

Stylite

Bespoke and standard **Vent-fill Insulation** - Pluotherm & White EPS

Construction - Insulation & building materials

Technical information

V3_16

Pr_25_71_29_37



TECHNICAL

Vent-fill Ventilated Formwork Insulation

500

40

40

60

70

80

- Lambda From 0.030 W/mK
- Available in a range of void thickness's
- Lightweight, quick and easy to install
- Provides ventilation & Insulation
- No reduction in performance
- Use In commercial & residential properties
- 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 download our full brochure from our website.



Quality

You can rest assured that SPI will provide you with the highest quality 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

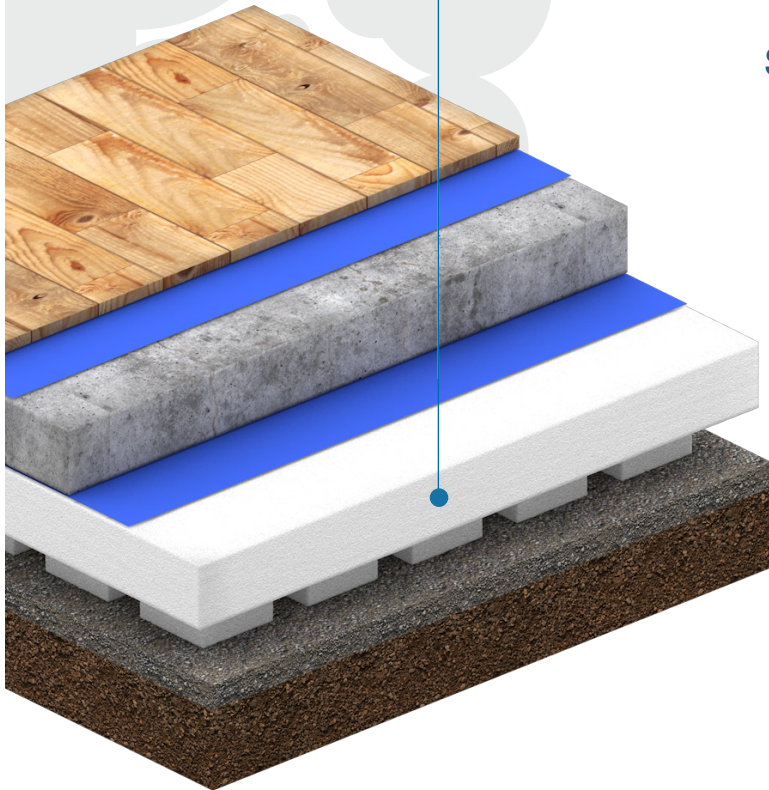
SPI will guide you through any bespoke project, moulded or contour cut, from start to finish.

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Stylite Vent-fill Insulation

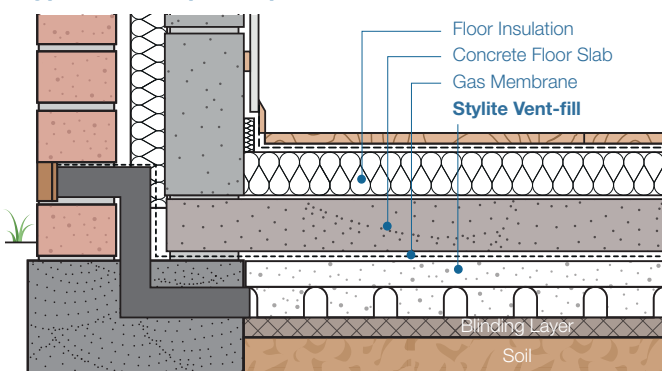
- Lambda from 0.030 W/mK
- Available in a range of void thickness's
- Lightweight
- Cost effective
- Provides insulation & ventilation
- No reduction in performance
- Use in commercial & residential property
- Minimal water absorption & permeability
- 100% recyclable
- No HFC's, CFC's or HCFC's



