

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

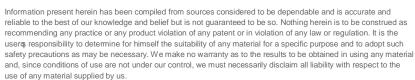
Polyisocyanurate Foam Sheets contain ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and clothing should be worn. Individuals should wash with soap and water before eating or drinking. Individuals should observe conditions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

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| Physical Properties (1)(2)(3) | ASTM Method | Typical Values (4) | |
|---------------------------------------|-------------|------------------------------------|--------------------------|
| | | English | Metric |
| Density, Average | D1622 | 6.0 lb/ft ³ | 96 kg/m3 |
| 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 | D0400 | +1.7% | |
| 212 °F (100 °C)+Ambient R.H./7 days | D2126 | +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 | <2 | 25 |
| Smoke Developed up to 6+(15.23 cm) | | <4 | 50 |

- (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 products 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 and use conditions.
- (6) Freeze-thaw cycling in wet environments may cause destruction of unprotected foams closed cell structure, resulting in the deterioration of physical properties.
- (7) Numerical Mame Spread+and moke 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.



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