

## PHYSICAL PROPERTIES OF DYTHERM PHENOLIC RIGID FOAM INSULATION

Property	Test Method	Unit	Typical Values			
Nominal Density	ASTM D1622	lb/ft <sup>3</sup>	2.3	3.75	5.0	7.5
Thermal Conductivity at +50°F	ASTM C518 (initial)	Btu·in/hr·ft <sup>2</sup> ·°F	0.145	0.20	0.208	0.222
Closed Cell Content	ASTM D2856 Method B	%	≥95	≥95		
Operating Temperature Upper Limit		°F	+248	+248	+248	+248
Operating Temperature Lower Limit		°F	-292	-292	-292	-292
Minimum Compressive Strength at +73°F	ASTM D1621					
	Parallel	Psi	22	46	86	145
	Perpendicular	Psi	15	25	64	116
Minimum Tensile Strength at +73°F	ASTM D1623					
	Parallel	Psi	22	44	75	116
	Perpendicular	Psi	16	31	51	87
Linear Dimensional Stability	ASTM D2126					
	+199.4°F for 24 hour	%	≤ 1	≤ 1	≤ 1	≤ 1
	-22°F for 24 hours	%	≤ 1	≤ 1	≤ 1	≤ 1
Linear Expansion Coefficient	ASTM D696	ft/ft·K	40-70 x10 <sup>-6</sup>	40-70 x10 <sup>-6</sup>	40-70 x10 <sup>-6</sup>	40-70 x10 <sup>-6</sup>
Friability for 10 mins	ASTM C421	%	< 30	< 40	< 30	< 10
Surface Burning Characteristics	ASTM E84					
	Flame Spread @ 2 in thick	20				
	Smoke Density @ 2 in thick	30				

(1) All properties are measured at 70°F – 75°+ unless otherwise indicated.

(2) These are nominal values obtained from representative product samples, and are subject to normal manufacturing variances.

(3) Average value through the foam cross section.

(4) Frequent and severe thermal cycling can produce dimensional changes significantly greater than those listed here. Special design considerations must be made in systems subject to severe cycling.

(5) This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

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