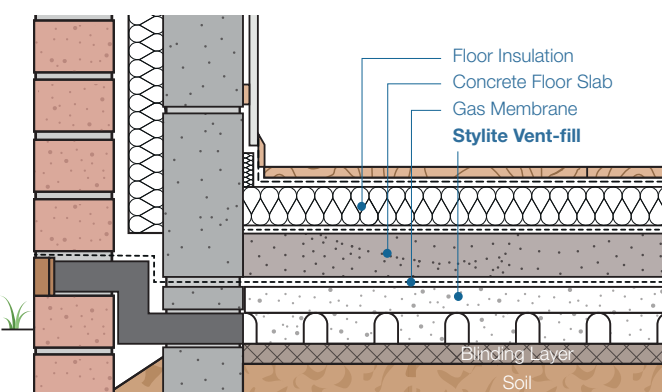
Stylite Vent-fill Insulation is utilised in slab floors to create a passive ventilation system that allows any gasses produced by the ground to safely pass to the outside of the build using perimeter vents. The Vent-fill boards also provide excellent thermal insulation layers to the floor structure. The Vent-fill boards are available in various thicknesses and grades to provide different loading and ventilation capacities. For more information visit our website at www.styrene.biz



Typical build-up - Suspended Ground Slab



Typical build-up - Ground Bearing Slab



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

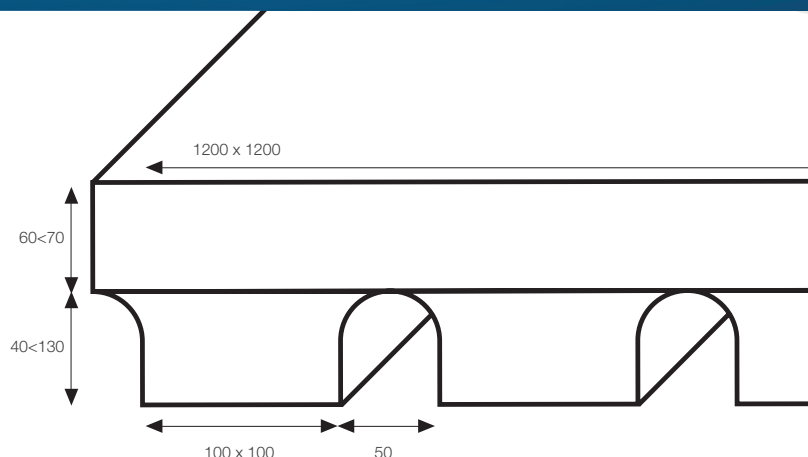
EPS is non-toxic, non-irritant and odourless. It does not contain CFC's or HCFC's. EPS has a Global Warming Potential (GWP) of zero and an Ozone Depletion Potential (ODP) of zero.

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.

Vent-fill Dimensions

The Vent-fill boards come in various thicknesses (see below table) and are available in an easy to handle and install size of 1200x1200mm. The depth of the board varies and will change depending on the load and ventilation capacity requirements.



Vent-fill Loadings & Grades Guide

Each board is available in two different grades of expanded polystyrene. Each of the two grades has the same loading and compressive capacities but have different thermal conductivities. One features our Plustherm Grey EPS offering 0.030^{Wmk} and the other

white EPS at 0.034 > 0.038. The different leg depths available throughout the product range will offer a range of different clear void measurements, which can be used to calculate rate of ventilation from the structure.

Vent-fill Product	Full Depth (mm)	Leg Depth (mm)	Clear-void Equivalent (mm)	Maximum Load Capacity (kN/m ²)	Thermal Conductivity (Wm ⁻¹ K ⁻¹)	Thermal Resistance (m ² K/W)
S / 70	80	40	22	20	0.038 & 0.032	1.60
S / 100				30	0.036 & 0.030	1.65
S / 150				50	0.034 & 0.030	1.75
M / 70	100	60	33	20	0.038 & 0.032	1.84
M / 100				30	0.036 & 0.030	1.90
M / 150				50	0.034 & 0.030	2.01
L / 100	150	80	60	10	0.036 & 0.030	2.37
L / 150				15	0.034 & 0.030	2.43
XL / 100	200	130	100	10	0.036 & 0.030	2.63
XL / 150				15	0.034 & 0.034	2.70

Stylite Vent-fill Typical U-Values

Stylite Vent-fill is used as a ventilating layer however it also provides an excellent thermal benefit to the floor. It is easy to achieve the current target U-Values for new and

refurbishment builds using Stylite Vent-fill. For a specific U-Value calculation or pricing information on Stylite Vent-fill contact our sales team on 01274 691 777.

