

HOUSTON FOAM PLASTICS

TYPICAL PHYSICAL PROPERTIES OF EPS INSULATION

Typical Physical Properties of EPS Insulation							
Specification Reference: ASTM C578-06							
Property	Units	ASTM TEST	Type I	Type VIII	Type II	Type IX	Type XIV
Density, minimum	pcf	D303 or D1622	0.90	1.15	1.35	1.80	2.40
Thermal Resistance at 25° F	at 1 inch thickness		4.20	4.40	4.60	4.80	
R-Value**** at 40° F			4.00	4.20	4.40	4.60	
at 75° F			3.60	3.80	4.00	4.20	4.20
Strength Properties							
Compressive 10% Deformation	psi	D 1621	10-14	13-18	15-21	25-33	40
Flexural	psi	C 203	25-30	30-38	40-50	50-75	60
Tensile	psi	D 1623	16-20	17-21	18-22	23-27	
Sheer	psi	D 723	18-22	23-25	26-32	33-37	
Sheer Modulus	psi		230-320	370-410	460-500	600-640	
Modulus of Elasticity	psi		180-220	250-310	320-360	460-500	
Moisture Resistance							
WVT	perm.in.	E 96	2.0-5.0	1.5-3.5	1.0-3.5	0.6-2.0	2.5
Absorption(vol.)	%	C 272	less than 4.0	less than 3.0	less than 3.0	less than 2.0	less than 2.0
Capillarity			none	none	none	none	none
Co-efficient of							
Thermal Expansion	in/(in.)(F)	D696	0.000035	0.000035	0.000035	0.000035	0.000035
Maximum Service Temp °.F							
Long-term exposure			167	167	167	167	167
Intermittent exposure			180	180	180	180	180
Oxygen Index	%	D2863	24.0	24.0	24.0	24.0	24.0
Buoyancy	lb/ft ³		60	60	60	60	60

* R-value means the resistance to heat flow. The higher the R-value, the greater insulating power.

** These are minimum R-values. Higher values can often be achieved. Please ask your HFP representative for details.

