

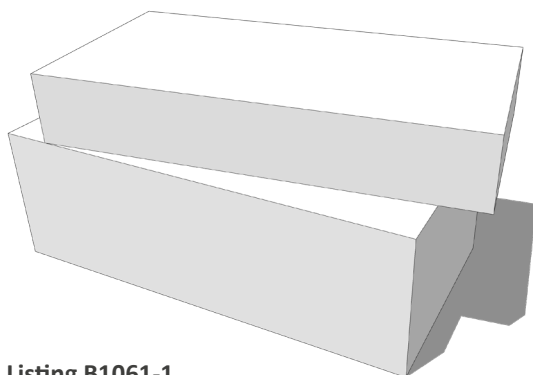
Geofoam Lightweight Fill Material



GEOTECHNICAL INSULATION

Alleguard's Geofoam is a closed cell, rigid cellular polystyrene (RCPS) geofoam designed for use as an alternative to traditional fills for geotechnical applications. Geofoam is 50 times lighter when compared to traditional fills with similar compressive strengths making it an attractive alternative for void fill.

Geofoam can be used on weak or soft soils eliminating the need to reach bedrock or to reduce the size of an embankment allowing for more usable space. It minimizes the settlement of soil along with reduced maintenance and installation cost reductions.



QAI Listing B1061-1

Alleguard Advantage

- Geofoam has high strength to density ratio with 1-2% density of soil with equivalent compressive strength.
- Has 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.
- Can be installed in any weather condition.
- Geofoam is inert, it does not break down and does not spread to surrounding soil contaminating it. Alternatively, it can also be dug up and reused.
- Improved sustainability through the use of reprocessed polystyrene foam (regrind) during manufacturing.

Availability

Geofoam is available in a wide variety of densities and compressive strengths. Custom shapes along with standard blocks [maximum block size is 38.5 x 48 x 96" (978 x 1219 x 2438mm)] and panels are available.

Applications

- Lightweight fill for construction on soft soils
- Bridge abutments
- Road embankments and sub grade fill
- Stadium and theatre seating
- Retaining walls
- Utilities protection
- Green roofs
- Noise and vibration dampening
- Pavement sub grade insulation
- Slope stabilization

The maximum continuous operating temperature for Geofoam is 158°F (70°C). EPS exposure to ultra violet (UV) is limited to a thin layer causing slight discoloration and surface dusting. The material underneath remains unaffected maintaining its properties. Prolonged exposure may cause minimal reduction in thickness. To avoid membrane adhesion issues, apply membrane right after installation or remove the UV affected material by brushing/ rasping the surface to expose unaffected EPS (avoid hydrocarbons and petroleum based products).

Warranty

Alleguard supports building owners, designers and contractors by offering a 20-year, limited thermal warranty on Geofoam product line. This warranty is available to the owner at the time the project is completed and is transferable to any subsequent owner during the 20-year period.

Physical Properties Table

	Standard		EPS12	EPS15	EPS19	EPS22	EPS29	EPS39	EPS46
Compressive Strength (Min.)	ASTM D1621	psi	5.8	12.7	21.2	23.4	31.9	44.7	58.8
	@ 10% Strain	(kPa)	(40)	(88)	(146)	(162)	(222)	(308)	(405)
	ASTM D1621	psi	5.1	11.2	18.4	20.4	29.4	40.9	54.1
	@ 5% Strain	(kPa)	(35)	(77)	(127)	(140)	(202)	(282)	(373)
	ASTM D1621	psi	2.2	5.0	11.1	11.8	12.3	15.2	26.4
	@ 1% Strain	(kPa)	(15)	(35)	(76)	(81)	(85)	(105)	(182)
Flexural Strength (Min.)	ASTM C203	psi	10.0	27.9	38.4	42.2	58.3	60.0	97.4
		(kPa)	(69)	(192)	(265)	(291)	(402)	(414)	(672)
Limiting Oxygen Index (Min.)	ASTM D2863	%	>24.0	>24.0	>24.0	>24.0	>24.0	>24.0	>24.0
Density (Min.)	ASTM D1622	lb/ft ³	0.70	0.99	1.38	1.52	1.84	2.51	2.89
		(kg/m ³)	(11.2)	(15.9)	(22.1)	(24.2)	(29.5)	(40.2)	(46.3)

¹ Alleguard Geofoam is tested as per ASTM D6817