

Stylite

Bespoke and standard **EWI boards** - Plustherm & White EPS

Construction - Insulation & building materials

Technical information

V3_16

Pr_25_71_63



TECHNICAL

External Wall Insulation Boards

The diagram shows a series of five horizontal insulation boards of increasing thickness, labeled 60, 90, 110, 130, and 150 on the left. A horizontal line at the bottom indicates a width of 600. To the right of the boards, a list of technical specifications is provided, each with a checkmark icon.

- Lambda From 0.030 W/mK
- With straight profile Edge
- Lightweight
- Application to any wall substrate
- No reduction in performance
- Quick & easy install
- Minimal water absorption & permeability
- Achieves BRE Green Guide A+
- 100% recyclable
- No HFC's, CFC's or HCFC's

STYLITE EXPANDED POLYSTYRENE

From the idea to point of delivery SPI will guide you through the process making it easy for you to get the expanded polystyrene you want when you need it.

Offering technical and design advice on every aspect of your order from product specifications developed by our experts to delivery of your product organised by our dedicated transport department. For more information on the full process from sample production to bespoke product modelling.



Quality

With our expert production and sales team we can offer you quality service and products at some of the cheapest rates available.



Expanding

SPI is always investing in new technologies and products to stay at the forefront of the industry.



Technical

Our sales and technical team are always on call to answer all your EPS queries.



Bespoke

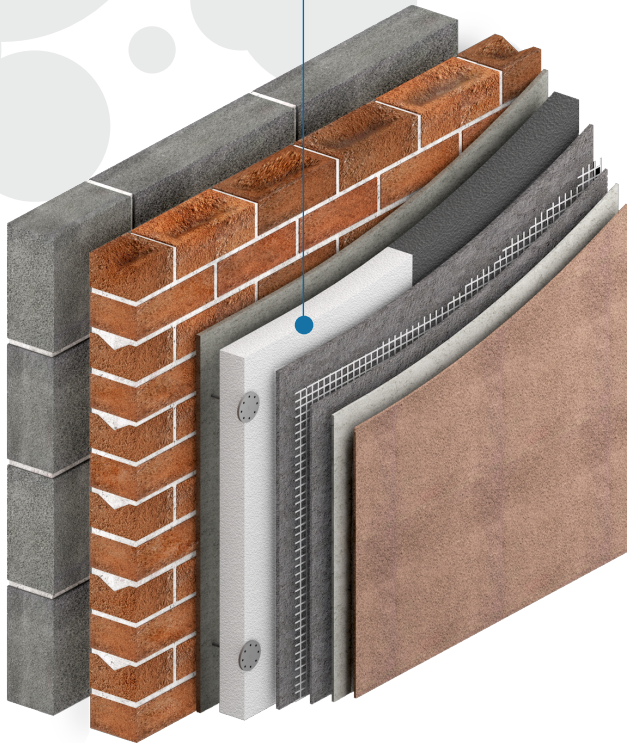
SPI will guide you through any bespoke project, moulded or contour cut, from start to finish.

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- 03 - Finishes
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Stylite External Wall Insulation

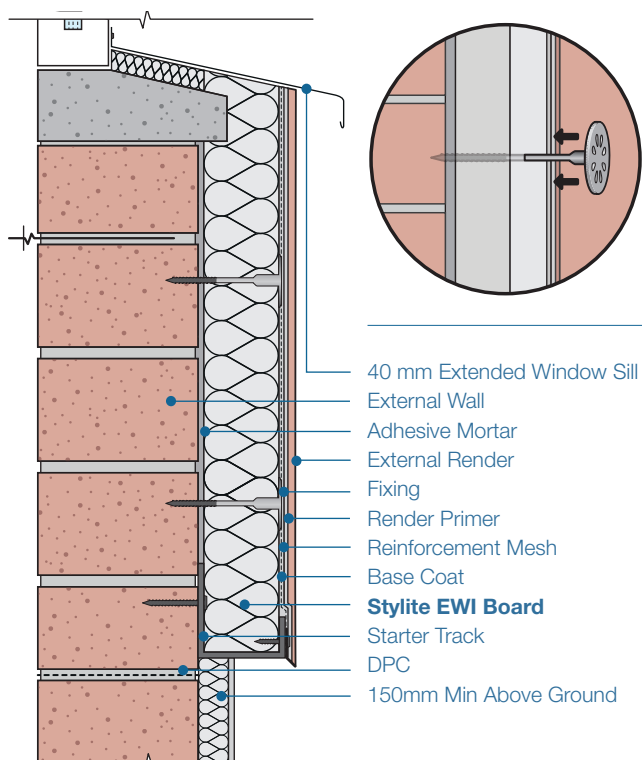
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- **No HFC's, CFC's or HCFC's**



