

**Stylite**

Bespoke and standard **UFH Routed Insulation** - Plustherm & White EPS

Construction - Insulation & building materials

Technical information

**V3\_16**

Pr\_25\_71\_63



# TECHNICAL

## UFH Routed Insulation Boards

The diagram shows a grid of insulation boards with various dimensions and a routed groove pattern. Dimensions include 16, 50, 50, 1200, 1200, 200, and 100. A specific groove layout is labeled 'P.100'.

- Lambda From 0.030 W/mK
- For use with any underfloor heating
- With different routed groove layouts
- Bespoke layouts available upon request
- 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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### Stylite Underfloor Heating Insulation

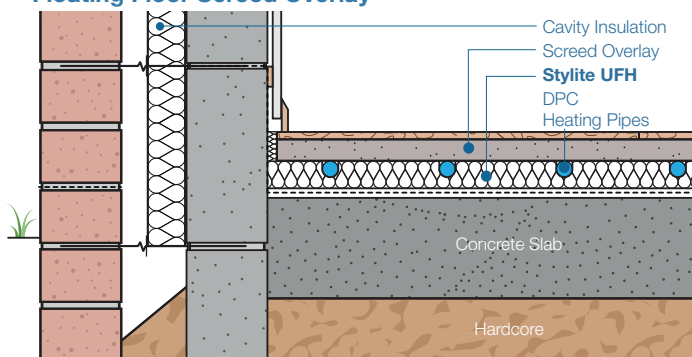
- **Lambda from 0.030 W/mK**
- **Lightweight**
- **Cost effective**
- **Can be used on all floor types**
- **Quick & easy installation**
- **Low profile performance**
- **Use in commercial & residential property**
- **Minimal water absorption & permeability**
- **100% recyclable**
- **No HFC's, CFC's or HCFC's**



**Stylite UFH Panels** are a new, innovative and practical low profile routed EPS board that allows you to lay your underfloor heating pipes directly into the insulation layer, with no need for fixtures. For use with underfloor heating systems and offering a brilliant low profile performance with excellent thermal & compressive values, Stylite UFH

boards are available in a variety of sizes. However we are able to design and cut to bespoke systems. These underfloor heating boards are often utilised with the use of spreader diffusion plates to further disperse the heat from the hot water pipes. We advise that any boards thinner than 25mm should be manufactured in EPS 150 upwards.

#### Floating Floor Screed Overlay



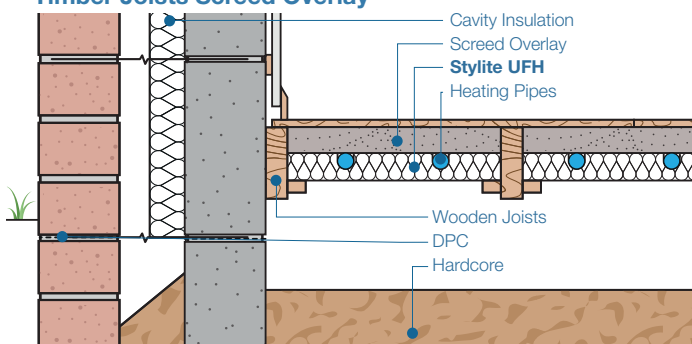
#### Compatibility

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](http://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.

#### Timber Joists Screed Overlay



#### Environmental Safety

EPS is non-toxic, non-irritant, 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 floor containing the boards will depend heavily on the type and nature of the build up.

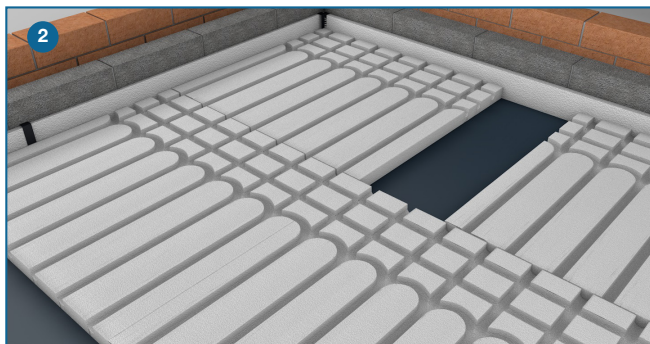
### Stylite UFH Installation Guide

Stylite UFH Insulation is designed for use with underfloor heating systems. Below are guidelines on the installation process. All considerations must be checked by your building surveyor to ensure they meet with the regulations for your specific build.

