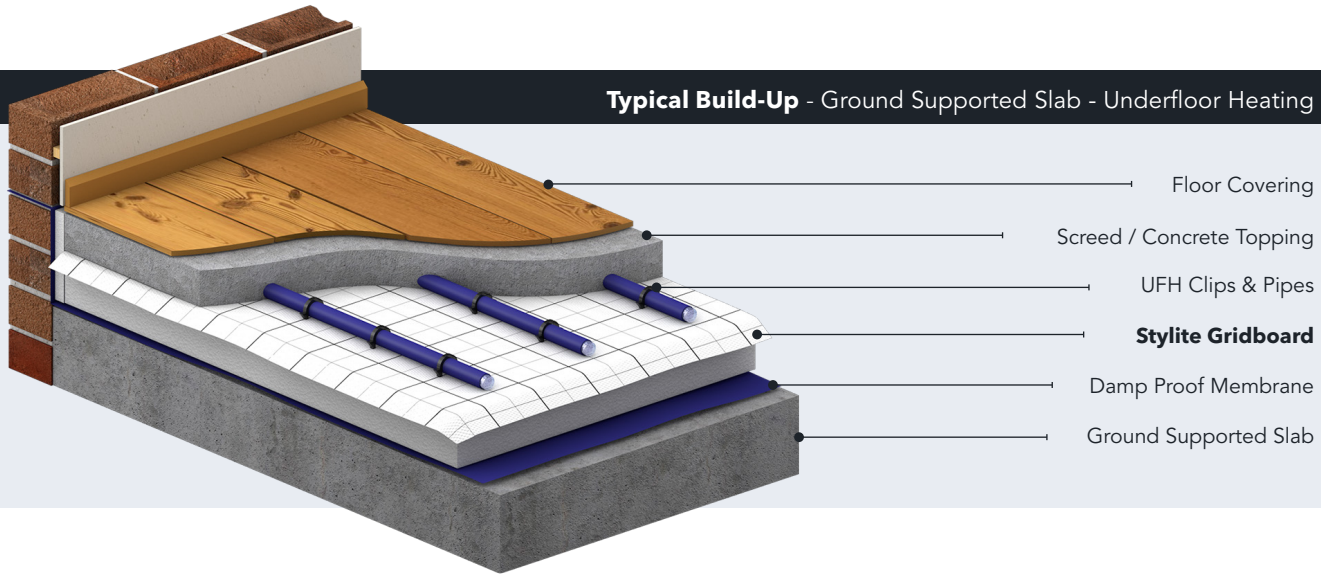
Stylite®

GRIDBOARD UNDERFLOOR HEATING INSULATION

DATASHEET

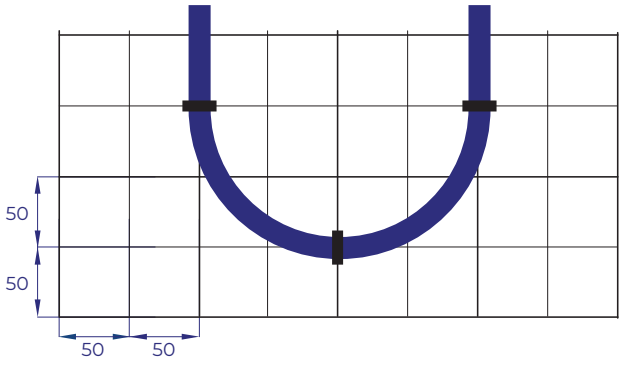
Pr_25_71_63_26 - 5_090120

Expanding Possibilities



Standard Product Attributes

Length	2400mm
Width	1200mm
Thickness	25 - 250mm
Grades	EPS 70 - 300 & Plustherm
UFH Guide	50x50mm grid



Design Standards

All our Stylite Gridboard Underfloor Heating 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 Gridboard UFH Insulation is for use with underfloor heating systems and provides excellent thermal and compressive properties with quick and easy installation.

Laminated to each board is a grid-patterned layer of split woven Polypropylene membrane, the grid provides a visual guide to assist in laying underfloor heating pipes. The grid system is laid out in increments of 50mm allowing for placement of different size pipe centres and pipes.

The split woven membrane is also pull-out resistant to help keep pipe clips securely fixed to the boards. The membrane has an overhang on two sides so it can be sealed to ensure no ingress of screed between board joints.

Product Benefits

- Ideal for large areas of UFH
- Thermal Conductivity from as low as **0.030W/mK**
- Quick installation of UFH pipes
- 50mm gridded split woven membrane pre-bonded to insulation
- Available in a range of EPS grades
- Lightweight, quick & easy to install
- Minimal water absorption & permeability
- 100% recyclable
- BRE Green Guide A+

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Typical U-Values

Stylite Gridboard is manufactured in thicknesses from 25mm to 250mm in standard 5mm increments, other thicknesses may be available on request. To comply with stringent thermal Building Regulations an additional layer of Stylite Flooring Insulation may be required to achieve a target u-value for the whole floor element.