Stylite EWI Boards are suitable for use with all external wall applications, both domestic and commercial to satisfy the current building regulations. Stylite external wall insulation is a quick and effective way to dramatically increase the thermal performance of any building and can be applied with almost any render or cladding system to

produce a full EWI system. EWI board systems are often used to upgrade existing buildings with retrofit solutions but are also used for new-builds. The long lifespan and water resistant properties make Stylite expanded polystyrene the perfect insulation for EWI applications. For more information about our EWI boards visit our website at www.styrene.biz

Typical EWI Boards - masonry block wall



Compatibility

Expanded Polystyrene is compatible with most chemicals and materials. For more information about how EPS interacts with different chemicals check www.styrene.biz/downloads/SPI_Chemical_Behaviour.pdf

Durability

EPS is rot proof and durable, and will remain an effective insulation for the life of the construction. EPS is not affected by bacteria, moulds or fungi, and will not provide nutrient value for insects or vermin.

Environmental Safety

EPS is non-toxic, non-irritant and odourless and It does not contain CFC's or HCFC's. EPS has a Global Warming Potential (GWP) of zero and an Ozone Depletion Potential (ODP) of zero.

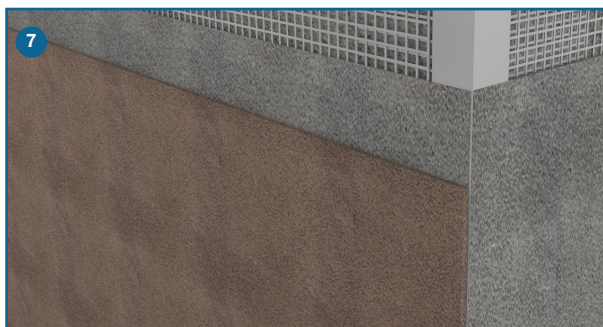
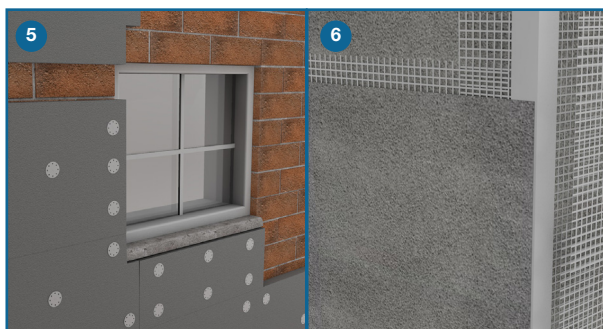
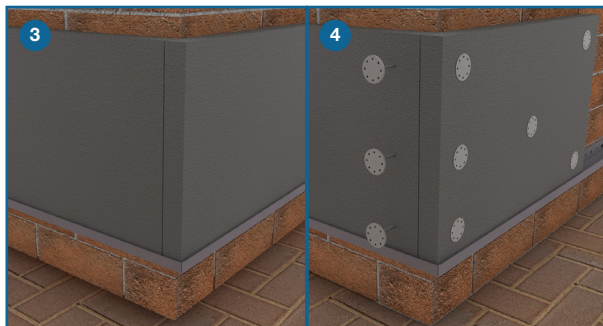
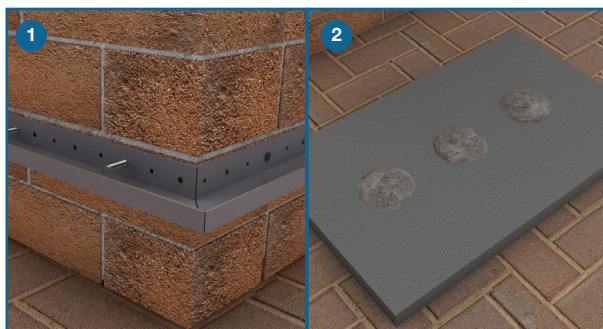
Reaction To Fire Classification

