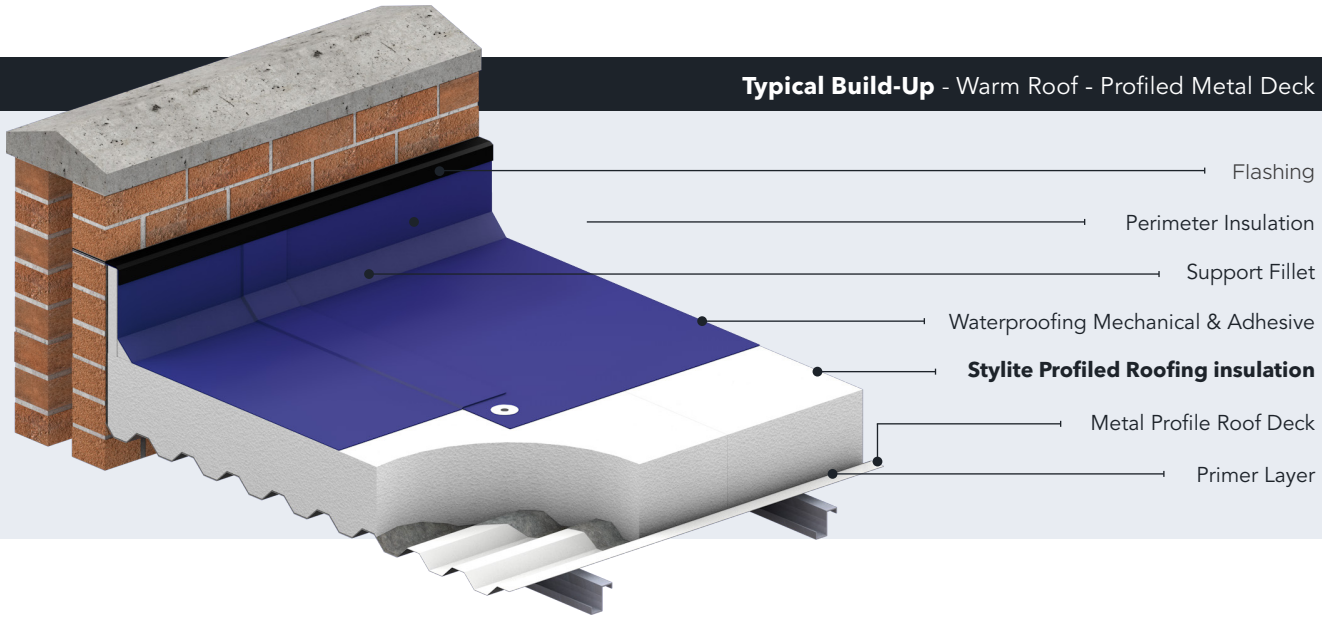
Stylite®

PROFILED ROOFING INSULATION DATASHEET

Pr_25_71_63_26 - 1_200820

Expanding Possibilities

Typical Build-Up - Warm Roof - Profiled Metal Deck



Standard Product Attributes

Length	1200 mm
Width	1200 mm
Thickness	20 - 600 mm
Coverage	1.44 m^2
Grades	EPS 70 - 300 & PlusTherm

Stylite Profiled Roof Insulation is suitable for warm roof applications on profiled metal or fibre cement roofing panels. The profiled boards are often used in conjunction with tapered boards to provide a complete refurbishment solution, with sufficient fall to improve drainage of water from existing flat roofs.

Design Standards

All our Stylite Profiled Roofing 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 Profiled Roof Insulation Boards can be used as part of a new build roofing system or as an overlay solution for existing roofs without incurring the high cost of re-roofing. Manufactured from high density Expanded Polystyrene (EPS) they are designed to match any profiled roof deck and fit tightly into the profile to eliminate air gaps and condensation and increase the thermal performance of the roof.

