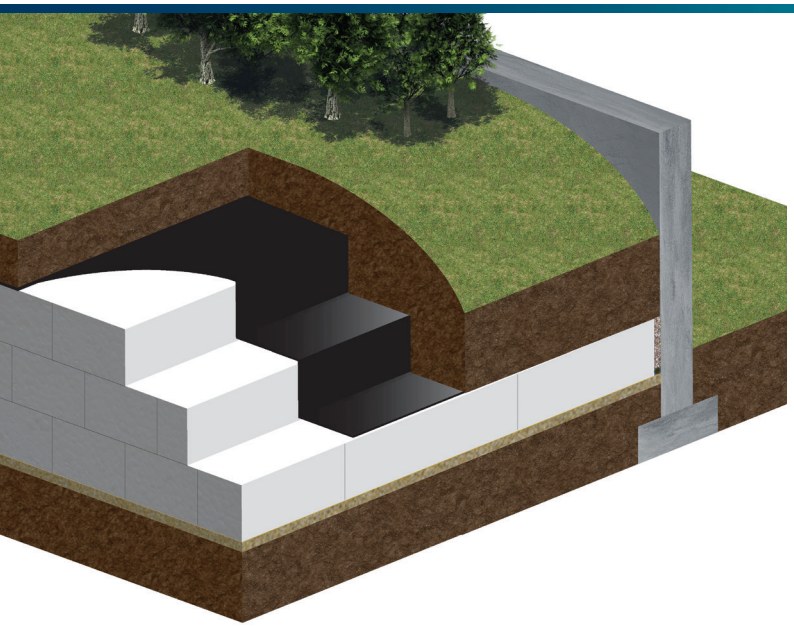
Engineered
Foam Products

Technical Datasheet

Geofoam Expanded Polystyrene
Civil Engineering Voidfill & Void Former



Key Features & Benefits

- Super lightweight alternative to other fills
- High compressive strength properties
- Easily cut on-site or supplied pre-engineered
- Control your costs with an engineered product
- Reduced imposed loads and lateral pressures
- Maximises onsite installation efficiency
- Lightweight material for on-site handling
- Long-lasting, strong, and stable
- Available in a range of densities
- A+ BRE Green Guide Rating
- 100% recyclable

Description

Geofoam Expanded Polystyrene (EPS) is a versatile, lightweight alternative to traditional fill materials such as soil or concrete. Due to its high compressive strength it is widely used in civil engineering applications to alleviate lateral pressures and reduce the need for pre-loading, surcharging and draining. It can also be used as a void former to replace some of the volume of concrete in applications such as floors and ramps.

Typical Applications

Due to its versatility Geofoam can be used in many applications, here are just a few examples:

- Voidfill
- Road construction
- Road widening
- Rail embankments
- Slope stabilisation
- Green roof gardens
- Concrete void forming
- Temporary access
- Retaining walls
- Bridge abutments
- Bridge infilling
- Utility protection
- Landscaping
- Cinema seating
- Steps and ramps
- Raising floors

Dimensions

Geofoam maximum block size:
2550mm x 1250mm x 1050mm.
Other sizes are available on request.

Installation Guide

Step 1 - Prepare the ground by excavating to the required depth, backfill and compact with suitable fill material to ensure a firm and level surface.

Step 2 - Install a sand blinding layer.

Step 3 - Geofoam blocks are then placed tightly together, each layer should be 'butt jointed', positioned with staggered joints without vertical or horizontal joints running through the installation.

Step 4 - To protect the Geofoam from possible contact with petroleum, solvents or hydrocarbons cover with a suitable geomembrane.

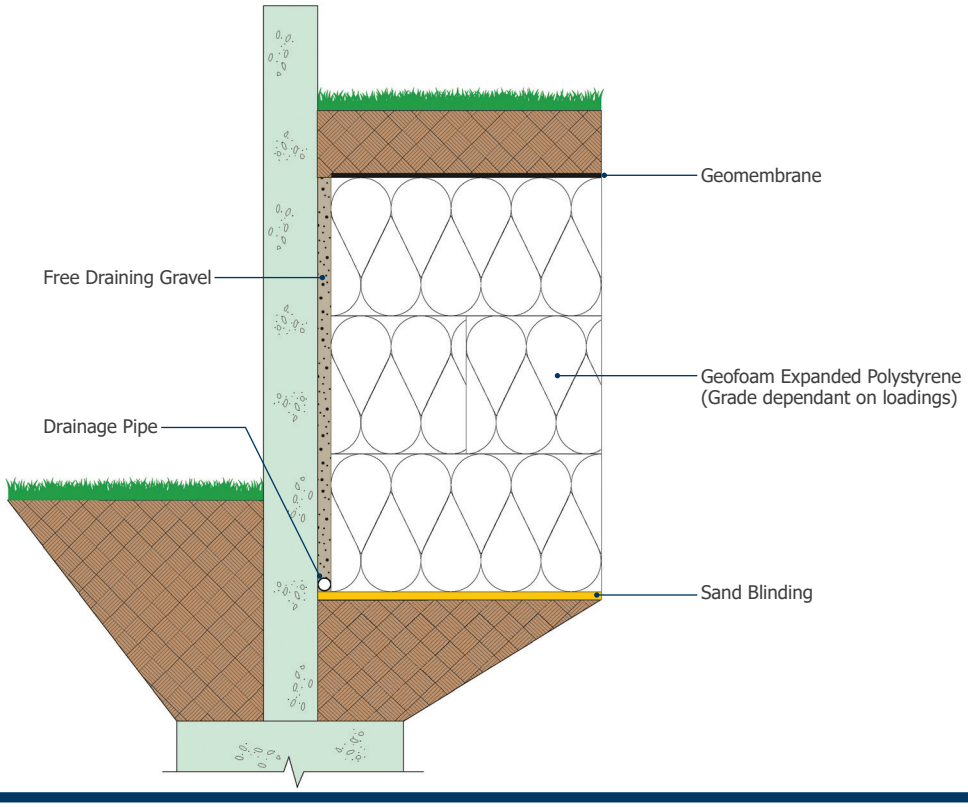
Step 5 - Backfill and quickly cover with the specified permanent overlying material.

Technical Specification

Physical Properties BS EN13163:2016 & BS EN14933:2007	EPS 70	EPS 100	EPS 150	EPS 200	EPS 300	EPS 400	EPS 500
Compressive Strength at 10% (kPa)	70	100	150	200	300	400	500
Compressive Strength at 2% (kPa) (Long term load)	21	30	45	60	90	120	150
Compressive Strength at 1% (kPa) (Short term load)	20	45	70	90	120	160	190
Nominal Density (kg/m3)	15	20	25	30	40	50	55
Thermal Conductivity (W/mK) (Lambda 90/90)	0.038	0.036	0.034	0.034	0.034	0.034	0.034
Sheer Strength (kPa)	55	75	100	125	225	300	375
Bending Strength (kPa)	115	150	200	250	450	600	750
Fire Classification (Euroclass)	E	E	E	F*	F*	F*	F*
Water Vapour Permeability (mg Pa.h.m)	0.015 - 0.030	0.009 - 0.020	0.009 - 0.020	0.006 - 0.015	0.006 - 0.015	0.006 - 0.015	0.006 - 0.015
Dimensional Stability	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5	DS (N) 5

*All grades of Geofoam are manufactured using Fire Retardant bead, however this grade hasn't been UKAS tested, hence the "F" classification.

Typical Application | Retaining Wall



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Sustainable Innovation