Hytherm MW and Hytherm MW Underlay, place the 150mm Hytherm MW Underlay boards down first as a base layer, and add the fleece-faced Hytherm MW insulation boards with the fleece facing upwards to receive the bitumen.

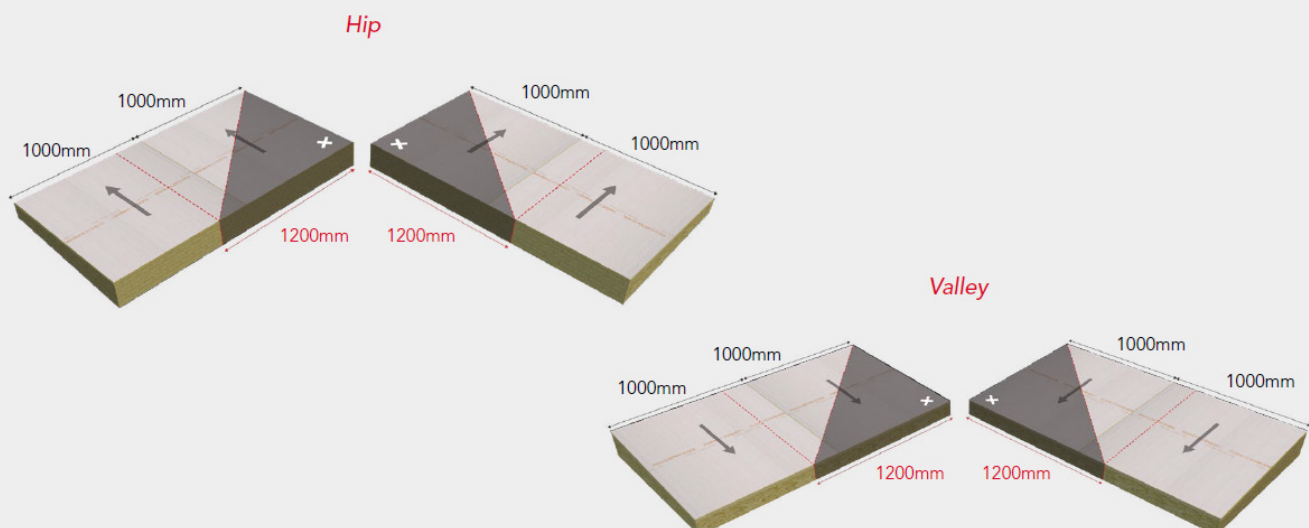
In designated walkways or in areas of high foot traffic, a supporting layer should be placed on the roof both during installation and upon completion.

For advice on cold applied liquid membranes, please contact Axter Ltd.

When using Hytherm MW Tapered in refurbishment applications, all previously applied finishes and insulation layers should be removed, unless the existing roof finish is known to be sound and watertight. The existing insulation layers should also be removed if the type and condition of the surface is suitable for the bonding or mechanical fixing of Hytherm MW Tapered boards. It is recommended that the specifier or contractor checks the existing levels to ensure that the falls are correct.

## MITRE DETAILS

To form hips and valleys, cut and discard the shaded sections of insulation as shown below.



## Design considerations

### Minimum finished falls

Tapered insulation schemes should satisfy minimum finished falls of 1:80 as per BS 6229: 2025. Tapered insulation schemes are designed to meet the requirements of individual projects. Please contact Axter Ltd Technical Department for further details [technical@axterltd.co.uk](mailto:technical@axterltd.co.uk)

### Design considerations for profiled metal decks

#### Crown and trough position

Hytherm MW insulation boards 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.

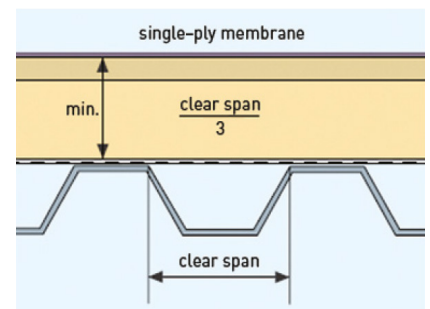
#### Free spanning capability

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 Tapered 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.

#### 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.



*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.*

### Handling, cutting and storage

Hytherm MW Tapered 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.

### Durability

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

## 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.

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