

July 2016

TECHNICAL DATASHEET

HYTHERM ECO XPS

High performance insulation for inverted roof constructions



Axter Hytherm ECO XPS is a lightweight, durable rigid extruded polystyrene XPS insulation board, used in conjunction with the Axter water reducing membrane.

Key features

- Low thermal conductivity minimising board thickness needed to achieve a specific U-value, thus allowing greater design flexibility
- High compressive strength; the closed cell structure gives greater rigidity and provides high resistance to compression.
- Low water absorption; natural resistance to rain, snow, frost and water vapour, making Hytherm ECO XPS an exceptionally stable material.
- High resistance to temperature fluctuations and repeated freeze/thaw cycles.
- Rigid boards provide firm base for ballast layer (gravel or concrete slabs).
- Low susceptibility to rot, resulting in minimized mould or fungal growth.
- Easy to install.
- Manufactured in accordance with BS EN 13164, ISO 14001 and ISO 9001.
- BRE Green Guide Rating A+
Ref: www.greenbooklive.com BRE Certificate of Validation No. ENP 521 (Appendix Ref ENP521a) to 21 April 2019
- Easy to install.
- GWP (Global Warming Potential) = <5.
- ODP (Ozone Depletion Potential) = zero.
- HYTHERM ECO XPS is tested to ETAG 031 and can be used in a Green Roof application.

STANDARD THICKNESSES & CHARACTERISTICS

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m ² K/W)	Length (mm)	Width (mm)	Compressive strength (kPa)
200	0.033	6.25	1250	600	300
180	0.033	5.60	1250	600	300
140	0.033	4.35	1250	600	300
120	0.033	3.75	1250	600	300
100	0.033	3.15	1250	600	300
80	0.033	2.60	1250	600	300
50	0.030	1.65	1250	600	300

Hytherm ECO XPS is supplied as a lap jointed board

AXTER WATER REDUCING MEMBRANE

The Axter water reducing membrane is a high performance, is a spun bonded polyethylene geotextile, which helps to minimise heat loss caused by rainwater cooling and consequently the thickness of insulation required.

Length (m)	Width (m)	Area per roll (m ²)
100	3	300*

* Not allowing for overlap (300mm)

HYTHERM ECO (XPS)

Properties	Measure unit	Value	Standard
Dimensions			
Length	mm	1250	BS EN 822
Width	mm	600	BS EN 822
Thickness	mm	50, 80, 100, 120, 140, 180, 200	BS EN 823
Mechanical Properties			
Compressive strength or compressive stress at 10% deformation (90 days)	kPa	300	BS EN 826
Compressive creep (design load) max 2% deflection after 50 years ²	kPa	110	BS EN 1606
Hygrometric properties			
Long term water absorption by immersion (28 days)	Vol-%	≤0.7	BS EN 12087
Long term water absorption by diffusion dN ≥50mm to <80mm	Vol-%	≤2	BS EN 12088
dN ≥80mm	Vol-%	≤1	BS EN 12088
Freeze/thaw after 300 cycles	Vol-%	≤1	BS EN 12091
Thermal Conductivity			
Declared thermal conductivity ¹ Thickness:	W/mK		
50mm		0.030	BS EN 13164
60 – 80mm		0.031	BS EN 13164
<80 – 200mm		0.032	BS EN 13164
Other properties			
Reaction to fire	-	E	BS EN 13501-1
Linear thermal expansion coefficient	mm/m.K	0.07	
Maximum service temperature	°C	+75	
Capillarity		0	
Density (typical)	kg/m ³	34	BS EN 1602
Surface finish	Skin		
Edge profile	Shiplap		

¹ Declared thermal conductivity according to EN 13164; Annex A; Annex C.2 and C.4.1)

² For thickness >80mm

³ Varies with thickness



AXTER

ROOFING - GREEN ROOFS
STRUCTURAL WATERPROOFING
SOLAR PV - SINGLE PLY

DURABILITY

When properly installed, HYTHERM ECO (XPS) boards have a service life similar to that of the building or structure.

ENVIRONMENTAL

HYTHERM ECO (XPS) is non bio-degradable and does not present an environmental hazard. If circumstances allow, HYTHERM ECO (XPS) can be recycled, disposed of as landfill or incinerated to recover the energy content.

FIRE

Although HYTHERM ECO (XPS) contains a flame retardant additive to inhibit accidental ignition from a small fire source, it is combustible and therefore should not be stored close to open flames or other ignition sources or come into contact with volatile organic compounds and chemicals such as solvents.

HANDLING AND STORAGE

HYTHERM ECO (XPS) is lightweight and easy to handle and install. The product must be protected from prolonged exposure to sunlight to prevent degradation of the surface of the board.

For further information, contact Axter Ltd.

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.

Axter Ltd

West Road, Ransomes Europark
Ipswich, Suffolk IP3 9SX

www.axter.co.uk

Tel: 01473 724056 Fax: 01473 723263
Email: info@axterltd.co.uk

Registered in England number 1446923

