P300 Polyisocyanurate Foam

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Product Description

P300 is a rigid, closed cell, preformed, unfaced, polyisocyanurate foam material (polyiso). This CFC and HCFC free product provides outstanding physical properties in applications having a service temperature between –297 and +300°F (-183 and +149°C). P300 is teal in color and is available in blocks, sheets and fabricated shapes.

Physical Properties [1, 2]	ASTM Method	Typical Values [3] English	Metric
Density	D1622	3.0 lb/ft³	47.9 kg/m³
Thermal Conductivity, k-factor[4]	C518		
Initial at 75°F (24°C)		0.165 (BTU·in)/(hr·ft²·°F)	0.024 W/(m·°C)
Aged 10 days at 158°F (70°C)		0.185 (BTU·in)/(hr·ft²·°F)	0.027 W/(m·°C)
Thermal Conductivity, R-value per inch[4]	C518		
Initial at 75°F (24°C)		6.0 (hr·ft²·°F)/BTU	1.06 (m²·°C)/W
Aged 10 days at 158°F (70°C)		5.4 (hr·ft²·°F)/BTU	0.96 (m²·°C)/W
Compressive Strength / Modulus	D1621		
Parallel to Rise		65 / 1,400 lb/in²	448 / 9,646 kPa
Perpendicular to Rise[5]		40 / 800 lb/in²	275 / 5,512 kPa
Shear Strength / Modulus	C273		
Parallel to Rise		35 / 450 lb/in²	241 / 3,100 kPa
Perpendicular to Rise[5]		30 / 400 lb/in²	206 / 2,756 kPa
Tensile Strength / Modulus	D1623		
Parallel to Rise		60 / 1,711 lb/in²	413 / 11,789 kPa
Perpendicular to Rise[5]		50 / 1,054 lb/in²	344 / 7,263 kPa
Flexural Strength / Modulus	C203		
Parallel to Rise		88 / 2,189 lb/in²	606 / 15,082 kPa
Perpendicular to Rise[5]		47 / 1,013 lb/in²	324 / 6,980 kPa
Closed Cell Content (by volume)	D6226	95%	
Water Absorption (by volume)	C272	0.6%	
Water Vapor Transmission	E96	3.0 perms·in	4.4 ng/Pa·s·m
Dimensional Stability[6] (length / volume change)	D2126		
+158°F(70°C), 97 ± 3% relativity humidity, 14 days		+0.5 / +2.2%	
-40°F(-40°C), ambient relativity humidity, 14 days		-0.1 / +0.2%	
+212°F(100°C), ambient relative humidity, 14 days		-0.2 / -0.1%	
Coefficient of Linear Thermal Expansion	E228		
0 to +250°F (-17 to +121°C)		35 x 10^{-6} in/in·°F	63 x 10^{-6} mm/mm·°C
Hot Surface Performance at 300°F (149°C)	C411	Pass	
Polyisocyanurate Insulation Requirements	C591	Grade 2, Type III compliant	