Stylite Vent-fill Ground Bearing Floor Slab

Target U-Values & P/A		Product / (Additional Insulation) Overlay Thickness (mm)									
P/A 0.2		S 70	S 100	S 150	M 70	M 100	M 150	L 100	L 150	XL 100	XL 150
0.14 W/m ² K	White	90	85	75	90	85	75	60	55	60	55
	Plustherm	70	60	60	70	60	60	40	40	40	40
0.16 W/m ² K	White	60	55	50	60	55	50	30	25	30	25
	Plustherm	45	40	40	45	40	40	15	15	15	15
0.20 W/m ² K	White	20	15	10	20	15	10	0	0	0	0
	Plustherm	10	5	5	10	5	5	0	0	0	0
P/A 0.4		S 70	S 100	S 150	M 70	M 100	M 150	L 100	L 150	XL 100	XL 150
0.14 W/m ² K	White	140	130	120	140	130	120	110	105	110	105
	Plustherm	110	100	100	110	100	100	80	80	80	80
0.16 W/m ² K	White	110	100	90	110	100	90	80	75	80	75
	Plustherm	90	75	75	90	75	75	60	60	60	60
0.20 W/m ² K	White	65	60	50	65	60	50	40	35	40	35
	Plustherm	50	40	40	50	40	40	20	20	20	20
P/A 0.6		S 70	S 100	S 150	M 70	M 100	M 150	L 100	L 150	XL 100	XL 150
0.14 W/m ² K	White	160	150	140	160	150	140	125	115	125	115
	Plustherm	115	120	120	115	120	120	95	95	95	95
0.16 W/m ² K	White	130	120	110	130	120	110	95	85	95	85
	Plustherm	90	100	100	90	100	100	70	70	70	70
0.20 W/m ² K	White	85	80	70	85	80	70	55	50	55	50
	Plustherm	60	60	60	60	60	60	35	35	35	35
P/A 0.8		S 70	S 100	S 150	M 70	M 100	M 150	L 100	L 150	XL 100	XL 150
0.14 W/m ² K	White	170	160	145	170	165	160	135	125	135	125
	Plustherm	135	125	125	135	125	125	100	100	100	100
0.16 W/m ² K	White	135	130	120	135	135	120	105	95	105	95
	Plustherm	110	100	100	110	100	100	75	75	75	75
0.20 W/m ² K	White	90	85	80	90	85	80	60	55	60	55
	Plustherm	70	65	65	70	65	65	40	40	40	40

Calculations breakdown : Reinforced Concrete Slab 2.3wkm - Clay / silt ground - 300mm wall - BS EN 13370.

Technical Specification

Features	EPS 70		EPS 100		EPS 150		Standard
	White	Plustherm	White	Plustherm	White	Plustherm	
Thermal Conductivity ($\lambda_{90/90}$)(Wm ⁻¹ K ⁻¹)	0.038	0.030	0.036	0.030	0.034	0.030	EN 13163
Length Tolerance	L1	L1	L1	L1	L1	L1	EN 822
Width Tolerance	W1	W1	W1	W1	W1	W1	EN 822
Thickness Tolerance	T1	T1	T1	T1	T1	T1	EN 823
Planarity Tolerance	P2	P2	P2	P2	P2	P2	EN 825
Squareness	S1	S1	S1	S1	S1	S1	EN 824
Bending Strength (kPa)	115	115	150	150	200	200	EN 12089
Reaction to Fire	F	F	F	F	F	F	EN 13501-1
- Virgin Bead	E	E	E	E	E	E	EN 13501-1
Water Absorption (mg Pa ⁻¹ h ⁻¹ m ⁻¹)	0.015 - 0.030	0.015 - 0.030	0.009 - 0.020	0.009 - 0.020	0.009 - 0.020	0.009 - 0.020	EN 13163
Dimensional Stability	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	EN 1603
Compressive Strength @ 10% (kPa)	70	70	100	100	150	150	EN 826
Compressive Strength @ 1% (kPa)	21	21	30	30	45	45	EN 13163
BRE Rating	A+	A+	A+	A+	A+	A+	BRE
Element No.	815320022	815320022	815320023	815320023	815320024	815320024	BRE

Dimensions	Length mm	Width mm	Thickness mm
Stylite Ventfill Board	1200	1200	80 < 200

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

Classification code : Pr_25_71_29_37
Pr_20_93_51_28

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 Tapered 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 protectors Edge protectors Cradles	Channels Cut boxes Tubes	Wedge Flat pad Bottle packs	
Domestic - Commercial - Industrial - Agricultural - Horticultural - Educational				

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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.