Stylite will achieve reaction to fire Euro-class F. However, the classification achieved when installed in a build will be considerably better. We also supply an FRA grade which contains a Fire retardant additive and achieves reaction to fire Euro-class E. The fire rating of a wall containing the boards will depend heavily on the type and attributes of the build up.

Stylite EWI Installation Guide

Stylite EWI Boards make up the insulation of a full EWI system which often utilises many different components which are dependant on the needs of your specific build. For full propriety installation instructions, please check with the system provider. The steps given below are only typical guidelines on how to install Stylite adhesive boards as part of a complete EWI system.

Stylite EWI Boards can be used in a wide variety of wall builds. Most commonly used to refurbish existing builds, increasing efficiency and improving the appearance, also used in new build developments. To find out more about the applications call our sales team on 012 74 691 777 or visit our website at www.styrene.biz



Step 1 - Install the base / starter track, ensuring its level, adding your EPS packer into the track if needed.

Step 2 - Use dot & dab adhesive render on the back of your Stylite EWI boards if applicable.

Step 3 - Insert boards into the track ensuring to overlap edges at corners (these should be staggered for strength).

Step 4 - You can now fix your EWI boards in place using system specific fixings. Additional fixings may be required at corners and around openings. Continue this process, installing boards, until your wall is covered.

Step 5 - Often systems will require cut boards around window structures, sometimes requiring smaller pieces in-between L shaped boards to make up the window surrounding.

Step 6 - You can now apply your first layer of base-coat render, thicknesses will vary. Overlay your mesh bedding it into the base-coat whilst still wet, overlapping mesh sheets by 100mm. Skim to make finished base-coat render level and let this dry.

Step 7 - You may now add your final wall render finish to the desired thickness of your system specification.

Note - Mesh corner beads are used to reinforce wall corners or features, these must also be overlapped with mesh.

For more information on how to install with a lightweight steel frame or wooden frame please contact our sales team on 01274 691 777 or visit our website at www.styrene.biz

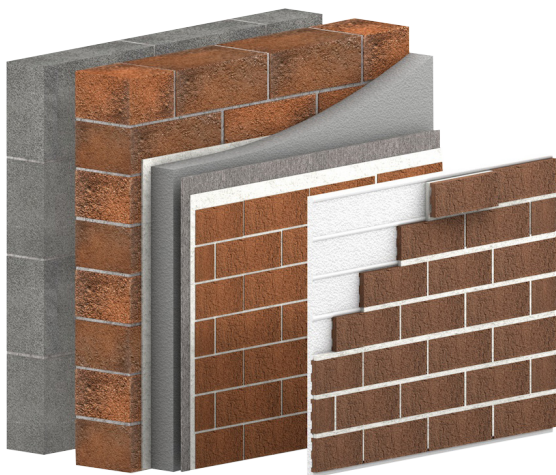
Stylite EWI boards - Renders & Cladding

Stylite expanded polystyrene EWI boards can be used with any type of external wall system. Different systems will utilise different wall finishes, specific to the system design and intention, all of which can completely change the appearance of builds. Brick slips & brick renders are a popular choice with existing build refurbishments, due to the lightweight configurations. The life-like brick faces or brick renders allow installers to effectively mimic any type of brick work helping refurbished buildings fit in to

the surroundings. External cladding finishes are most often utilised with new build developments, due to the heavy weight configurations. However both renders and cladding can be utilised on both existing and new build projects when built to suit. Please consult your system designer for more options using this method.

For more details about the use of EPS in EWI contact our sales and technical team on 01274 691 777.

