

Clayfill Clay Heave Protection

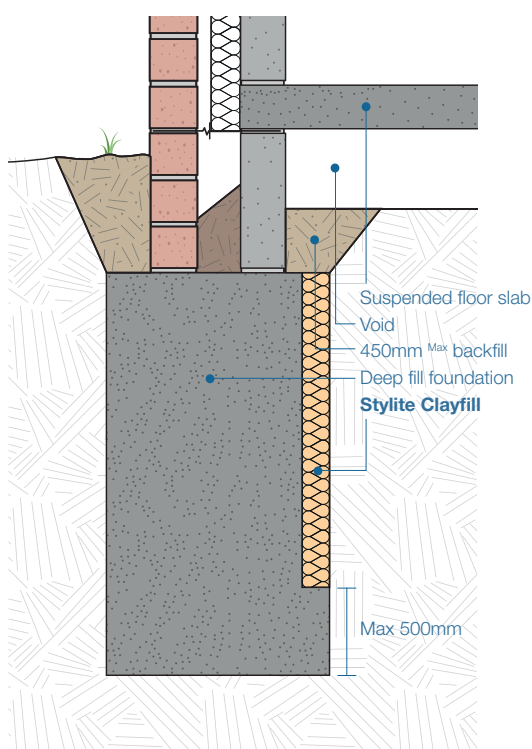
- For protection of Pile & Foundation
- Protects against :
 - Clay Heave
 - Soil Movement
- Low density compressible fill
- Long lasting protection
- Use in commercial & residential property
- Minimal water absorption & permeability
- 100% recyclable
- No HFC's, CFC's or HCFC's



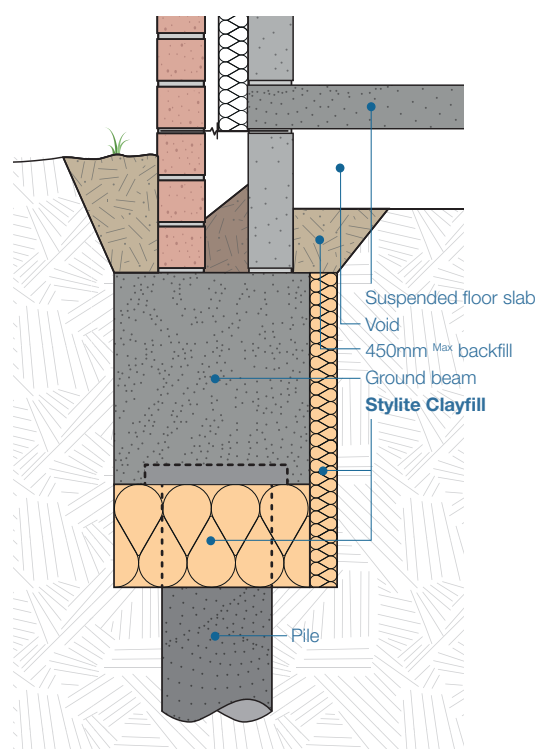
Stylite Clayfill is a proven way to protect foundations, below concrete ground beams in piled foundation constructions and at the verticle faces of deep trench foundations. The low density expanded polystyrene will protect foundations and piles against the pressure exerted by soil movement and from tree root growth. The cells in this specialist expanded polystyrene will compress within restrictions throughout the life of the structure acting as a defense between the ground and the foundation.



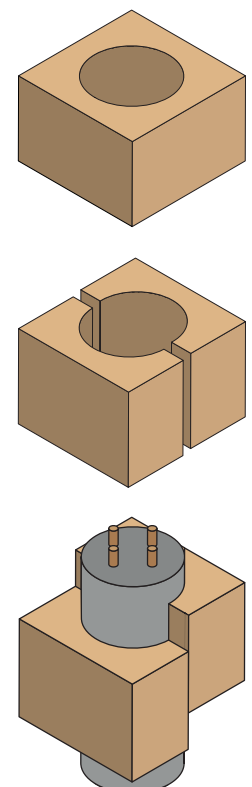
Typical build-up - Trench Fill



Typical build-up - Pile and Beam



Pile collar



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.

Clayfill Dimensions

The Stylite Clayfill comes in **50,100,150 & 200mm** thick and 2400x1200mm. The required depth of the board will vary depending on the potential ground movement and the allowable pressure limit of the foundation substrate.

It is important that the thickness of Stylite Clayfill required to resist the pressures exerted from the ground movements is correctly calculated. See the below diagram on how to determine the thickness of Stylite protection needed.

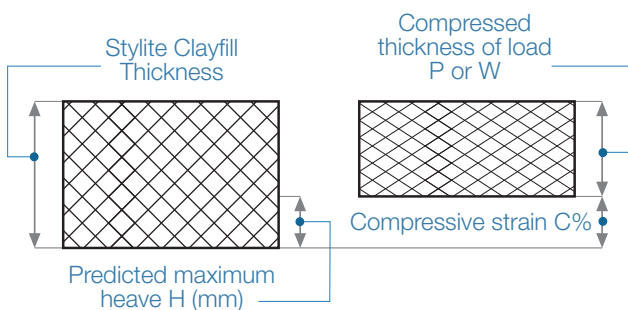
The following information is needed to determine the correct thickness of Stylite Clayfill for trench fill on the verticle facing :

- Maximum potential lateral ground movement
- Maximum acceptable lateral force on the concrete

The following information is needed to determine the correct thickness of Stylite Clayfill for ground beams and pile caps :

- Maximum potential verticle ground movement
- Maximum acceptable upward force on the concrete

This information is then used in the following formula to calculate the required thickness **T = 100 x H/C + 10**



Environmental Safety

EPS is non-toxic, non-irritant and odorless. 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.

