

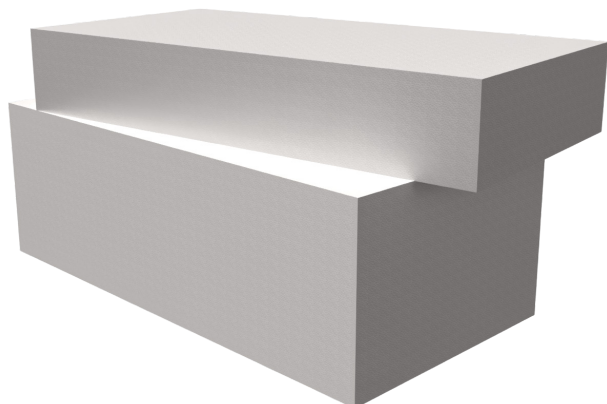
# EnviroFil



## COMPRESSIBLE FILL

Alleguard's EnviroFil is a closed cell, rigid cellular polystyrene (RCPS) compressible fill designed for use as an alternative to traditional fills for geotechnical applications.

The compressible properties of Alleguard EnviroFil allow it to alleviate vertical and lateral pressures posed on grade beams, structural slabs, along with other concrete structural elements as a result of expansive soil conditions, subgrade movement, and/or frost conditions.



## Alleguard Advantage

- Has a stable and consistent composition giving engineers the ability to select more specific performance requirements.
- Can be installed without the need for heavy machinery and tools, reducing installation overhead.
- No off-gassing and does not contain HFCs, CFCs or HCFCs.
- Does not contain organic materials, preventing rot and mold growth.

**Compressive Resistance**

Compressive resistance testing was conducted in general accordance with ASTM D6817/D6817M testing and was conducted as per ASTM D1621. Tests were carried out on 51mm x 51mm x 51 mm (2" x 2" x 2") specimens. Testing was carried out by QAI, a third-party testing organization, to showcase how EnviroFil reacts when it undergoes gradual ground loading conditions. The deformation in Alleguard Envirofil at 0.55 pcf by gradual compressive strain can be seen in Figure 1 below. This assessment can be viewed to help determine if Alleguard EnviroFil is a suitable fit for a given geotechnical project.

**Availability**

Alleguard's EnviroFil is made to order. Custom shapes along with standard blocks [maximum block size is 978mm x 1219mm x 2438mm (38.5" x 48" x 96")] and panels are available. Please contact your local territory manager for more information.

**Applications**

- Under-grade beams and related structural components
- Encompass the foundation and perimeter of structural slabs and frost walls

**Project Considerations**

When using Alleguard EnviroFil, the following shall be considered:

- Soil heave conditions that include the projected prolonged upward expansion of the ground below the structure
- Overtop slab thickness being set over the EnviroFil
- Overall structural weight impacting the EnviroFil
- The overall compressive strain that is to be designed for

**Thickness Estimate**

To estimate the thickness of EnviroFil required for a given project, the following equation can be used:

$$\text{EnviroFil Thickness} = \frac{\text{Soil Heave (mm)} \times 100}{\text{Overall EnviroFil Strain (\%)}}$$

Please note that project considerations shall be used to adjust the thickness of EnviroFil needed for a given project.

**EnviroFil Compressive Resistance**

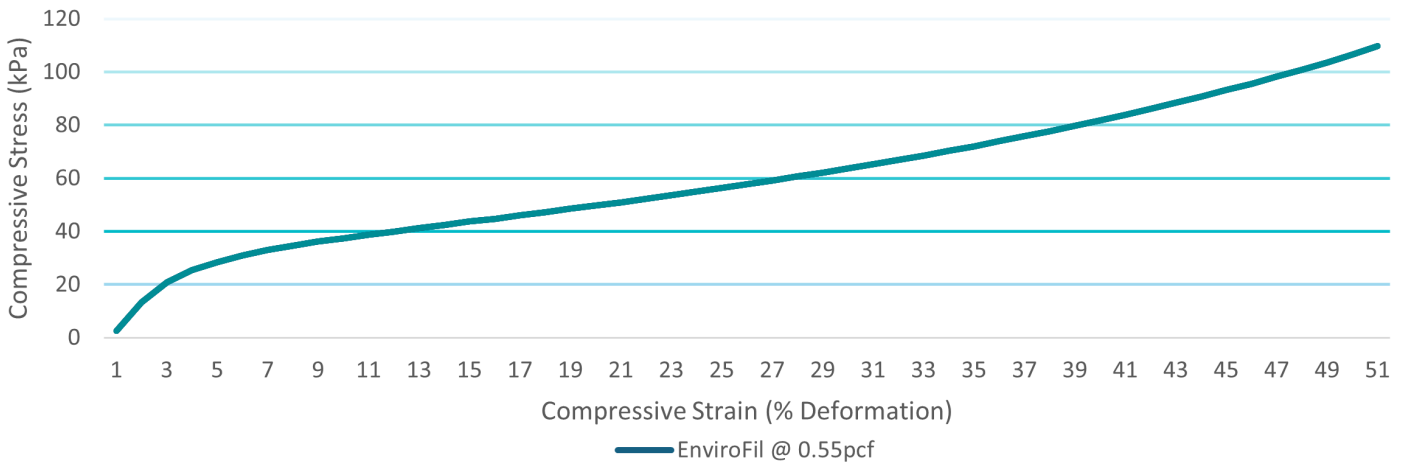


Figure 1. Alleguard EnviroFil at 0.55 pcf Compressive Resistance