

# TRYMER™ 1600 Polyisocyanurate Insulation

TRYMER™ 1600 insulation is a polyurethane modified polyisocyanurate cellular material. The rigid insulation is supplied in the form of bunstock for fabrication into sheets and other shapes for a variety of thermal insulation and specialty applications.

TRYMER™ 1600 insulation features improved dimensional stability over a wider range of temperatures than standard polyurethane insulation. TRYMER™ insulation is not a known nutrient source for mold and mildew.

## Applications

TRYMER™ 1600 insulation is used extensively in industrial, commercial and architectural design applications. TRYMER™ 1600 insulation has a broad service temperature of -297°F to +300°F (-183°C to +149°C). Typical applications for TRYMER™ 1600 insulation include:

- core material for custom decorative design displays
- core material for insulated doors
- core material for nonstructural panels
- insulation inserts for window frames

ITW can provide general guidelines and recommendations for TRYMER™ 1600 insulation. For additional information, visit [www.itwinsulation.com](http://www.itwinsulation.com), call 1-800-231-1024 or contact your local ITW representative.

SIZE	
Height:	24" (61 cm)
Width:	48" (122 cm)
Length:	96" (244 cm) 160" (406 cm)

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

## PHYSICAL PROPERTIES

TRYMER™ 1600 insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented.

Consultation with local code officials and design engineers/specifiers is recommended before application.

As with all cellular polymers, TRYMER™ 1600 insulation will degrade upon prolonged exposure to sunlight. A covering to block ultraviolet radiation must be used to prevent degradation. Other coverings to protect the insulation from the elements may be required.

## ENVIRONMENTAL DATA

TRYMER™ 1600 insulation 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™ 1600 insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

## SAFETY CONSIDERATIONS

TRYMER™ 1600 insulation requires care in handling. All persons working with this material must know and follow the proper

handling procedures. The current Material Safety Data Sheet (MSDS) and General Handling Recommendations for TRYMER™ contain information on the safe handling, storage and use of this material. For copies of these documents, visit the literature library at [www.itwinsulation.com](http://www.itwinsulation.com), call 1-800-231-1024 or contact your local ITW representative.

## Installation

TRYMER™ 1600 insulation is specifically formulated for easy fabrication into various sizes and shapes to meet specific design needs.

Because of the critical technical design aspects in many applications, ITW recommends contacting qualified designers to specify the total system. For more specific instructions, contact a local ITW representative or access the literature library at [www.itwinsulation.com](http://www.itwinsulation.com).

## Availability

TRYMER™ 1600 insulation is distributed through ITW's extensive Authorized Fabricator Network. For more information, call: 1-800-231-1024

## Technical Services

ITW can provide technical information to help address questions when using TRYMER™ 1600 insulation. Technical personnel are available at: 1-800-231-1024

**TABLE 1**

<b>Physical Properties of TRYMER™ 1600 Polyisocyanurate Insulation</b>			
<b>Property<sup>(1)</sup> and Test Method<sup>(2)</sup></b>	<b>Value</b>	<b>Property<sup>(1)</sup> and Test Method<sup>(2)</sup></b>	<b>Value</b>
Density <sup>(3)</sup> , ASTM D1622, lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	1.65 (26.4)	Closed Cell Content, ASTM D2856, %, min.	90
Compressive Strength <sup>(3)</sup> , ASTM D1621, lb/in <sup>2</sup> (kPa)		Water Absorption, ASTM C272, 24-hr immersion, % by volume	<0.7
Parallel to rise – thickness	17 (117)	Water Vapor Permeability, ASTM E96, perm-inch (ng/Pa•s•m)	4.0 (5.8)
Perpendicular to rise – width	9 (62)	Dimensional Stability <sup>(3), (5)</sup> , ASTM D2126	
Perpendicular to rise – length	17 (117)	At -40°F (-40°C), 7 days	
Compressive Modulus <sup>(3)</sup> , ASTM D1621, lb/in <sup>2</sup> (kPa)		Length, % change	-0.3
Parallel to rise – thickness	410 (2,830)	Volume, % change	0.2
Perpendicular to rise – width	340 (2,346)	At -10°F (-23°C), 7 days	
Perpendicular to rise – length	480 (3,312)	Length, % change	-2.5
Shear Strength, ASTM C273, lb/in <sup>2</sup> (kPa)		Volume, % change	2.4
Parallel and perpendicular, avg	13 (90)	At 158°F (70°C), 7 days	
Shear Modulus, ASTM C273, lb/in <sup>2</sup> (kPa)		Length, % change	1.5
Parallel and perpendicular, avg	150 (1,035)	Volume, % change	3.0
Tensile Strength, ASTM D1623, lb/in <sup>2</sup> (kPa)		At 158°F (70°C)/97% R.H., 7 days	
Parallel to rise – thickness	18 (124)	Length, % change	3.0
Flexural Strength, ASTM C203, lb/in <sup>2</sup> (kPa)		Volume, % change	3.6
Parallel to rise	22 (151)	At 300°F (149°C), 7 days	
Flexural Modulus, ASTM C203, lb/in <sup>2</sup> (kPa)		Length, % change	4.9
Parallel to rise	400 (2,750)	Volume, % change	5.8
k-factor, ASTM C518, Btu•in/hr•ft <sup>2</sup> •°F (W/m <sup>2</sup> •°C)		Service Temperature <sup>(6)</sup> , °F (°C)	-297 to +300 (-183 to +149)
Aged 180 days @ 75°F (24°C)	0.19 (0.027)	Color	Light Grey
R-Value <sup>(6)</sup> /in., ASTM C518, hr•ft <sup>2</sup> •°F/Btu (m <sup>2</sup> •°C/W)			
Aged 180 days @ 75°F (24°C)	5.3 (0.93)		

- (1) Unless otherwise indicated, data shown are typical values obtained from representative production samples. This data may be used as a guide for design purposes, but should not be construed as specifications. For property ranges and specifications, consult your ITW representative.
- (2) Average value through insulation cross section.
- (3) R means resistance to heat flow. The higher the R-value, the greater the insulating power.
- (4) Frequent and severe thermal cycling can produce dimensional changes significantly greater than those stated here. Special design consideration must be made in systems that cycle frequently.
- (5) Above 300°F, discoloration and charring will occur, resulting in an increased k-factor in the discolored area.

- **For Technical Information: 1-800-231-1024**
- **For Sales Information: 1-800-231-1024**
- ITW Insulation Systems
- 1370 East 40<sup>th</sup> Street, Building 7, Suite 1,  
Houston, TX 77022-4104
- [www.itwinsulation.com](http://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.