Product Benefits

- Contour cut to fit any roof deck profile
- Lambda from as low as **0.030 W/mK**
- Ideal for metal or fibre cement decks
- Insulates new or existing roofs
- High compressive strength
- Compatible with adhesive and mechanically fixed waterproofing systems
- 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+

PROFILED ROOFING INSULATION
DATASHEET

PR_20_93_51_28 - 1_200820

Typical Application

Stylite Profiled Roofing Insulation can be used as part of a new build roofing system or as an overlay solution for existing flat roofs. The profiled insulation boards are designed to match and fit tightly with any profiled or corrugated sheet. They are installed directly over the profiled roofing sheets to instantly improve the u-value and extend the life of the roof by protecting the structure. If a fall is required then tapered insulation can be installed over the profiled boards.

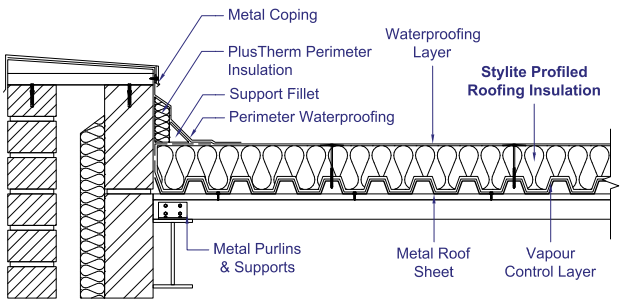
The Expanded Polystyrene boards can be used with adhesive or mechanically fixed fleece backed single ply PVC waterproofing systems and single ply TPO/FPO systems. When combined with a suitable separation layer or overlay board a single ply PVC and EPDM, hot or cold liquid applied or hot bituminous felt membrane can be used.

Typical U-Values

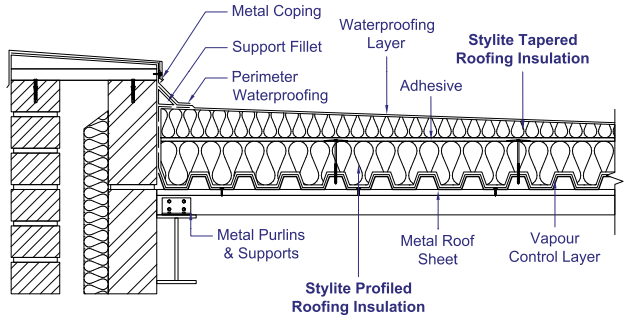
The table below shows the thickness of Stylite Profiled Roof Insulation Boards required to achieve a specific u-value. Calculations are based on a single skin roof construction with fibre cement roof panels, steel purlins and rail system, with a single ply adhesively bonded waterproofing system and Stylite Profiled Roof Insulation.

Need a unique U-Value or help specifying Stylite Flooring Insulation, Give us a call now on **: 01274 691 777**

Typical Parapet Junction Detail - Warm Roof - Metal Deck



Typical Parapet Detail - Tapered Warm Roof - Metal Deck

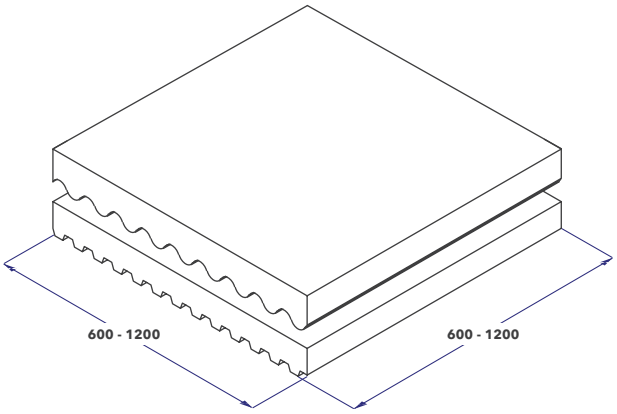


U-value (W/m²K)	Required Thickness (mm)			
	EPS 70	EPS 100	EPS 150 - 300	PlusTherm
0.18	175	165	155	135
0.17	185	175	165	145
0.16	195	185	175	155
0.15	210	195	195	170
0.14	230	220	205	185
0.13	255	240	220	200
0.12	280	260	245	245
0.11	305	290	270	240

