







XPS Flat Roofing

Blue Roofs - Technical Data Sheet

Sundolitt XPS is ideally suited for Blue Roof applications. With its extremely low water absorption and high strength it can be used below water attenuation units and specialist drainage outlets to control storm water flow.

XPS Benefits

-  High compressive strengths up to 700 kPa
-  Excellent thermal insulating properties
-  Resistant to freeze/thaw
-  Flame Retardant available
-  ODP = 0 GWP = <5
-  Rated A in BRE Green Guide
-  Fully Recyclable

Why Blue Roof?

Whilst a Green Roof will provide a measure of water flow control, there is a need in some urban areas to create a truly controlled water containment and run-off system for statistically predicted storm events. Sustainable Drainage Systems (SuDS) in urban areas reduce water flow and take pressure from the sewerage system.

It is becoming common practice to design hybrid Blue/Green Roofs to gain the ecological, environmental and sustainable benefits of both systems.

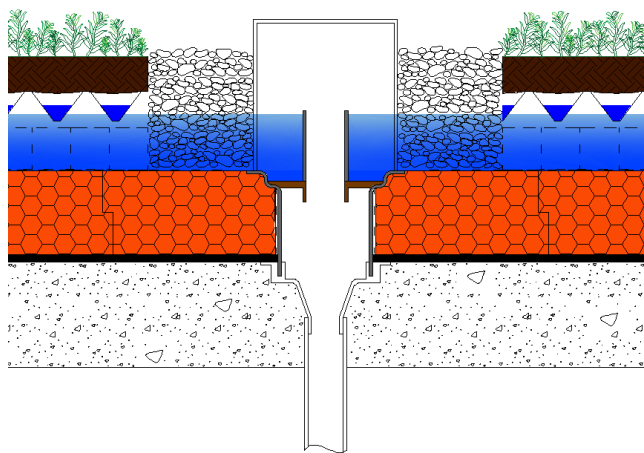


Design Considerations

Standard Blue roof design will allow for the storage of water at 100mm deep across the entire roof surface. When full this adds around 1.0kN/m² which would need to be included in the design of the supporting deck.

The construction of a Blue Roof is usually based on an inverted roof system with the water attenuation units placed over the Water Flow reducing layer. Sundolitt XPS installed below this helps protect the waterproof layer from damage during installation and later trafficking of the roof.

Any surface finish must ensure rainwater is allowed to freely flow through to the water collection layer. For more information we recommend the National Flat Roofing Council (NFRFC) document "Technical Guidance Note for the construction and design of Blue Roofs". <https://www.nfrfc.co.uk/blue-roofs>



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Thermal Performance

The excellent thermal properties of XPS provide insulation with minimum thickness to meet Building Regulation requirements.

Thermal Resistance Values (m ² K/W)				
Thickness (mm)	XPS200	XPS300	XPS500	XPS700
30	0.909	0.909		
40	1.212	1.212		
50	1.515	1.515	1.471	1.471
60	1.765	1.765	1.765	1.765
75	2.206	2.206		
80	2.353	2.353	2.353	2.353
100	2.778	2.778	2.778	2.778
120	3.077	3.077	3.077	3.077
130	3.333	3.333	3.333	3.333
140	3.590	3.590	3.590	3.590
150	3.846	3.846	3.846	3.846
160	4.103	4.103	4.103	4.103

To ensure optimum thermal performance the boards can be supplied with ship-lapped edges which overlap and reduce cold bridging. Multiple layers may also be installed cross-laid to reduce the risks associated with board joints.


To further enhance the thermal performance a water control layer is placed over the insulation boards. This also ensures the water is trapped and stored within the water attenuation layer.




Standard Sizes Available		
Dimensions (mm)	Length	Width
Rebated Edge	2385	585
Square Edge	2400	600
Thickness	30, 40, 50, 60, 75, 80, 100, 120, 130, 140, 150 and 160mm	

Accreditation

Sundolitt XPS Roofing is manufactured in accordance with BS EN ISO 13164.

 QMS
 ISO 9001
 Registered Company

 EMS
 ISO 14001
 Registered Company

EPD Certificate – nepd-396-274-EN – demonstrates the excellent environmental performance of Sundolitt XPS which has emissions of 0.0073 kg CO₂ calculated in accordance with ISO 14025.

Sundolitt XPS Roofing - Physical Properties

	XPS200	XPS300	XPS500	XPS700
Design Load at 2% nominal Compression (kPa)	90	140	225	250
Compressive Strength at 10% nominal Compression (kPa)	200	300	500	700
Thermal Conductivity (W/mK) at 50mm thickness	0.033	0.033	0.034	0.034

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