

HYDROSHIELD INSULATION SYSTEM

June 2014

The Axter Hydroshield insulation system is a specially designed expanded polystyrene insulation with a water reducing membrane layer for use in green and inverted roofs with a variety of ballast roof finishes.

Hydroshield corresponds to the BRE Global Green Guide online generic specification for timber joists, OSB/3 deck and modified bitumen based waterproofing, insulation and pebbles (ref. 812530021 et al) which achieves a summary rating of A+ within domestic buildings. Axter can advise on the generic rating for other constructions and building types. Hydroshield is CFC/ HCFC free. Manufactured from expanded polystyrene without the use of any blowing agents, Hydroshield EPS insulation has a zero ozone depletion potential (ODP) and a <5 global warming potential (GWP).

Loadings from green roof systems or from any live loads must be assessed and agreed with all parties prior to specification.

INSTALLATION

Hydroshield insulation boards are laid over a compatible and complete waterproofing system, generally starting at the point of access in a brick bond pattern. The boards are laid in an advancing front together with the Hydroshield water reducing layer to ensure the ballast is adequately distributed as soon as possible to protect the system.

The Hydroshield membrane must be laid in accordance with the BBA Certificate and must remain intact and undamaged to ensure that its performance and properties are unaffected. Hydroshield tape should be used to seal around all penetrations and upstands immediately after positioning the boards. No penetrations must be made through the membrane once it has been sealed. In addition the head of the membrane should be sealed with Axter Stickband tape at vertical penetrations such as balustrades and man-safe posts.

1 - Release one side of the Hydroshield tape and apply to the membrane ensuring full contact.



4 - Ensure a full seal at all membrane laps and joints with pressure. Install ballast immediately.



2 - Ensure joints in the tape overlap. Pull back the top protective layer of the tape.



5 - Apply sealing tape to upstand, using a neoprene roller to apply pressure. Pull away protective cover and bring Hydroshield membrane up and into contact. Finish the detail by using the roller to complete the seal.



3 - Pull and overlap the joints of the membrane to provide a minimum 150mm lap.



6 - Trim Hydroshield membrane neatly to detail. Apply Stickband forming a continuous seal around edges, applying pressure with roller. Stickband is used to seal the edges of the Hydroshield membrane to the waterproofing surface at penetrations and outlets.

Dimensions	Length	Width	Thickness
Hydroshield insulation board	1200mm	600mm	80mm to 600mm
Hydroshield membrane	50m	1.5m	
Hydroshield tape	24m	15mm	
Stickband 75 (for details)	10m	750mm	0.6mm

TECHNICAL DATA General Requirements to BS E13163			
Property		Class	Declared

Thermal conductivity			0.038 W/(mK)* <i>*Manufacturer states that a thermal conductivity figure of 0.033 W(mK) is achieved when the material is fully sealed with Hydroshield membrane and tape.</i>
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Length & width		L1 & W1	+/- 0.6% or +/- 3mm* <i>*whichever gives greatest numerical tolerance.</i>
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Thickness		T1	+/- 2mm
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Squareness		S1	+/- 5mm per 1000mm
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Flatness		P3	+/- 10mm per 1000mm
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Dimensional stability under constant normal laboratory conditions 23°C, 50% relative humidity		DS (N) 5	+/- 0.5%
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Dimensional stability under specified temperature and humidity conditions (23 +/-2) °C, (90 +/- 5)% relative humidity			Maximum 1%
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Bending strength			250 kPa
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Reaction to fire		Euroclass	Euroclass E
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Specific requirements to BS EN 13163

Compressive stress @ 10% deformation		CS (10) 200	Minimum 200 kPa
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Additional properties BS EN 13163

Shear strength of 125 kPa correlated to bending strength requirement 250 kPa

Water vapour diffusion factor (μ)		40 to 100	
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Water vapour permeability mg/ (Pa.h.m)		0.007 to 0.018	
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Other information

Nominal Density 30 – 32 kg/m³

1% compressive strength – nominal 100 kPa.

Dimensional tolerances are as stated above, unless otherwise specified on TDSO4.

The above material is a flame retardant grade.

The manufacturer reserves the right without prior notice to modify the composition of these products. Characteristics provided in this publication derive from data obtained under controlled test conditions. Axter Ltd makes no warranties, express or implied, as to the properties and performance under any variations from such conditions in actual construction.

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