Styrene Packaging & Insulation Ltd is registered in England, Company No.1800539 | VAT Registration No.408763928

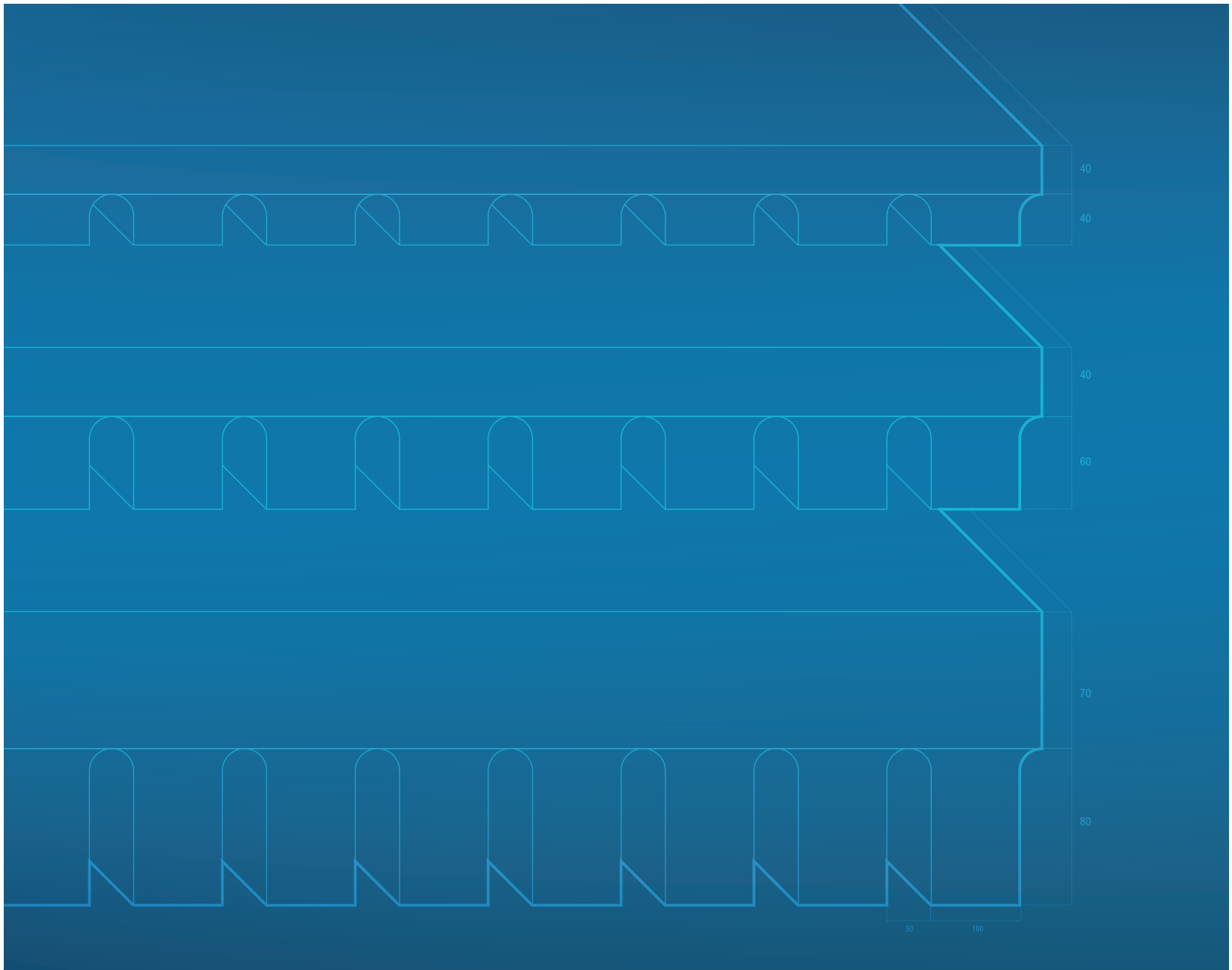
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Vent-fill is specifically designed to create passive underfloor ventilation for projects that are built on land that produces harmful ground gasses.

The board is available in a range of different grades and depths with varying void sizes. The Boards brilliant resistance to heat means it not only serves as a passive ventilation system but also as an underfloor insulation, meaning you can still easily meet current building regulations with minial effort. Vent-fill can be used in a wide range of properties most comonly utilised with slab on ground builds.

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