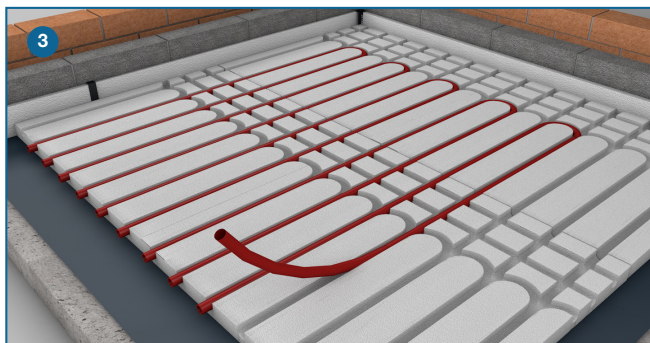
**Stylite UFH Boards can be used in a wide variety of floor builds. See our website or contact one of our experts for more details on installation for different build types.**



**Step 1** - A suitable damp proof membrane should be laid to resist moisture from the ground. Most DPM manufacturers specify that a 150mm overlap be left between sheets and sealed with tape. Perimeter edge pieces are cut and placed around the edges and taped at joints.



**Step 2** - Place your desired layout of **Stylite UFH boards** according to appropriate centres and returns to achieve the desired pipe layout.

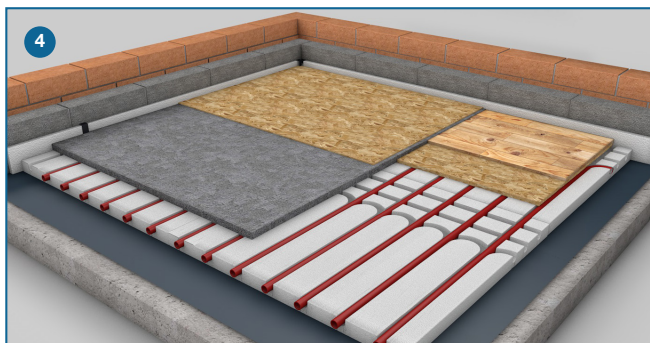


**Step 3** - Install the pipes according to the system guidelines. Once installed ensure the integrity of the pipe system by instruction of the heating system manufacturer.

**Step 4** - Once the pipes are laid, the appropriate screed or concrete can be poured and compacted following the relevant clauses of BS 8204-1 : 2003.

**Note** - Alternatively, you may use timber-based overlays with no screed.

You may now apply your choice of floor finish.



### - For Timber Joist Floor -

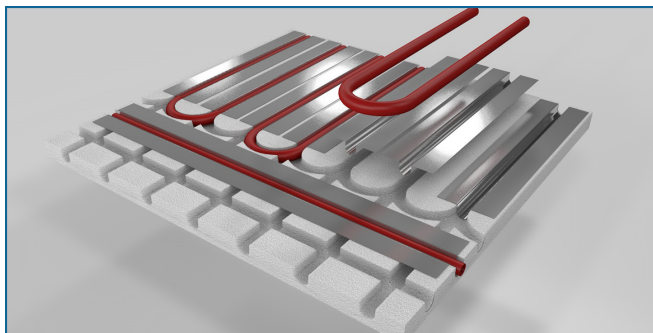
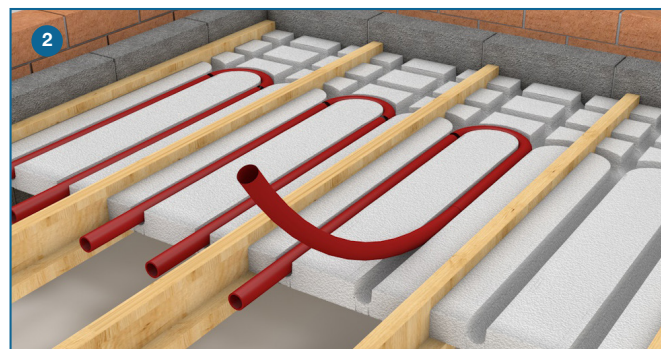
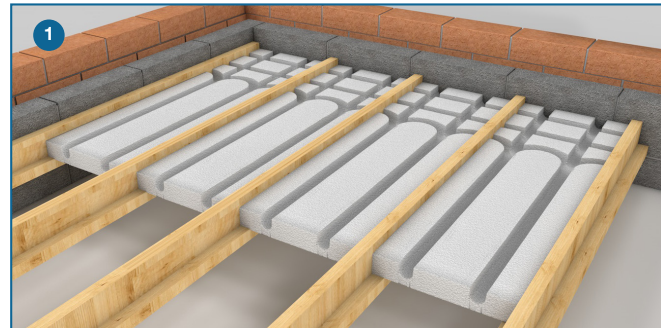
**Step 1** - Lay the **Stylite UFH Boards** in between your timber treated joists in the appropriate layout.