Brick slips & Brick effect



External Cladding



Stylite EWI Boards Typical U-Values

Here you will find an outline of **Stylite external wall insulation boards** for adhesive and mechanical fixture U-Values. The walls thermal transmittance (U-Value) depends heavily on things such as ventilation, bridging factors and the type of wall substrate used. To ensure the validity of your calculations each U-Value is generated

according to **BS EN ISO 6946**. The thicknesses here have been calculated to the nearest 5mm increments. The inherit U-Values will be over calculated, never under-calculated.

For a specific U-Value calculation contact our technical and sales teams on 01274 691 777.

Masonry cavity wall

Grade	U-value W/m ² K / Thickness mm						
	0.16	0.18	0.20	0.22	0.25	0.28	0.30
SD FRA - VB	205	180	160	145	125	110	100
Plustherm	150	145	130	115	100	95	80

Build up calculated to ; Plaster - 0.18* 13mm, Dense block - 1.130* 100mm, 50mm unventilated cavity R=0.18, Brick - 0.77* 100mm. A correction level of 1 in the continuity of install and the use of standard plastic fixtures.

Technical Specification

Features	SD VB FRA	Plustherm	Standard
Thermal Conductivity ($\lambda_{90/90}$)($Wm^{-1}K^{-1}$)	0.038	0.030	EN 13163
Length Tolerance	L1	L1	EN 822
Width Tolerance	W1	W1	EN 822
Thickness Tolerance	T1	T1	EN 823
Planarity Tolerance	P2	P2	EN 825
Squareness	S1	S1	EN 824
Bending Strength (kPa)	115	150	EN 12089
Tensile Strength (kPa)	TR100	TR150	EN 1607
Reaction to Fire	E	E	EN 13501-1
Water Absorption ($mg Pa^{-1} h^{-1} m^{-1}$)	0.015 - 0.030	0.009 - 0.020	EN 13163
Dimensional Stability	DS (N) 5	DS (N) 5	EN 1603
Compressive Strength @ 10% (kPa)	70	100	EN 826
Compressive Strength @ 1 % (kPa)	21	30	EN 13163
BREEAM Rating	A+	A+	BRE
Element No.	815320022	1315320016	BRE

Typical Dimensions	Length mm	Width mm	Thickness mm
Stylite EWI Adhesive	1200	600	20 < 300

EN 13163 : 2012 | BS EN 13501 : 1 : 2007 | BS EN 1603 : 2013 | BS EN 12089 : 2013

Classification code : Pr_25_71_63

Recycling

Here at Styrene Packaging & Insulation Ltd provide a scrap EPS pick-up to help us recycle as much polystyrene as possible back into suitable products; please download a copy of our recycling policy to find out how to get involved.

Certification

We have real pride in the products we supply that is why we go above and beyond to ensure that we surpass all current regulations and offer all the relevant certifications to stand by our expanded polystyrene products. For full details of our certifications please visit our website at www.styrene.biz



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Available Stylite Products

Building				Bespoke Cutting & Moulding
Floors Flooring insulation boards Suspended floor insulation Stylite Plustherm Underfloor heating boards Stylite Gridboard Void Fillers Ventilated Voidfillers	Walls External wall insulation EWI Railboards Cavity fill bead Cavity fill boards SIP's insulation Insulated plasterboard Stud cavity Insulation	Roofing Flat inverted Insulation SIP's insulation Tappered flat insulation Corrugated panels Rafter insulation Laminated Insulation Bonded Insulation	Civil Engineering Marine pontoon Stylite clayfill Voidfillers Special Laminates Laminate precut Laminate precut PVC	
Packaging				
Seed tray Produce box Fish box	Corner proptectors Edge protectors Cradels	Channels Cut boxes Tubes	Wedge Flat pad Bottle packs	
Domestic - Commercial - Industrial - Agricultural - Horticultural - Educational				

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Stylite
INSULATION SOLUTIONS

To the best of our knowledge, the technical data contained herein is true and accurate at the date of issuance and is subject to change without prior notice. Please consult your structural engineer directly for design details. The proper use and application for this product must be the responsibility of the user.

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Stylite

External wall insulation (EWI) boards are used in conjunction with render and or cladding systems provided by specialist installers.

