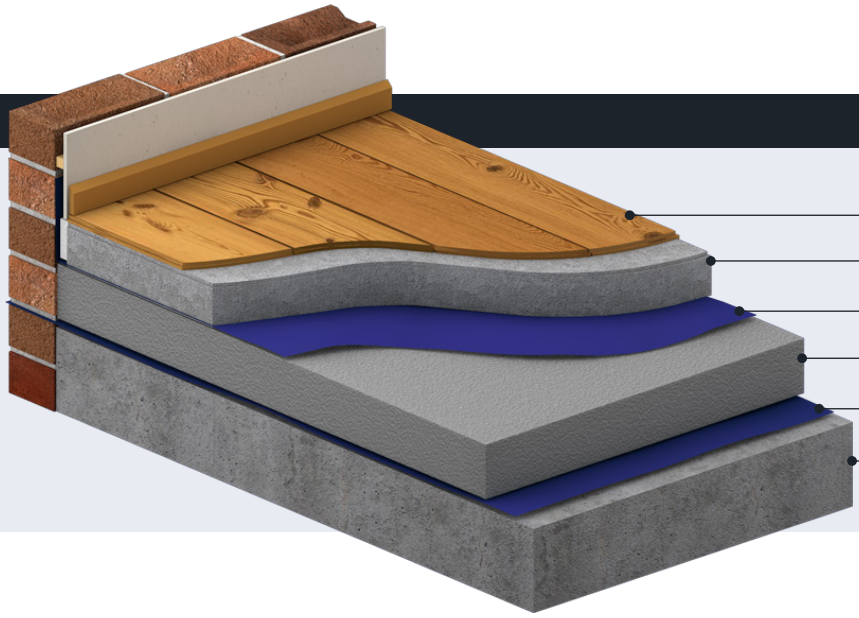
Stylite®

PLUSTHERM FLOORING INSULATION

DATASHEET

Pr_25_71_63_26 - 1_200820

Expanding Possibilities



Typical Build-Up - Slab on Ground

- Floor Covering
- Screed / Concrete Topping
- Vapour Control Layer
- **Stylite Plustherm Flooring Insulation**
- Damp Proof Membrane
- Ground Supported Slab

Standard Product Attributes

Length	< 2400mm
Width	< 1200mm
Thickness	25 - 300mm
Grades	EPS 70 - 100 Plustherm

Design Standards

All our Stylite Plustherm Expanded Polystyrene Flooring Insulation is manufactured in accordance to **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.**

Accreditations

We hold a British Board of Agrément Certificate which covers the applications of ground-supported or suspended concrete ground floors in new or existing dwellings or buildings of similar occupancy. Our BBA certificate offers further technical guidance, Certificate Number **- 04/4102.**

ISO 14001 CERTIFIED — British Assessment Bureau

ISO 9001 CERTIFIED — British Assessment Bureau

BBA APPROVAL INSPECTION TESTING CERTIFICATION — CERTIFICATE 04/4102

Product Overview

Stylite PlusTherm Flooring Insulation is manufactured from Expanded Polystyrene (EPS) and can be used in a wide variety of floor applications, both domestic and industrial, to meet or exceed Building Regulations for thermal performance. Stylite Plustherm is made from graphite infused Expanded Polystyrene giving it a enhanced performance thermal conductivity compared to standard white Expanded Polystyrene. The most common applications are above or below ground supported concrete slab, and suspended concrete or timber ground floors. The insulation boards are easy to install without the need for special tools.

Product Benefits

- ☑ Lambda from as low as **0.030 W/mK**
- ☑ Lightweight and easy to handle
- ☑ Highly cost effective insulation
- ☑ Can be used in all floor types
- ☑ No reduction in performance over time
- ☑ Use above or below DPM
- ☑ Minimal water absorption & permeability
- ☑ 100% recyclable
- ☑ No HFC's, CFC's or HCFC's

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

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Typical U-Values

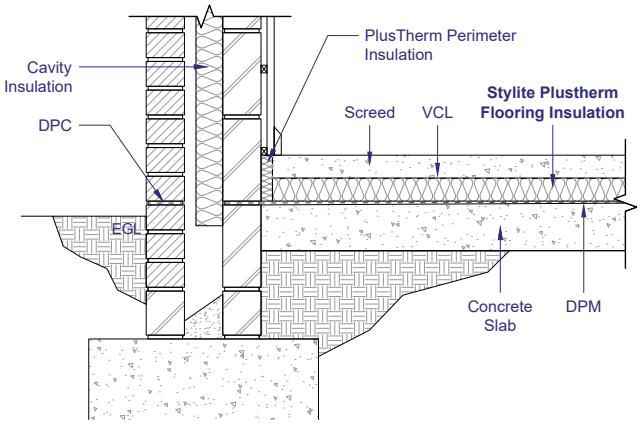
Stylite Plustherm Flooring Insulation is available in a range of different grades with varying compressive strengths. This means whatever the application there is a suitable Stylite EPS grade for almost every design requirement.

