

ELFOAM[®] P600

POLYISOCYANURATE FOAM

Product Description

Elfoam P600 is a 6.0 lb/ft³ (96 kg/m³), rigid, unfaced, closed cell polyisocyanurate foam supplied as blocks, sheets, shapes and custom parts for a variety of insulation, core material and carving applications. Polyisocyanurate foam (*polyiso*) is similar to polyurethane foam but offers greater dimensional stability over a wider service temperature range.

Elfoam P600 is manufactured in bunstock form 16" (40cm) thick with a 48" (122cm) width in 96" (244cm) lengths. Cut sheets are offered in thicknesses from 1/8" to 8" (.32cm to 20cm) in 1/32" (.08cm) increments. Custom sizes and fabricated parts up to 16" (40cm) thick and 192" (488cm) in length are available for customers wanting to eliminate in-house cutting, handling, piecing and scrap disposal. Contact the Indianapolis Sales Office for additional information.

Design Considerations

Elfoam P600 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 P400 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.

Elfoam, 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

Elfoam P600 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, Elfoam P600 is manufactured with hydrocarbon blowing agents which have no ozone depletion and no global warming potential.

Safety

All persons who work with Elfoam products should follow proper handling procedures. The Elfoam Material Safety Data Sheet (MSDS) contains information on the proper handling, storage and use of this material. A copy of this MSDS may be downloaded at www.elliottfoam.com or obtained by calling the Indianapolis Sales Office.

Availability

All Elfoam product support, samples, pricing and orders are coordinated by the Indianapolis Sales Office. Please call **(800) 545-1213** for details. Additional Elfoam product data sheets may also be downloaded at www.elliottfoam.com.

* Application testing is often required to determine suitability of the foam for a specific application. The potential user should perform pertinent testing to determine the suitability of the product for the intended application. Final determination of fitness of the product for any particular use is the responsibility of the buyer.

NOTE: Elliott Company of Indianapolis Inc. (Elliott) believes the information and recommendations herein to be accurate and reliable as of date of publication. However, since any assistance furnished by Elliott with reference to the proper use and disposal of its products is provided without charge and since use conditions are not within its control, Elliott assumes no obligation or liability for such assistance. No warranty, expressed or implied, regarding accuracy or correctness is given and Elliott expressly disclaims any implied warranties including the implied warranties of merchantability or fitness for a particular use. Since use conditions and government regulations may vary from one location to another and may change with time, it is the buyer's responsibility to determine whether Elliott products are appropriate for buyer's use, and to assure the buyer's workplace and disposal procedures are in compliance with law, regulations, ordinances, and other government enactments applicable in the jurisdiction having authority over the buyer's operations.



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Manufacturer/Fabricator of ELFOAM Polyiso & Polyurethane Products

Product Description

Elfoam P600 is a rigid, unfaced, closed cell polyisocyanurate foam material. This CFC and HCFC free polyiso product provides outstanding physical properties at service temperature environments between -297°F to +300°F (-183°C to 149°C). Elfoam P600 is supplied in standard and custom blocks, sheets and fabricated shapes.

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)	C518		
Initial at 75°F (24°C)		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	D1621		
Parallel		142 lb/in ²	978 kPa
Perpendicular		121 lb/in ²	834 kPa
Compressive Modulus	D1621		
Parallel		4,773 lb/in ²	32,886 kPa
Perpendicular		3,093 lb/in ²	20,621 kPa
Shear Strength	C273		
Parallel		82 lb/in ²	565 kPa
Perpendicular		64 lb/in ²	441 kPa
Shear Modulus	C273		
Parallel		672 lb/in ²	4,630 kPa
Perpendicular		571 lb/in ²	3,934 kPa
Tensile Strength	D1623		
Parallel		126 lb/in ²	868 kPa
Perpendicular		116 lb/in ²	799 kPa
Tensile Modulus	D1623		
Parallel		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)	D2126		
158°F (70°C) + 97% R.H./7 days		+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)	E84-03		
Flame Spread up to 6" (15.23 cm) .		<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 age 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.

NOTE: The information presented herein is offered in good faith as accurate, but without warranty, expressed or implied, regarding accuracy or correctness. Conditions of use and suitability of the product for particular uses are beyond the control of Elliott Company of Indianapolis Inc., therefore all risks of the use of this product are assumed by the user.

FOR MORE INFORMATION OR PRODUCT SAMPLES CALL

1-800-545-1213

OR VISIT

www.elliottfoam.com



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