



6 Lb. Polyisocyanurate Foam Sheets

Part # - 448

1" Thick, 6 lb/ft³. Pattern-Making and Mold less Designs

This polyisocyanurate foam is a rigid, closed cell foam used in insulation, core material and carving applications where strength is important. With similar properties to our 624/625 6lb Mix and Pour foam, you can easily cut and shape with a sharp knife and sandpaper. Pattern-making has never been quicker! You can also glue together several sheets form blocks as thick as necessary for shaping functional mold less-type parts.

Design Considerations

This foam is designed for use in environments where temperatures range from -297°F to +300°F (-183°C to +149°C). However, in non-laminated applications where this foam is exposed to temperatures exceeding 140°F (60°C) and/or relative humidity in excess of 70%, allowances for foam expansion may need to be incorporated into the engineering design. Regardless of operating conditions, a qualified design engineer should review all foam applications.

This foam, like all cellular plastics, will degrade upon prolonged exposure to sunlight. Cover foam material in order to block ultraviolet radiation and prevent degradation. Other coverings to protect exposed foam surfaces from the elements and to meet applicable fire regulations may also be required.

Applications

- Laminated building wall and roof panels
- Truck bodies, trailers, shipping containers and railcars
- FRP panels, tanks and shelters
- Pultrusion and infusion processes
- Plugs, patterns and carved products

Environmental Data

This foam is specifically formulated to provide excellent physical properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, this foam is manufactured with hydrocarbon blowing agents which have no ozone depletion and no global warming potential.

Safety and Handling

Polyisocyanurate Foam Sheets contain ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and clothing should be worn. Individuals should wash with soap and water before eating or drinking. Individuals should observe conditions of good industrial hygiene and safe working practice. For more detailed instructions on handling, please see the MSDS.

Physical Properties (1)(2)(3)	ASTM Method	Typical Values (4)	
		English	Metric
Density, Average	D1622	6.0 lb/ft ³	96 kg/m ³
k-factor (5)			
Initial at 75°F (24°C)	C518	0.180 BTU in/hr ft ² °F	.026 W/m °C
Aged 10 days at 158°F (70°C)		0.192 BTU in/hr ft ² °F	.028 W/m °C
R-value/inch			
Aged 10 days at 158°F (70°C)		5.2 Hr ft ² °F/BTU	0.92 m ² °C/W
Compressive Strength			
Parallel	D1621	142 lb/in ²	978 kPa
Perpendicular		121 lb/in ²	834 kPa
Compressive Modulus			
Parallel	D1621	4,773 lb/in ²	32,886 kPa
Perpendicular		3,093 lb/in ²	20,621 kPa
Shear Strength			
Parallel	C273	82 lb/in ²	565 kPa
Perpendicular		64 lb/in ²	441 kPa
Shear Modulus			
Parallel	C273	672 lb/in ²	4,630 kPa
Perpendicular		571 lb/in ²	3,934 kPa
Tensile Strength			
Parallel	D1623	126 lb/in ²	868 kPa
Perpendicular		116 lb/in ²	799 kPa
Tensile Modulus			
Parallel	D1623	3,729 lb/in ²	25,692 kPa
Perpendicular		3,415 lb/in ²	23,529 kPa
Closed Cell Content (6)	D2856	90%	
Water Vapor Transmission	E96	2.4 perms/in	4.3 ng/Pa S m
Dimensional Stability (volume change)			
158 °F (70 °C)+97% R.H./7 days	D2126		+1.7%
212 °F (100 °C)+Ambient R.H./7 days			+0.5%
-40 °F (-40 °C)+Ambient R.H./7 days			-0.4%
Surface Burning Characteristics (7)			
Flame Spread up to 6+(15.23 cm)	E84-03		<25
Smoke Developed up to 6+(15.23 cm)			<450

- (1) Data shown are average values obtained from representative production samples, unless otherwise indicated.
- (2) The suitability of this product for any particular application is the responsibility of the user. The potential user is responsible for performing any pertinent test required to determine the product's suitability for the intended application.
- (3) All properties measured at 74°F (23°C) unless otherwise indicated.
- (4) To be used only as a guide for engineering.
- (5) K-factors will vary with and use conditions.
- (6) Freeze-thaw cycling in wet environments may cause destruction of unprotected foam's closed cell structure, resulting in the deterioration of physical properties.
- (7) Numerical Flame Spread and Smoke Developed ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions. This material is combustible and will burn when exposed to large fire sources.