

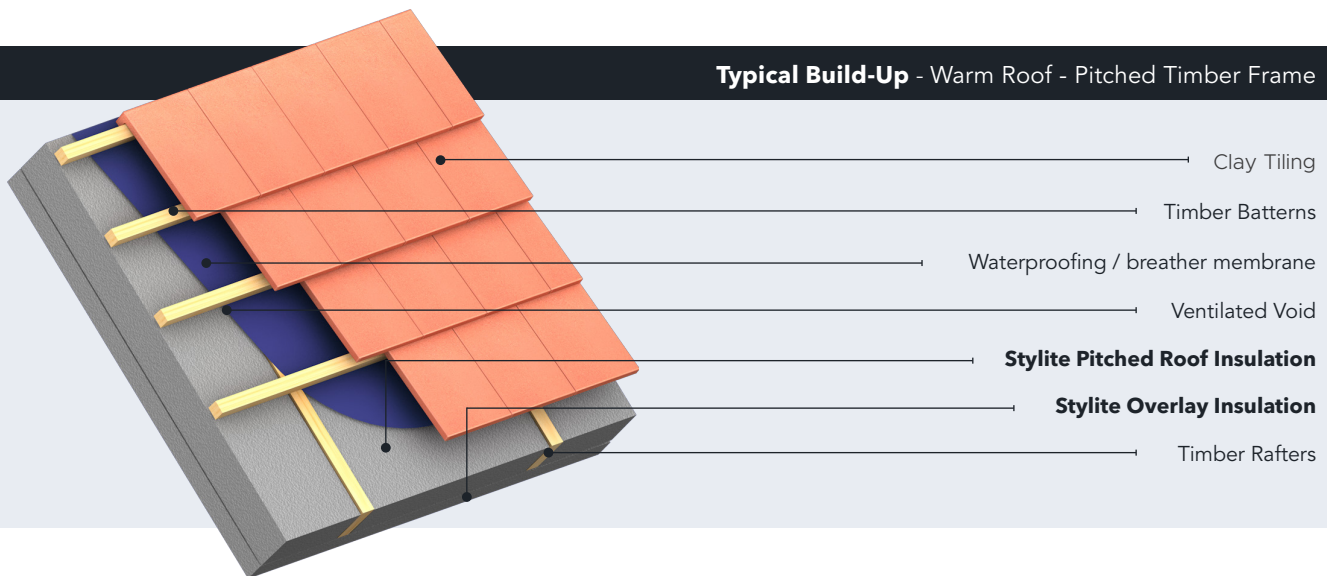
Stylite®



Expanding Possibilities

PITCHED ROOFING INSULATION DATASHEET

Pr_25_71_63_26 - 1_200820



Typical Build-Up - Warm Roof - Pitched Timber Frame

Standard Product Attributes

Length	1200 mm
Width	up to 600 mm
Thickness	20 - 250 mm
Board Coverage	up to 0.72 m ²
Grades	EPS 70 - 150 & Plustherm

Product Dimensions

All our Stylite Pitched Roofing Insulation Boards are typically manufactured to one standard size, at 1200 x 450mm although we can also cut bespoke sizes to fit your rafter centres up to 600mm.

Design Standards

All our Stylite Pitched Roof Insulation is manufactured in accordance with **BS-EN-13163-2012+A2-2016**. Under a Quality Management System accredited to **ISO 9001:2015** and an Environmental Management System accredited to **ISO 14001:2015**.



Product Overview

Stylite Pitched Roof Insulation is a cost-effective way of insulating a pitched roof either in a new build or refurbishment application. Our Stylite Plustherm EPS has a low thermal conductivity of 0.030 W/mK and for extra thermal performance, full sheets can be used as an overlay prior to plasterboard being installed. Sheets are supplied in 2400x1200mm and can be cut easily with a hand saw to the exact width required between each roof truss.

