

Typical Physical Properties of RayLite® EPS Insulation

Specification Reference			ASTM C578-95	Type I	Type VIII	Type II	Type IX
Property		Units	ASTM Test	1#	1.25#	1.5#	2#
Density, Minimum		(PCF)	C303 or D1622	0.90	1.15	1.35	1.80
Thermal Conductivity K factor	at 25° F at 40° F at 75° F	BTU/(hr.) (sq. ft.)(F/in.)	C177 or C518	0.23 0.24 0.26	0.22 0.235 0.255	0.21 0.22 0.24	0.20 0.21 0.23
Thermal Resistance Values R	at 25° F at 40° F at 75° F	per inch thickness		4.35 4.17 3.85	4.54 4.25 3.92	4.76 4.55 4.17	5.00 4.76 4.35
Strength Properties							
Compressive 10% Deformation		psi	D1621	10-14	13-18	15-21	25-33
Flexural		psi	C203	25-30	32-38	40-50	55-75
Tensile		psi	D1623	16-20	17-21	18-22	23-27
Shear		psi	D732	18-22	23-25	26-32	33-37
Shear Modulus		psi	-	280-320	370-410	460-500	600-640
Modulus of Elasticity		psi	-	180-220	250-360	320-360	460-500
Moisture Resistance							
WVT		perm. in.	E96	2.0-5.0	1.5-3.5	1.0-3.5	0.6-2.0
Absorption (vol.)		%	C272	less than 4.0	less than 3.0	less than 3.0	less than 2.0
Capillarity		-	-	none	none	none	none
Coefficient of Thermal Expansion		in./(in.)(F)	D696	0.000035	0.000035	0.000035	0.000035
Maximum Service Temp		° F	-				
Long-Term				167	167	167	167
Intermittent				180	180	180	180