GEOFOAM CONCEPTS
GEOTECHNICAL GROUND FILL SOLUTIONS

EPS GEOFOAM PROPERTIES

Geofoam is a high-performance, lightweight, engineered fill material made up of closed cell expanded polystyrene (EPS). It is lightweight, strong, and has a very low density (1% of traditional earth materials.) It is manufactured in block form and all our manufacturing sources meets ASTM D6817, "Standard Specification for Rigid, Cellular Polystyrene Geofoam." EPS Geofoam is intended to be use in the following applications, soil fill, Slope Stabilization, Embankments, Retaining Structures, Utility Protection, Pavement Insulation, and Landscape Design but not limited to.
Geofoam is available in a range of Types to provide control of structural integrity and cost effectiveness.

PHYSICAL PROPERTY REQUIREMENTS OF EPS GEOFOAM

PER-ASTM D6817	Units		EPS-12	EPS-15	EPS-19	EPS-22	EPS-29	EPS-39	EPS-46
Density[1], min.	lb/ft^3		0.70	0.90	1.15	1.35	1.80	2.40	2.85
Compressive Resistance[1] min. @ 1% deformation	PSI (PSF)		2.2 (320)	3.6 (520)	5.8 (840)	7.3 (1050)	10.9 (1570)	15.0 (2160)	18.6 (2680)
Compressive Resistance[1] min. @ 5% deformation	PSI (PSF)		5.1 (730)	8.0 (1150)	13.1 (1890)	16.7 (2400)	24.7 (3560)	35.0 (5040)	43.5 (6260)
Compressive Resistance[1] min. @ 10% deformation	PSI (PSF)		5.8 (840)	10.2 (1470)	16.0 (2300)	19.6 (2820)	29.0 (4180)	40.0 (5760)	50.0 (7200)
Flexural Strength[1] min.	PSI		10.0	25.0	30.0	40.0	50.0	60.0	75.0
Elastic Modulus[1], min	PSI		220	360	580	730	1090	1500	1860
Oxygen Index[1], min.	Volume %		24.0	24.0	24.0	24.0	24.0	24.0	24.0
Buoyancy Force	lb/ft^3		61.7	61.5	61.3	61.1	60.6	60.0	59.5
Water Absorption[1] by total immersion, max.,	Volume %		4.0	4.0	3.0	3.0	2.0	2.0	2.0
R-value[1], Thermal Resistance per Inch, ASTM-C518	25°F	°F.ft2.h/Btu	3.6	4.4	4.5	4.8	5.0	5.0	5.1
	40°F	°F.ft2.h/Btu	3.4	4.2	4.3	4.6	4.8	4.8	4.9
	75°F	°F.ft2.h/Btu	3.2	3.9	3.9	4.2	4.4	4.4	4.5

***For Geofoam applications the design load stresses should not exceed 1% strain for combined live and dead loads.**
****See ASTM D6817 Standard for test methods and complete information.**
"Foam Concepts is the distributor of EPS Geofoam and does provide technical advice for its use and applications. However, it is the responsibility of the user to determine if EPS Geofoam is suitable for the use and application."

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