Product Benefits

- Lambda from as low as **0.030 W/mK**
- Cost effective insulation
- Insulates new or existing roof
- Lightweight, quick & easy to install
- Minimal water absorption & permeability
- 100% recyclable
- No HFC's, CFC's or HCFC's
- BRE Green Guide rating of A+

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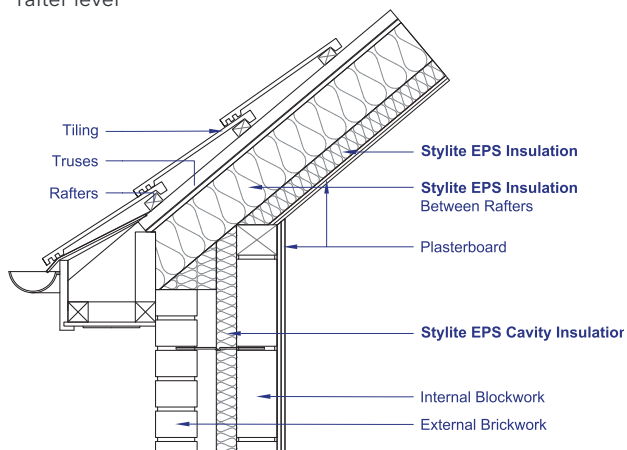
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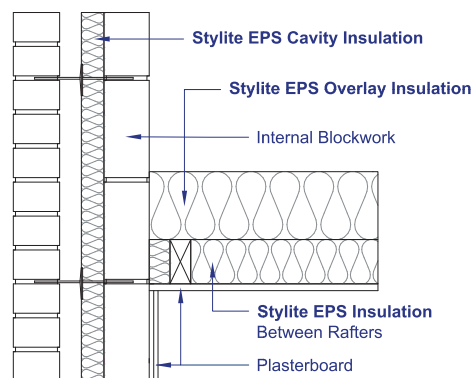
Typical Application

Stylite Pitched Roofing Insulation offers many benefits for use within a pitched roof. The Compressible nature of EPS means its the perfect material to fit neatly between roof and ceiling rafters to effectively insulate the roof. Often a separate overlay layer is used over or under the rafters to bring the thermal performance of the roof up to current regulations. The insulation is normally covered with a fire rated plaster or particle board to finish off the roof. As Stylite EPS is a hydrophobic material it naturally repels water. There are a few main options when insulating a pitched roof, to insulate just the rafters, just the ceiling level or both.

Typical Eaves Wall Junction - Warm Roof - Timber Joists - at rafter level



Typical Eaves Wall Junction - Warm Roof - Timber Joists - at ceiling level



Rafters - 150mm				
Overlay Thickness (mm)	U-value (W/m²K)			
	EPS 70	EPS 100	EPS 150	Plustherm
50	0.20	0.19	0.18	0.16
100	0.16	0.15	0.14	0.13
150	0.13	0.13	0.12	0.11

- Based on a roof pitch of 40°
- Correction level of 0 inbetween rafters
- All other parameters are default values from BRE Report BR 443 : 2006.

Typical U-Values

The table below shows the typical thickness of Stylite Pitched Roof Insulation Boards required to achieve a specific u-value. Calculations below are based on insulating between the roof rafters, which means you must not exceed the depth of your rafters, instead using an overlay sheet to finish off insulating your pitched roof.

Rafters - 150mm				
Overlay Thickness (mm)	U-value (W/m²K)			
	EPS 70	EPS 100	EPS 150	Plustherm
50	0.25	0.24	0.23	0.21
100	0.20	0.19	0.18	0.16
150	0.17	0.16	0.15	0.14

- Based on a roof pitch of 40°
- Correction level 1 for rafter air space
- All other parameters are default values from BRE Report BR 443 : 2006.

Need a unique U-Value or help specifying Stylite Flooring Insulation, Give us a call now on : **01274 691 777** or send our sales team and email at sales@styrene.co.uk.

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Specification Clause

You can use our generic specification clause below to include Stylite Inverted Roof Insulation System in your design.