- 1200mm rail spacing, 40mm rail width and 50mm depth with conductivity of 0.040 W.m–1.K–1 including correction level 1.
- 6mm profiled fibre cement deck with conductivity of 0.36 W.m–1.K–1.
- Stylite profiled insulation measured at its thinnest point.
- Single ply adhesively bonded waterproofing system with conductivity of 0.25 W.m–1.K–1.
- All other parameters are default values from BRE Report BR 443 : 2006.

Product Dimensions

All our Stylite Profiled Roofing Insulation Boards are typically manufactured to one standard size, at 1200 x 1200mm. Stylite Profiled Roof Insulation Boards are contour cut to fit perfectly over corrugated sheets, commonly known as Profile 6 or Big Six, and can be cut to standard or bespoke profiles. Other sizes and thicknesses may be available on request.



PROFILED ROOFING INSULATION
DATASHEET

PR_20_93_51_28 - 1_200820

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:
H43 Metal composite panel cladding/ covering
120 Metal Composite Panel

J31 Liquid applied waterproof roof coatings
331 Expanded Polystyrene (Eps) Warm Deck Roof Insulation
335 Warm Deck Roof Insulation

J41 Reinforced bitumen membrane roof coverings
410 Expanded Polystyrene (Eps) Warm Deck Roof Insulation
430 Warm Deck Roof Insulation

J42 Single layer polymeric sheet roof coverings
410 Expanded Polystyrene (Eps) Warm Deck Roof Insulation
430 Warm Deck Roof Insulation

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 doesnt come into contact with any source of ignition.

Safety
Expanded Polystyrene is non-toxic, non-irritant and odorless, making it completley 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 Saftey Data Sheet available on our website.

Stylite®

PROFILED ROOFING INSULATION
DATASHEET

PR_20_93_51_28 - 1_200820

Expanding Possibilities

Physical Properties	EPS 70	EPS 100	EPS 150	EPS 200	EPS 250	EPS 300	PlusTherm
Thermal Conductivity (W/mK)	**0.038**	**0.036**	**0.034**	**0.034**	**0.034**	**0.034**	**0.030**
Compressive Strength @ 10% (kPa)	70	100	150	200	250	300	100
Bending Strength (kPa)	115	150	200	250	350	450	150
Water Vapour Permeability (mg Pa.h.m)	0.015 - 0.030	0.009 - 0.020	0.009 - 0.020	0.006 - 0.015	0.006 - 0.015	0.006 - 0.015	0.009 - 0.020
Water Vapour Diffusion Resistance (μ)	20-40	30-70	30-70	40-100	40-100	40-100	30-70
Reaction to Fire - Standard EPS	F	F	F	F	F	F	E
Reaction to Fire - FRA EPS	E	E	E	E	E	E	E
Length Tolerance	L2	L2	L2	L2	L2	L2	L2
Width Tolerance	W2	W2	W2	W2	W2	W2	W2
Thickness Tolerance	T2	T2	T2	T2	T2	T2	T2
Flatness Tolerance	P5	P5	P3	P3	P3	P3	P5
Squareness	S2	S2	S2	S2	S2	S2	S2
BRE Green Guide Rating	A+	A+	A+	A+	NA	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 - BS EN 13501-1.**

6 PS

CE

A+ BRE

MADE IN BRITAIN

ISO 14001 CERTIFIED UKAS MANAGEMENT SYSTEMS British Assessment Bureau

ISO 9001 CERTIFIED UKAS MANAGEMENT SYSTEMS British Assessment Bureau

mpa British Precast Member

Styrene Packaging & Insulation Ltd
Morley Carr Rd, Low Moor, Bradford BD12 0RA
VAT Reg No.40876392 - Company Reg No.1800539