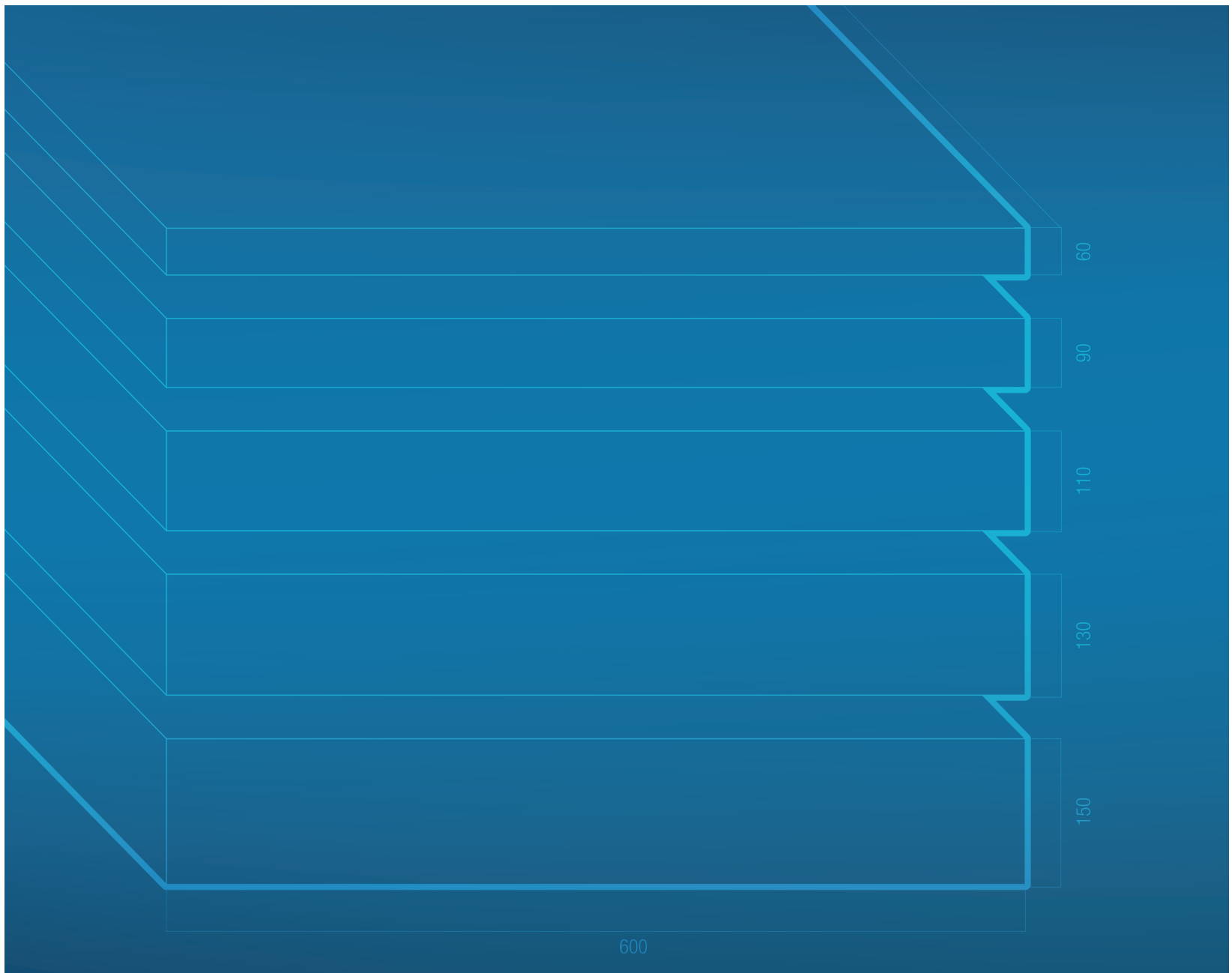
EWI provides an economical way of enhancing thermal performance in properties without insulation cavity wall insulation. The boards are available in a range of different sizes, edge details and grades. The boards are lightweight, easy to cut and handle and provide an excellent surface for all renders.

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