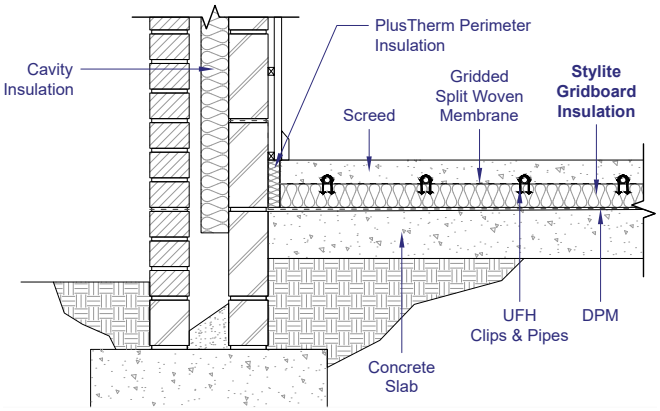
The tables below show the thickness of Stylite Gridboard UFH Insulation required to achieve a typical u-value based on a floor construction comprising of a 65mm concrete topping (1.15 W/m2K) above ground supported concrete slab. Calculated to BS EN ISO 13370:2017 and BRE Report BR 443:2006.

Need a unique u-value or help to specify Stylite Flooring Insulation, Give us a call now on **: 01274 691 777**

☐ The standard thickness of Stylite Gridboard plus an additional layer of Stylite Flooring Insulation is required for target u-value.

Typical Application

Stylite Gridboard UFH Insulation - Slab On Ground



P/A - 0.2	Required Thickness (mm)			
U-value (W/m²K)	EPS 70	EPS 100	EPS 150 - 300	PlusTherm
0.25	35	30	30	25
0.22	50	50	50	40
0.20	65	60	60	55
0.18	85	80	75	70
0.15	120	120	115	100
0.13	165	155	145	130
0.10	230	220	210	190

P/A - 0.4	Required Thickness (mm)			
U-value (W/m²K)	EPS 70	EPS 100	EPS 150 - 300	PlusTherm
0.25	80	75	70	65
0.22	100	90	85	75
0.20	110	105	100	90
0.18	130	125	120	105
0.15	170	165	160	135
0.13	215	200	185	165
0.10	300	275	260	230

P/A - 0.6	Required Thickness (mm)			
U-value (W/m²K)	EPS 70	EPS 100	EPS 150 - 300	PlusTherm
0.25	95	90	85	75
0.22	120	110	105	90
0.20	130	125	120	105
0.18	150	145	135	125
0.15	190	180	170	150
0.13	230	215	205	180
0.10	320	300	275	245

P/A - 0.6	Required Thickness (mm)			
U-value (W/m²K)	EPS 70	EPS 100	EPS 150 - 300	PlusTherm
0.25	105	100	95	85
0.22	125	120	110	100
0.20	140	135	125	110
0.18	160	155	145	130
0.15	200	190	180	160
0.13	235	225	215	190
0.10	320	300	285	250

- ☑ 100 mm concrete slab with conductivity 2.06 W.m–1.K–1
- ☑ 65 mm concrete screed with conductivity 1.15 W.m–1.K–1.
- ☑ All other parameters are default values from BRE Report BR 443 : 2006.

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Specification Clause
The underfloor heating insulation shall be Stylite Gridboard UFH Insulation, ___ mm thick, EPS Grade___, 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.

Refer to clauses:
K11 Rigid sheet flooring/ sheathing/ decking/ sarking/ linings/ casings -

115 Battened Plywood Floating Floor
125 Battened Particleboard Floating Floor
135 Battened Oriented Strand Board Floating Floor
145 Battened Cement Bonded Particleboard Floating Floor
215 Plywood Floating Floor
225 Particleboard Floating Floor
235 Oriented Strand Board Floating Floor
245 Cement Bonded Particleboard Floating Floor
295 Floating Floor System

M10 Cement based levelling/ wearing screeds

290 Floating Construction

M13 Calcium sulphate based levelling screeds

260 Floating Construction

T90 Heating systems - domestic

450 Insulation To Pipelines To Control Heat Loss

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 a reaction to fire Euroclass F. We also supply FRA grades which contain a Fire Retardant Additive and achieve a reaction to fire Euroclass E.

Environmental
Our Stylite Expanded Polystyrene does not contain HFC, CFC'or HCFC. 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 undercover 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 an open flame, care should still be taken to ensure EPS does not come into contact with any source of ignition.

Safety
Expanded Polystyrene is non-toxic, non-irritant and odourless, 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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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

ISO 9001 CERTIFIED

British Assessment Bureau

mpa British Precast Member

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