



CHEMA FOAM
BUILD YOUR DREAM

GEOFOAM

Geofoam is a cellular plastic material that is strong, but has very low density (1% of traditional earth materials). It is manufactured in block form and meets ASTM D6817, "Standard Specification for Rigid, Cellular Polystyrene Geofoam."

Geofoam is available in a range of Types to provide control of structural integrity and cost effectiveness. The information given is deemed to be timely, accurate, and reliable for the use of Foam-Control Geofoam. Each project using Foam-Control Geofoam should be designed by a professional engineer. The engineer or project specifications should be consulted to determine the ASTM D6817 Type required for your project loading conditions.



Technical Data

| Description | Unit | 12 Kg/m ³ | 15 Kg/m ³ | 19 Kg/m ³ | 22 Kg/m ³ | 29 Kg/m ³ | 39 Kg/m ³ | 46 Kg/m ³ |
|-------------------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Compressive Resistance 1% min | kPa | 15 | 25 | 40 | 50 | 75 | 103 | 128 |
| Elastic Modulus | kPa | 1500 | 2500 | 4000 | 5000 | 7500 | 10300 | 12800 |
| Flexural Strength | kPa | 69 | 172 | 207 | 240 | 345 | 414 | 517 |
| Water Absorption | Vol. % | 4.0 | 4.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 |
| Oxygen Index | Vol. % | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| Buoyancy Force | kg/m ³ | 990 | 980 | 980 | 980 | 970 | 960 | 950 |
| ASTM D6817 Compliance, Type | | EPS12 | EPS15 | EPS19 | EPS22 | EPS29 | EPS39 | EPS46 |

See ASTM D6817 Standard for test methods and complete information
Combined live and dead load stresses should not exceed the compressive resistance at

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Geofoam is used in ground fill applications where a lightweight fill material is required to reduce stresses on underlying or adjoining soils/structures.

Ready to Use.

Geofoam maximizes onsite installation efficiency: material arrives ready to place, no weather delays, material can be prefabricated or cut at the jobsite, no staging required, material can be inventoried, production efficiency improved, and it is easy to handle.

Design Loads.

For most applications, long-term design loads should not exceed the linear elastic range of Foam-Control Geofoam. Combined live and dead load stresses should not exceed the compressive resistance at 1% deformation.

In some specialty compressible applications, the compressive resistance at 5% and 10% deformation may be applicable. Please consult Geofoam Technical Bulletins for additional information.

In general earthwork applications (such as levees, dikes, berms, etc.) uplift buoyancy force must be counteracted with overburden or restraint devices, such as geogrids, geomembranes, hold down devices, etc.

Size and Shape.

Geofoam is produced in block form and is easily positioned at the work site. Standards sizes:

- 4' (1.2 m) widths
- 8' (2.4 m) up to 16' (4.8 m) lengths
- 1" (25 mm) to 36" (914 mm) thickness

Other sizes and fabrication can be provided by the manufacturer.

Exposure to Water and Water Vapor.

The mechanical properties of Geofoam are unaffected by moisture. Exposure to water or water vapor does not cause swelling.

Temperature Exposure/Flame Retardants.

Foam-Control Geofoam is able to withstand the rigors of temperature cycling, assuring long-term performance.

Although flame retardants used in the manufacture of Geofoam provide an important margin of safety, Geofoam must be considered combustible.

The maximum recommended long-term exposure temperature for Foam-Control Geofoam is 165°F (74°C).

Adhesives, Coatings, and Chemicals.

Solvents which attack Foam-Control Geofoam include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. If Foam-Control Geofoam is to be placed in contact with materials (or their vapors) of unknown composition, pretest for compatibility at maximum exposure temperature.

Proven to meet, or exceed, building codes.

Foam-Control Geofoam is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER11812-01. Foam-Control meets ASTM D6817, "Standard Specification for Rigid, Cellular Polystyrene Geofoam."

Termite Resistant

One of the most destructive forces anywhere is termites. It can be manufactured with Perform Guard, a proven and safe additive, that effectively resists termites.

Perform Guard meets ICC ES AC239,

"Acceptance Criteria for Termite-Resistant Foam Plastics".

Storage and Ballast.

Geofoam stands up well to normal short-term weather conditions encountered during installation.

Long-term exposure to sunlight causes yellowing and a slight embrittlement of the surface due to ultraviolet light. This has little effect on mechanical properties. If stored outdoors, cover Geofoam with opaque polyethylene film, tarps, or similar material.

Geofoam should be ballasted to prevent displacement by wind or high water conditions, both in storage and during all phases of placement.

Warranty.

Geofoam Licensees offer a product warranty ensuring physical properties.

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