

TECHNICAL DATA SHEET



HeatShield® PUR 65 ●●●●● Polyurethane Insulation

HeatShield® POLYURETHANE (PUR) is a Rigid closed cell and CFC Free Foam withstand outstanding physical properties at service temperature environments from -183°C to 149°C (-297°F to 300°F)

PHYSICAL PROPERTIES	TEST METHOD	TYPICAL VALUES
Density	ASTM D 1622	65 Kg/m ³ (4.06 lb/ft ³)
Thermal Conductivity		
Initial Value @ 10 °C	ASTM C 518	0.022 W/m. °C (0.153 Btu-in/h*ft ² °F)
Aged Value @ 10 °C		0.024 W/m. °C (0.166 Btu-in/h*ft ² °F)
Initial Value @ 24 °C		0.024 W/m. °C (0.166 Btu-in/h*ft ² °F)
Aged Value @ 24 °C		0.026 W/m. °C (0.180 Btu-in/h*ft ² °F)
Thermal Resistance Per Inch		
Initial Value @ 10 °C	ASTM C 518	1.155 m ² . °C/W (0.200 Btu/(hr-ft ² -°F)
Aged Value @ 10 °C		1.058 m ² . °C/W (0.183 Btu/(hr-ft ² -°F)
Initial Value @ 24 °C		1.058 m ² . °C/W (0.183 Btu/(hr-ft ² -°F)
Aged Value @ 24 °C		0.977 m ² . °C/W (0.169 Btu/(hr-ft ² -°F)
Average Compressive Strength @10% Relative Deformation		
Parallel to rise	ASTM D 1621	630 kPa (91.37 lb/in ²)
Perpendicular to rise		520 kPa (75.42 lb/in ²)
Compressive Modulus		
Parallel to rise	ASTM D 1621	22150 kPa (3212.59 lb/in ²)
Perpendicular to rise		18283 kPa (2651.66 lb/in ²)
Tensile Strength		
Parallel to rise	ASTM D 1623	610 kPa (88.47 lb/in ²)
Perpendicular to rise		470 kPa (68.17 lb/in ²)
Tensile Modulus		
Parallel to rise	ASTM D 1623	20090 kPa (2913.81 lb/in ²)
Perpendicular to rise		15479 kPa (2245.06 lb/in ²)
Shear Strength		
Parallel to rise	ASTM C 273	550 kPa (79.77 lb/in ²)
Perpendicular to rise		465 kPa (67.44 lb/in ²)
Shear Modulus		
Parallel to rise	ASTM C 273	6770 kPa (981.91 lb/in ²)
Perpendicular to rise		5725 kPa (830.16 lb/in ²)
Closed Cell Content	ASTM D 2856	>92 %
Water Absorption (By Volume)	ASTM D 2842	1.5 %
Average Water Vapor Transmission	ASTM E 96	1.10 (grains/h*ft ²)
Dimensional Stability (Linear Change)		
24 hours @ -20 °C	ASTM D 2126	Negligible
24 hours @ +110 °C		0.95 %
24 hours @ +70 °C 100% RH		1.4 %
Service Temperature Limit		-183 °C to 149 °C (-297°F to +300°F)
Linear Coefficient of Expansion nm/m·K	ASTM D-696	40-70x10 ⁻⁶
Surface Burning Characteristics		
Flammability Class	BS 4102	B2
Average Time & Extent of Burning (mm)	ASTM D-635:91	< 5
Surface Spread of Flame		Self-Extinguishing

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