TechData

Branch River 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." Branch River 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 Branch River geofoam. Each project using Branch River 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.

PRODUCT		BRANCH RIVER						
		12	**15**	**19**	**22**	**29**	**39**	**46**
Density[1], min.	lb/ft^3 (kg/m^3)	0.70 (11.2)	0.90 (14.4)	1.15 (18.4)	1.35 (21.6)	1.80 (28.8)	2.40 (38.4)	2.85 (45.7)
Compressive Resistance[1,2] @ 1% deformation, min.	psi psf (kPa)	2.2 320 (15)	3.6 520 (25)	5.8 840 (40)	7.3 1050 (50)	10.9 1570 (75)	15.0 2160 (103)	18.6 2680 (128)
Elastic Modulus, min	psi (kPa)	220 (1500)	360 (2500)	580 (4000)	730 (5000)	1090 (7500)	1500 (10300)	1860 (12800)
Flexural Strength[1], min.	psi (kPa)	10.0 (69)	25.0 (172)	30.0 (207)	35.0 (240)	50.0 (345)	60.0 (414)	75.0 (517)
Water Absorption by total immersion, max.,	vol. %	4.0	4.0	3.0	3.0	2.0	2.0	2.0
Oxygen Index[1], min.	vol. %	24	24	24	24	24	24	24
Buoyancy Force	lb/ft^3 (kg/m^3)	61.7 (990)	61.5 (980)	61.3 (980)	61.1 (980)	60.6 (970)	60.0 (960)	59.5 (950)
ASTM D6817 Compliance, Type		EPS12	EPS15	EPS19	EPS22	EPS29	EPS39	EPS46

[1] See ASTM D6817 Standard for test methods and complete information.

[2] Combined live and dead load stresses should not exceed the compressive resistance at 1% deformation.

Branch River 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.

Branch River 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 Branch River 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 Branch River 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.

Branch River 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 Branch River geofoam are unaffected by moisture. Exposure to water or water vapor does not cause swelling.

Temperature Exposure/Flame Retardants.

Branch River geofoam is able to withstand the rigors of temperature cycling, assuring long-term performance.

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

The maximum recommended long-term exposure temperature for Branch River geofoam is 165°F (74°C).

Adhesives, Coatings, and Chemicals.

Solvents which attack Branch River geofoam include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. If Branch River 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.

Branch River geofoam is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER40326-01. Branch River Insulation meets ASTM D6817, "Standard Specification for Rigid, Cellular Polystyrene Geofoam."

Termite Resistant.

One of the most destructive forces anywhere is termites. Branch River geofoam can be manufactured with borate, a proven and safe additive, that effectively resists termites.

Branch River geofoam with borate meets ICC ES AC239, "Acceptance Criteria for Termite-Resistant Foam Plastics".

Storage and Ballast.

Branch River 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 Branch River geofoam with opaque polyethylene film, tarps, or similar material.

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

Warranty.

Branch River Plastics, Inc. offer a product warranty ensuring physical properties.

BRANCH RIVER

Branch River geofoam products are manufactured by Branch River Plastics, Inc.

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