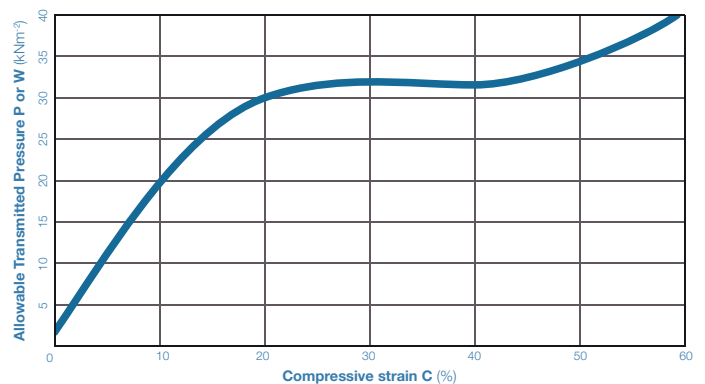
Deep Trench fill - Verticle Face of Foundation

Shrinkage Potential	Plasticity Index (%)	NHBC Void	Clayfill Thickness
High	40 - 60	35	100
Medium	20 - 40	25	50
Low	10 - 20	0	0

Pile Collars - Underneath Beam

Shrinkage Potential	Plasticity Index (%)	NHBC Void	Clayfill Thickness
High	40 - 60	150	250
Medium	20 - 40	100	175
Low	10 - 20	50	100

Please note the thicknesses given in the above tables are only esitimations, full calculations for thickness required should be conducted.



NHBC Recommendations

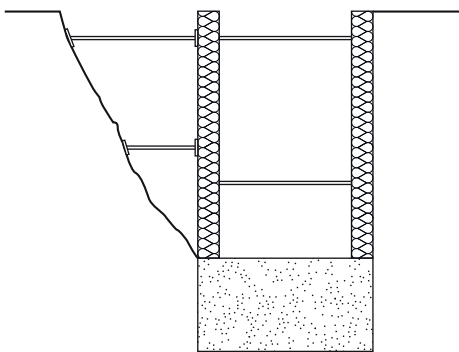
The NHBC Standards 2016 outlines requirements for foundations in trench fill, ground beams and piles when dealing with soil movements. The required voids demonstrated in table 7 of chapter 4.2 (building near trees) shows the potential change volume and the correlating void thickness requirements, however, it is important to remember that the Stylite Clayfill will deform under the load of wet concrete, this has been allowed for in the thickness tabel on page 2.

Stylite Clayfill Installation

The product is suitable for use on ground beams of a maximum depth of 600mm in piled construction and on the verticle face of trench fill foundations up to 2m deep.

Verticle faces of trench-fill foundations

1. The excavation must be founded below the ground movement zone with a 500mm concrete toe setting which will run flush with the Stylite Clayfill board.
2. With your stylite Clayfill board sat 500mm above the excavated trench depth struts will be used to prevent breakages and movement while pouring the concrete.



3. Internal supports must be provided, struts with adequate spreader plates.
4. External support may be provided by the verticle face of the excavation unless sharp projections could cause damage to the Clayfill boards. Then external struts must be used.
5. The boards must be adequately restrained to prevent uplifting during concrete pouring.

Specification

NBSPlus

This product is associated with the following NBS clauses:

E20 Formwork for in situ concrete

- 185 COMPRESSIBLE BOARD SUBSTRUCTURE FORMWORK

M10 Cement based levelling/ wearing screeds

- 290 FLOATING CONSTRUCTION

This product is associated with the following NBS clauses:

45-50-30/390 Compressible board substructure formwork

Concrete ground beams and pile caps

1. The excavated trench will be even and compacted, blinding may be required.
2. Your boards are laid in the bottom of the excavation, closley butted, making sure all the bottom of the trench is covered.
3. Small gaps will be filled with as-dug or granular material.
4. Where the concrete piles protrude into the excavation Clayfill boards should be cut to fit around pile colars tightly.
5. Once all your Clayfill boards have been laid in the bottom, concrete spacing blocks must be used to ensure the corect concrete depth.

The spacing blocks must be aranged correctly to distribute the load of the drying concrete sufficiently, making sure not to exceed 15kN-m².

Technical Specification

Features	Clayfill	Standard
Length Tolerance	L1	EN 822
Width Tolerance	W1	EN 822
Thickness Tolerance	T1	EN 823
Planarity Tolerance	P2	EN 825
Squareness	S1	EN 824

Dimensions	Length mm	Width mm	Thickness mm
Stylite Ventfill Board	2400	1200	50 < 200

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

Classification code : Pr 25_71_29_16

Recycling

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



Visit product webpage