Refer to clauses:

The roof insulation shall be Stylite Profiled Roof Insulation, EPS____, ____mm thick, cut to suit sheet profile _____, manufactured to BS EN 13163-2012+A2-2016 by Styrene Packaging & Insulation Ltd (SPI). The insulation is to be installed in accordance with SPI's recommendations and installation guide.

Refer to clauses:

K11 Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings

695 rigid board insulation fixed as roof sarking

P10 Sundry insulation/ proofing work

140 insulation fitted at rafter level

Durability

Expanded Polystyrene is rot proof, Expanded Polystyrene is not affected by bacteria, moulds or fungi, and will not provide nutrient value for insects or vermin.

Expanded Polystyrene does not lose any performance over time and will remain an effective insulation for the life of the building.

Compatibility

Expanded Polystyrene should be kept away from hydrocarbons, solvents and volatile substances, however, Expanded Polystyrene is compatible with most chemicals and materials found in common construction environments. For more information, a full list of chemical behaviours is available on our website.

Stylite Expanded Polystyrene should not come into contact with any PVC cables. This is to avoid plasticizer migration which causes PVC cables to become brittle and fragile. Any PVC cables should be protected within a suitable conduit or with a suitable air gap.

Moisture Resistance & Breathability

Stylite Expanded Polystyrene is hydrophobic and highly resistant to the absorption of water but will allow a very minimal amount of water vapour transfer. Expanded Polystyrene is often utilised with a suitable damp proof membrane or vapour control layer to avoid any unwanted water ingress.

Reaction To Fire Classification

Stylite Expanded Polystyrene will achieve reaction to fire Euroclass F. However, the classification achieved when installing in a building will be considerably better. We also supply FRA grades which contain a Fire Retardant Additive and achieve reaction to fire Euroclass E.

Sustainability

Our Stylite Expanded Polystyrene does not contain HFC's, CFC's or HCFC's. Expanded Polystyrene has a Global Warming Potential (GWP) of zero and a low O-Zone Depletion Potential (ODP).

Our Expanded Polystyrene is 100% recyclable. For more information on our recycling policy, you can contact our office to find out more, or alternatively visit our website.

BRE Green Guide Rating

Expanded Polystyrene achieves a green guide rating from **A+**. For a full overview of grades and ratings please see technical specifications overleaf.

Delivery & Storage

The boards are delivered to site in packs, wrapped in polythene. They must be protected from prolonged exposure to sunlight and UV rays. Packs should be stored either under cover or protected with opaque light-coloured polythene sheeting. The products must be stored fully supported and flat on a firm, level base, to prevent bowing.

The products must not be exposed to open flame, care should still be taken to ensure EPS doesn't come into contact with any source of ignition.

Safety

Expanded Polystyrene is non-toxic, non-irritant and odorless, making it completely safe to handle. It can be cut on site using a fine tooth saw or a hot wire cutter. For more information refer to our Safety Data Sheet available on our website.

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Physical Properties	EPS 70	EPS 100	EPS 150	PlusTherm
Thermal Conductivity (W/mK)	0.038	0.036	0.034	0.030
Compressive Strength @ 10% (kPa)	70	100	150	100
Bending Strength (kPa)	115	150	200	150
Water Vapour Permeability (mg Pa.h.m)	0.015 - 0.030	0.009 - 0.020	0.009 - 0.020	0.009 - 0.020
Water Vapour Diffusion Resistance (μ)	20-40	30-70	30-70	30-70
Reaction to Fire - Standard EPS	F	F	F	E
Reaction to Fire - FRA EPS	E	E	E	E
Length Tolerance	L2	L2	L2	L2
Width Tolerance	W2	W2	W2	W2
Thickness Tolerance	T2	T2	T2	T2
Flatness Tolerance	P5	P5	P3	P5
Squareness	S2	S2	S2	S2
BRE Green Guide Rating	A+	A+	A+	A+

Please note: The information contained within this datasheet is true and accurate at the date of issuance and is subject to change without prior notice. It is for guidance only the proper use and application of this product is the responsibility of the user.

All Stylite Expanded Polystyrene is manufactured to the following standards - **BS EN 13163:2012+A2:2016**.



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