**Step 2** - Install your underfloor heating pipes into the grooves of the UFH board.

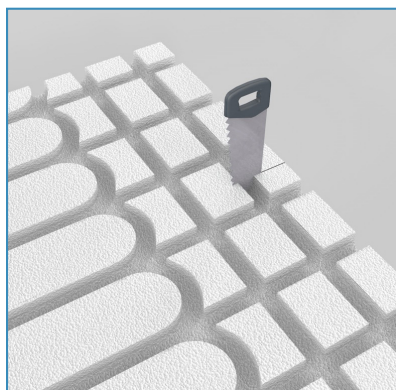
**Step 3** - Once the pipes are laid, the appropriate screed or concrete can be poured and compacted ( min 65mm ) following the relevant clauses of BS 8204-1 : 2003.

**Note** - Alternatively, you may use timber based overlays with no screed.

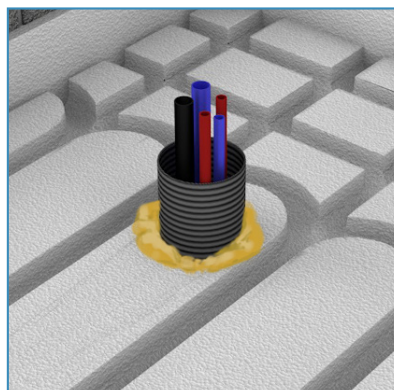
**Spreader plates** - Many underfloor heating designs will utilise defusion plates to help disperse the heat from the pipes. These are installed before laying the heating pipes.



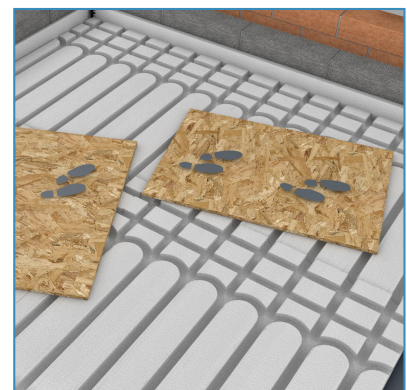
**Cutting Boards** - Stylite UFH boards may be cut to size using a sharp knife or fine tooth saw.



**Pipes** - Where possible, pipes must be contained in suitable ducting. Insulation must not come into contact with any electrical or hot pipes.



**Spreader Boards** - Do not walk directly on the UFH insulation boards. Ensure spreader boards are laid to protect them.





### Technical Specification

Features	EPS 70	EPS 100	EPS 150	EPS 200	EPS 250	EPS 300	Plustherm	Standard
<b>Thermal Conductivity</b> ( $\lambda_{90/90}$ )( $Wm^{-1}K^{-1}$ )	0.038	0.036	0.034	0.034	0.034	0.034	0.030	EN 13163
<b>Length Tolerance</b>	L1	L1	L1	L1	L1	L1	L1	EN 822
<b>Width Tolerance</b>	W1	W1	W1	W1	W1	W1	W1	EN 822
<b>Thickness Tolerance</b>	T1	T1	T1	T1	T1	T1	T1	EN 823
<b>Planarity Tolerance</b>	P2	P2	P2	P2	P2	P2	P2	EN 825
<b>Squareness</b>	S1	S1	S1	S1	S1	S1	S1	EN 824
<b>Bending Strength</b> (kPa)	115	150	200	250	300	350	150	EN 12089
<b>Reaction to Fire</b>	F	F	F	F	F	F	E	EN 13501-1
<b>Water Absorption</b> ( $mg Pa^{-1} h^{-1} m^{-1}$ )	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	EN 13163
<b>Dimensional Stability</b>	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	EN 1603
<b>Compressive Strength @ 10%</b> (kPa)	70	100	150	200	250	300	100	EN 826
<b>Compressive Strength @ 1 %</b> (kPa)	21	30	45	60	75	90	30	EN 13163
<b>BREEAM Rating</b>	A+	A+	A+	A+	A+	A+	A+	BRE

Dimensions	Length mm	Width mm	Thickness mm	Pipe Diameter mm
Stylite UFH Board	1200	< 1200	< 300	bespoke

For more information on the specific centres, returns and straight layouts of the different UFH Panels, please contact our sales team or visit our website. We can also cut bespoke designs if you cant find the exact layout you require.

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](http://www.styrene.biz)



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## Available Stylite Products

Building				Bespoke Cutting & Moulding
<b>Floors</b> Flooring insulation boards Suspended floor insulation Stylite Plustherm Underfloor heating boards Stylite Gridboard Void Fillers Ventilated Voidfillers	<b>Walls</b> External wall insulation EWI Railboards Cavity fill bead Cavity fill boards SIP's insulation Insulated plasterboard Stud cavity Insulation	<b>Roofing</b> Flat inverted Insulation SIP's insulation Tapered flat insulation Corrugated panels Rafter insulation Laminated Insulation Bonded Insulation	<b>Civil Engineering</b> Marine pontoon Stylite clayfill Voidfillers  <b>Special Laminates</b> 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	
<b>Domestic - Commercial - Industrial - Agricultural - Horticultural - Educational</b>				

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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**

