



Physical Properties Polyethylene Foam Comparison (ArPlank vs Synergy 1000)

Physical Properties†	Test Method	ETHAFOAM™ SYNERGY™ 1000 Polyethylene Foam		ArPlank EPE13 Molded Expanded Polyethylene Bead Foam		ArPlank EPE15 Molded Expanded Polyethylene Bead Foam	
		Direction	Value	Direction	Value	Direction	Value
Density	ASTM D3575, Suffix W, Method B; ISO 845	Vertical	pcf 1.8	Isotropic (All Directions)	pcf 1.3	Isotropic (All Directions)	pcf 1.5
Compression Set (50% compr.) (25% compr.)	ASTM D3575, Suffix B, EN/ISO 1856	Vertical	< 20% < 10%	Isotropic (All Directions)	15% 3%	Isotropic (All Directions)	13% 4%
Compressive Creep (1000 hrs @ 73°F [23°C])	ASTM D3575, Suffix BB	Vertical	< 10% @ 2.0 psi	Isotropic (All Directions)	< 10% @ 2 psi	Isotropic (All Directions)	< 10% @ 2 psi
Compressive Deflection @ 10% @ 25% @ 50%	ASTM D3575, Suffix D	Average	psi 6 9 18		psi 6.5 8.8 16.6		psi 8.0 10.3 18.4
Thermal Conductivity @ 75°F (24°C)	ASTM D3575, Suffix V; EN 28301; ISO 2581	Vertical	(K) BTU-in/ft2-hr-°F 0.37	Isotropic (All Directions)	(K) BTU-in/ft2-hr-°F 0.26	Isotropic (All Directions)	(K) BTU-in/ft2-hr-°F 0.24
Water Absorption	ASTM D3575, Suffix L; ISO 2896; ASTM C272		lb/ft2 0.3 < 3% by volume		% (vol)/lb/ft2 0.02 <5% by volume		% (vol)/lb/ft2 0.02 <5% by volume
Buoyancy	ASTM D3575, Suffix AA		pcf 58		pcf 60.6		pcf 59.5
Tensile Strength @ peak	ASTM D3575, Suffix T; ISO 1798	Average	psi 32	Isotropic (All Directions)	psi 40	Isotropic (All Directions)	psi 45
Tensile Elongation	ASTM D3575, Suffix T; ISO 1798	Average	68%	Isotropic (All Directions)	38%	Isotropic (All Directions)	35%
Tear Strength	ASTM D3575, Suffix G	Average	lb/in 9	Isotropic (All Directions)	lb/in 14	Isotropic (All Directions)	lb/in 16