

Geofoam is expanded polystyrene (EPS) manufactured into large lightweight blocks. The primary function of geofoam is to provide a lightweight void fill below a highways, bridge approaches, embankments, plaza decks, or parking lots. EPS Geofoam minimizes settlement on underground utilities. Geofoam is also used in much broader applications, some of the major ones are lightweight fill, green roof fill, compressible inclusions, and even tapered drainage systems.

SHELTER ENTERPRISES EPS GEOFOAM PROPERTIES

DESIGN VALUES	ASTM D6817 ¹						
	EPS # EPS Name EPS Type	EPS 15 1.0# Type I	EPS 19 1.25# Type VIII	EPS 22 1.5# Type II	EPS 29 2.0# Type IX	EPS 39 2.5# Type XIV	EPS 46 3.0# Type XV
MINIMUM DENSITY (as per ASTM standards)	lb/ft ³ (kg/m ³)	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% DEFORMATION, min.	psi psf (kPa)	3.6 520 (25)	5.8 835 (40)	7.3 1050 (50)	10.9 1570 (75)	15.0 2160 (103)	18.6 2680 (128)
ELASTIC MODULUS, min.	psi (kPa)	360 (2500)	580 (4000)	730 (5000)	1090 (7500)	1500 (10300)	1860 (12800)
FLEXURAL STRENGTH, min.	psi (kPa)	25.0 (172)	30.0 (207)	35.0 (240)	50.0 (345)	60.0 (414)	75.0 (517)
WATER ABSORPTION (by total immersion)	maximum volume %	4.0	3.0	3.0	2.0	2.0	2.0
OXYGEN INDEX	minimum volume %	24.0	24.0	24.0	24.0	24.0	24.0
BUOYANCY FORCE	lb/ft ³ (kg/m ³)	61.5 (980)	61.3 (980)	61.1 (980)	60.6 (970)	60.0 (960)	59.5 (950)

ADDITIONAL PROPERTIES FOR COMPRESSIVE RESISTANCE

COMPRESSIVE RESISTANCE @ 5% DEFORMATION, min.	psi psf (kPa)	8.0 1150 (55)	13.1 1890 (90)	16.7 2400 (115)	24.7 3560 (170)	35.0 5040 (241)	43.5 6260 (300)
COMPRESSIVE RESISTANCE @ 10% DEFORMATION, min.	psi psf (kPa)	10.2 1470 (70)	16.0 2300 (110)	19.6 2820 (135)	29.0 4180 (200)	40.0 5760 (276)	60.0 7200 (345)

¹ See ASTM D6817 Standard for test methods and complete information