Here you can find a common application of Stylite Flooring Insulation Expanded Polystyrene and the U-values you can expect from using our Stylite Flooring Insulation.

The u-value of a completed floor will depend on the thickness of the products, the perimeter/area ratio and the floor type. Calculated u-values for typical application constructions in accordance with the Building Regulations are given below.

Typical Application

Above Ground Supported Slab - Screed Topping

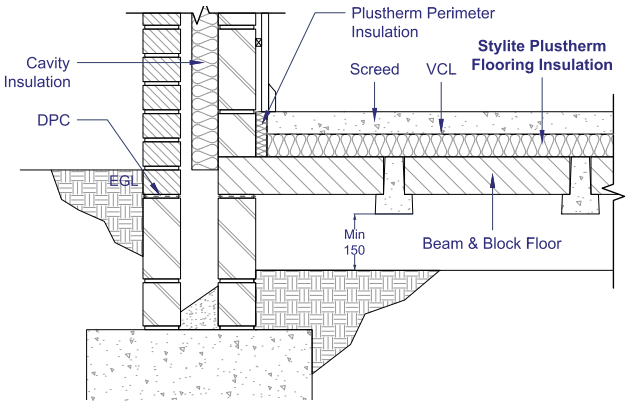


- 300 mm thick perimeter wall with U-value of 0.35 W.m–2.K–1.
- 100 mm concrete slab with conductivity 2.06 W.m–1.K–1 and a minimum 65 mm concrete screed with conductivity 1.15 W.m–1.K–1.
- Ground conductivity is 1.5 W.m–1.K–1.
- All other parameters are default values from BRE Report BR 443 : 2006.

Perimeter / Area	Required Thickness (W/mK)					
	0.22	0.20	0.18	0.15	0.13	0.10
0.2	40	55	70	100	130	190
0.4	75	90	105	135	165	230
0.6	90	105	125	150	180	245
0.8	100	110	130	160	190	250

Typical Application

Suspended Beam & Block Overlay - Screed Topping



- 300 mm thick perimeter wall with U-value of 0.35 W.m–2.K–1.
- 100 mm concrete beam and block floor with conductivity of 1.35 W.m–1.K–1 and 0.18 W.m–1.K–1 respectively
- Minimum 65 mm concrete screed with conductivity 1.15 W.m–1.K–1.
- Ground conductivity is 1.5 W.m–1.K–1.
- All other parameters are default values from BRE Report BR 443 : 2006.

Perimeter / Area	Required Thickness (W/mK)					
	0.22	0.20	0.18	0.15	0.13	0.10
0.2	40	55	70	100	130	200
0.4	75	85	100	135	165	235
0.6	80	95	110	145	175	245
0.8	85	100	115	150	180	250

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

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Specification Clause
All our Stylite Expanded Polystyrene product specifications are available on our website. Alternatively you can use our generic specification clause below to include Stylite Flooring Insulation in your design ;

The floor insulation shall be Stylite Plustherm Flooring Insulation System, EPS___, ___mm thick, 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:
E20 Formwork for in situ concrete -
200 Proprietary Underslab Insulation

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 sulfate based levelling screeds -
260 Floating Construction

P10 Sundry insulation/ proofing work -
250 Insulation Supported Between Floor Joists

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.

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Expanding Possibilities

Physical Properties	PlusTherm 70	PlusTherm 100
Thermal Conductivity (W/mK)	**0.030**	**0.030**
Compressive Strength @ 10% (kPa)	70	100
Bending Strength (kPa)	115	150
Water Vapour Permeability (mg Pa.h.m)	0.015 - 0.030	0.009 - 0.020
Water Vapour Diffusion Resistance (μ)	20-40	30-70
Reaction to Fire	E	E
Length Tolerance	L2	L2
Width Tolerance	W2	W2
Thickness Tolerance	T2	T2
Flatness Tolerance	P5	P5
Squareness	S2	S2

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**
BBA Certificate No. 04/4102

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 04/4102

6 PS

CE

A+ BRE

MADE IN BRITAIN

ISO 14001 CERTIFIED
British Assessment Bureau

ISO 9001 CERTIFIED
British Assessment Bureau

mpa British Precast Member

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