

# TRYMER™ 2500 Polyisocyanurate Insulation

TRYMER™ 2500 insulation is a modified polyisocyanurate cellular material supplied in the form of bunstock for fabrication into sheets, pipe, tank and vessel covering and other shapes for a variety of thermal insulation applications. Although similar in physical form to polyurethane insulations, TRYMER™ 2500 has better dimensional stability over a wider range of temperatures. TRYMER™ 2500 has been specifically formulated to provide excellent thermal insulation properties without the use of CFC or HCFC blowing agents.

## Applications

TRYMER™ 2500 is used extensively in industrial and commercial applications within the service temperature range of -297°F to +300°F (-183°C to +149°C). Because of the critical technical design aspects of many of these applications, qualified designers or consultants should design the total system. ITW can provide general guidelines and recommendations on many typical applications for TRYMER™ 2500. Call 1-800-231-1024 or contact your local ITW representative for details. Some typical applications include:

- Pipe, tank and vessel insulation
- Fabricated pipe fitting insulation
- Core material for architectural and structural panels
- Insulation for shipping containers, trucks or rail cars
- Core material for factory built panelized constructions
- Flat or tapered boardstock for roof insulation

## SIZE

Height:	24" (61 cm)
Width:	48" (122 cm)
Length:	36" (91 cm)

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

## PHYSICAL/CHEMICAL PROPERTIES

Like all cellular plastics, this product will degrade upon prolonged exposure to sunlight. A covering to block ultraviolet radiation must be used to prevent this degradation. Other coverings to protect the insulation 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™ 2500 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™ 2500 insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

## FIRE PROTECTION

Consideration should be given to the benefits of and 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™ 2500 polyiso-cyanurate insulation requires some care in handling. All persons who work with these materials must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) contains additional information on the safe handling, storage and use of this material. A copy of the MSDS can be obtained by calling 1-800-231-1024 or contacting your local ITW representative.

## Installation

TRYMER™ 2500 insulation 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](http://www.itwinsulation.com) for more specific instructions.

## Availability

TRYMER™ 2500 insulation 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™ 2500 insulation. Technical personnel are available at 1-800-231-1024.

# Product Information

TRYMER™ 2500 complies with ASTM C591, Grade 2, Type II

## TRYMER 2500 Polyisocyanurate Insulation

PHYSICAL PROPERTIES <sup>(1)</sup>	ASTM METHOD	ENGLISH UNITS	VALUES <sup>(2)</sup>	METRIC UNITS	VALUES <sup>(2)</sup>
<b>Density</b> <sup>(3)</sup>	D 1622	lb/ft <sup>3</sup>	2.5	kg/m <sup>3</sup>	40.0
<b>Compressive Strength</b> <sup>(3)</sup>	D 1621	lb/in. <sup>2</sup>		kPa	
Parallel to Rise (Thickness)			39		268
Perpendicular to Rise (Width)			30		206
Perpendicular to Rise (Length)			40		275
<b>Compressive Modulus</b>	D 1621	lb/in. <sup>2</sup>		kPa	
Parallel to Rise (Thickness)			790		5446
Perpendicular to Rise (Width)			490		3377
Perpendicular to Rise (Length)			1000		6894
<b>Shear Strength</b>	C 273	lb/in. <sup>2</sup>		kPa	
Parallel and Perpendicular			17		117
<b>Shear Modulus</b>	C 273	lb/in. <sup>2</sup>		kPa	
Parallel and Perpendicular			285		1967
<b>Tensile Strength</b>	D 1623	lb/in. <sup>2</sup>		kPa	
Parallel to Rise (Thickness)			35		241
Perpendicular to Rise (Width)			25		172
Perpendicular to Rise (Length)			32		220
<b>Tensile Modulus</b>	D 1623	lb/in. <sup>2</sup>		kPa	
Parallel to Rise (Thickness)			900		6205
Perpendicular to Rise (Width)			725		4980
Perpendicular to Rise (Length)			1090		7515
<b>Flexural Strength</b>	C 203	lb/in. <sup>2</sup>		kPa	
Parallel and Perpendicular			42		289
<b>Flexural Modulus</b>	C 203	lb/in. <sup>2</sup>		kPa	
Parallel and Perpendicular			780		5377
<b>k-Factor (75°F [24°C] mean temp.)</b>	C 518	BTU•in./hr•ft <sup>2</sup> •°F		W/m <sup>2</sup> •°C	
Initial			0.141		0.020
Aged 180 days @75°F (24°C)			0.190		0.027
<b>R-Value/in. (75°F [24°C] mean temp.)</b>	C 518	Hr•ft <sup>2</sup> •°F/BTU		m <sup>2</sup> •°C/W	
Initial			7.1		1.25
Aged 180 days @75°F (24°C)			5.3		0.93
<b>Closed Cell Content</b>	D 2856	%	95	%	95
<b>Water Absorption • (24 hr. immersion)</b>	C 272	% by Volume	0.7	% by Volume	0.7
<b>Water Vapor Permeability</b>	E 96	Perm-Inch	3.0	ng/Pa•S•m	4.6
<b>Dimensional Stability</b> <sup>(3) (4)</sup>	D 2126				
@ -40°F (-40°C), 7 Days					
length		% Change	-0.1	% Change	-0.1
volume		% Change	-0.2	% Change	-0.2
@ 158°F (70°C)/97% Relative Humidity, 7 Days					
length		% Change	1.5	% Change	1.5
volume		% Change	3.0	% Change	3.0
@ -10°F (-23°C), 7 Days					
length		% Change	0.1	% Change	0.1
volume		% Change	0.1	% Change	0.1
@ 300°F (149°C), 7 Days					
length		% Change	2.6	% Change	2.6
volume		% Change	3.6	% Change	3.6
@ 158°F (70°C)					
length		% Change	0.4	% Change	0.4
volume		% Change	0.6	% Change	0.6
<b>Service Temperature</b> <sup>(5)</sup>		°F	-297 to +300	°C	-183 to +149
<b>Surface Burning Characteristics</b> <sup>(6)</sup>					
Flame Spread, 1"through 6" (2.5 through 15 cm)	E 84		25		25
Smoke Generation			295		295
<b>Color</b>			Tan		Tan

- (1) All properties are measured at 74° (23°C), unless otherwise indicated.
- (2) 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.
- (3) Average value through insulation cross section.
- (4) R means resistance to heat flow. The higher the R-value, the greater the insulating power.
- (5) 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.
- (6) Above 300°F, discoloration and charring will occur, resulting in an increased k-factor in the discolored area.
- (7) This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

- 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.

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