



THE SMITHSON COMPANY, INC.

PolyNiche is an Expanded Polystyrene (EPS) product with a liquid-applied, waterproof membrane and an acrylic polymer finish, used in the construction industry. It's primary function is to act as an in-wall recessed device used in constructing shower enclosures. The EPS of PolyNiche meets or exceeds ASTM C578 "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation".

Typical Properties of PolyNiche Expanded Polystyrene (EPS)				
Property		Units	ASTM	Value
Nominal Density		pcf		3.0lb
Minimum Density		pcf	D1622	2.8
Range Density		pcf	D1622	2.8-3.2
Thermal Resistance (k Value)	At 25 Degrees F	BTU/hr. (sq. ft.) (F/in.)	C518	0.17
	At 40 Degrees F			0.18
	At 75 Degrees F			0.20
Thermal Resistance (R Value)	At 25 Degrees F	at 1" thickness		5.10
	At 40 Degrees F			5.05
	At 75 Degrees F			4.60
Strength Properties	Compressive Deformation 10%	psi	D1621	60
	Flexural	psi	C203	75
	Tensile	psi	D1623	34
	Shear	psi	D732	52
	Shear Modulus	psi		940
	Elastic Modulus	psi		1860
Dimensional Stability		max change %	D2126	<20
Moisture Resistance	Water Vapor Permeance	at 1" max, perms.	E96	2.5
	Water Absorption	max, volume %	C272	2.0
	Capillary Action			None
Coefficient of Thermal Expansion		in./(in.)(F)	D696	0.000035
Maximum Service Temperature	Long – Term			167
	Intermittent			180
Oxygen Index		min, volume %	D2863	24
Flame Spread Index			E84	<20
Smoke Spread Index			E84	150 – 300

PolyNiche's liquid applied waterproof membrane meets the following ANSI standards:
ANSI A118.10 (specification for waterproof membrane beneath thin set, tile, and stone).

PolyNiche acrylic polymer finish properties meets or exceeds the following ASTM Standards :

ASTM E84 Surface Burning, ASTM C67 Freeze/Thaw, ASTM D2247 Humidity, ASTM D3273 Mold/Mildew, ASTM D968 Abrasion, ASTM B117 Salt Spray, ASTM G53 Weathering, ASTM G23 Weathering

Please refer to PolyNiche Info Data Sheet for additional information including : Uses, warnings, standards and code compliance.

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