

TRYMER[®] 400L Polyisocyanurate Foam

TRYMER[®] 400L polyisocyanurate foam is a cellular polymer supplied in bunstock form. It is ideal for applications in which a lightweight, high-density core material is needed. This product is easily fabricated into sheets and other shapes and is less brittle than conventional polyisocyanurate foams, for improved handling.

Applications

TRYMER[®] 400L foam is used extensively in composite panel applications. It has a low index compared to conventional polyisocyanurate foams, a feature that offers improved shear, tensile and flexural strengths, and allows better adhesion to facers using standard adhesives.

The foam is also compatible with most thermoset resin adhesives, including vinyl esters and epoxies.

ITW can provide general guidelines and recommendations for TRYMER[®] 400L foam. Call 1-800-231-1024 or contact your local ITW representative for details. Some typical applications include:

- Core material for insulated architectural and structural panels
- Core material for factory built panelized construction systems
- Insulation for shipping containers, trucks or railcars
- Core material for boats, containers, trucks, and railcar components

SIZE

Height:	14" (35.5 cm)
Width:	48" (122 cm)
Length:	96" (244 cm)

Custom lengths are also available. Contact your local ITW representative for details.

PHYSICAL/CHEMICAL PROPERTIES

TRYMER[®] 400L foam exhibits the properties and characteristics indicated in Table 1 when tested as represented.

Like all cellular polymers, this product will degrade upon prolonged exposure to sunlight. A covering must be used to block ultraviolet radiation and prevent degradation. Other coverings to protect the foam from the elements and to meet applicable fire regulations may also be required. Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

ENVIRONMENTAL DATA

TRYMER[®] 400L foam is specifically formulated to provide excellent thermal insulation properties without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, TRYMER[®] 400L foam is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

FIRE PROTECTION

Consideration should be given to the benefits of and the costs of additional fire protection gained by installing automatic fire detection, alarm and suppression systems.

Consultation with local building code officials, design engineers/specifiers or insurance personnel is recommended before application.

Safety Considerations

TRYMER[®] 400L foam requires care in handling. All persons who work with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and handling guide contain information on the safe handling, storage and use of this material. For a copy of the MSDS, call 1-800-231-1024, visit www.itwinsulation.com or contact your local ITW representative.

Fabrication/Installation

TRYMER[®] 400L foam is easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, ITW recommends that qualified designers or consultants design the total system. Contact a local ITW representative or access the literature library at www.itwinsulation.com for more specific instructions.

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Table 1

Physical Properties of TRYMER® 400L Polyisocyanurate Foam					
Property and Test Method		Value	Property and Test Method		Value
Density, ASTM D1622, lb/ft ³ (kg/m ³)		4.1 (57.7)	Closed Cell Content, ASTM D2845, %		95
Compressive Strength, ASTM D1621, lb/in ² (kPa), parallel to rise		75 (517)	k-Factor, ASTM C518, Btu-in/hr-ft ² -°F (W/m ² ·°C), aged 180 days		0.19 (0.027)
Compressive Modulus, ASTM D1621, lb/in ² (kPa), parallel to rise		1300 (8963)	R-Value per inch, ASTM C578, °F-ft ² -h/Btu (m ² -°C/W), aged 180 days		5.3 (0.93)
Shear Strength, ASTM C273, lb/in ² (kPa), average of parallel to rise and extruded directions		40 (276)	Dimensional Stability, ASTM D2126, % change		0.02
Shear Modulus, ASTM C273, lb/in ² (kPa), parallel to rise		500 (3447)	At -30°F (-36°C) 7 days length, % linear change, max		-0.25
Tensile Strength, ASTM D1623, lb/in ² (kPa), 3D average		75 (517)	At 158°F (70°C)/ 97% relative humidity, 7 days length, % linear change, max		-1.47
Tensile Modulus, ASTM D1623, lb/in ² (kPa), parallel to rise		2400 (16547)	At 200°F (38°C), 7 days length, % linear change, max		
Flexural Strength, ASTM C203, lb/in ² (kPa), parallel to rise		100 (689)	Water Absorption, ASTM C272, % by vol., 24-hour immersion		<0.7
Flexural Modulus, ASTM C203, lb/in ² (kPa), parallel to rise		3000 (20684)	Service Temperature, °F (°C)		-297 to +300 (-183 to +149)
			Surface Burning Characteristics, ASTM E84, Flame Spread/Smoke Developed, FS/SD		10/90 up to 8" thickness

Availability

TRYMER® 400L foam is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-231-1024.

Technical Services

ITW can provide technical information to help address questions when using TRYMER® 400L foam. Technical personnel are available at 1-800-231-1024.

- For Technical Information: 1-800-231-1024
- For Sales Information: 1-800-231-1024
- ITW Insulation Systems
- 1370 East 40th Street, Building 7, Suite 1, Houston, TX 77022-4104
- www.itwinsulation.com

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COMBUSTIBLE: Protect from high heat sources. Local building codes may require a protective or thermal barrier. For more information, consult MSDS, call ITW at 1-800-231-1024 or contact your local building inspector.

Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for mold formation. No material supplier including ITW can give assurance that mold will not develop in any specific system.