

## DESCRIPTION

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. JM can provide general guidelines and recommendations on many typical applications for Trymer 2500. Typical applications for Trymer 2500 insulation include:

- Fabricated pipe insulation, including elbows and fittings
- Core material for factory built panelized constructions
- Insulation for shipping containers, trucks or railcars
- Core material for architectural and structural panels
- Pipe, tank and vessel insulation
- Flat or tapered board stock for roof insulation

## SIZE

Height: 24" (61 cm)

Width: 48" (122 cm)

Length: 36" (91cm)

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

## AVAILABILITY

Trymer 2500 insulation is distributed through JM's extensive Authorized Fabricator Network.

## 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, JM recommends that qualified designers or consultants design the total system.



## PHYSICAL 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 & SAFETY CONSIDERATIONS

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.

Trymer 2500 insulation requires care in handling. All persons working with this material must know and follow the proper handling procedures. The current Safety Data Sheet (SDS) and General Handling Recommendations for Trymer contain information on the safe handling, storage and use of this material, and can be found at [www.JM.com](http://www.JM.com).

**PHYSICAL PROPERTIES OF TRYMER 2500<sup>(1,2)</sup>**

ASTM C591, Grade 2, Type II	Complies		
Density, ASTM D1622 <sup>(3)</sup>	2.5 lb/ft <sup>3</sup> (40.0 kg/m <sup>3</sup> )		
Compressive Strength, ASTM D1621	39 lb/in <sup>2</sup> (268 kPa) parallel to rise 30 lb/in <sup>2</sup> (206 kPa) perpendicular to rise - width 40 lb/in <sup>2</sup> (275 kPa) perpendicular to rise - length		
Compressive Modulus, ASTM D1621	790 lb/in <sup>2</sup> (5446 kPa) parallel to rise 490 lb/in <sup>2</sup> (3377 kPa) perpendicular to rise - width 1000 lb/in <sup>2</sup> (6894 kPa) perpendicular to rise - length		
Shear Strength, ASTM C273	17 lb/in <sup>2</sup> (117 kPa) parallel and perpendicular avg.		
Shear Modulus, ASTM C273	285 lb/in <sup>2</sup> (1967 kPa) parallel and perpendicular avg.		
Tensile Strength, ASTM D1623	35 lb/in <sup>2</sup> (241 kPa) parallel to rise - thickness		
Flexural Strength, ASTM C203	42 lb/in <sup>2</sup> (289 kPa) parallel to rise		
Flexural Modulus, ASTM C203	780 lb/in <sup>2</sup> (5377 kPa) parallel to rise		
Closed cell Content, ASTM D6226	95%		
R-value per Inch, ASTM C518, @75°F (24°C) mean temp, Aged 180 Days <sup>(4)</sup>	5.3 hr•ft <sup>2</sup> •°F/Btu 0.93 m <sup>2</sup> •°C/W		
Water Absorption, ASTM C272	<0.7% by vol. after 24-hour immersion		
Water Vapor Permeability, ASTM E96	3 perm-inches (4.6 ng/Pa•s•m)		
Dimensional Stability <sup>(5)</sup> , ASTM D2126 (%Change)		Length	Volume
	At -40°F (-40°C), 7 days	-0.1%	-0.2%
	At -10°F (-23°C), 7 days	0.1%	0.1%
	At 158°F (70°C), 7 days	0.4%	0.6%
	At 158°F (70°C), 97% R.H. 7 days	1.5%	3.0%
At 300°F (149°C), 97% R.H. 7 days	2.6%	3.6%	
Service Temperature <sup>(6,7)</sup>	-297°F to 300°F (-183°C to 149°C)		
Color	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 JM 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) Trymer PIR can be used at temperatures below this but certain system design precautions may be necessary. Please consult JM for more information.

**THERMAL PROPERTIES OF TRYMER 2500**

	Temperature (°F)	Btu-in/h-ft <sup>2</sup> -F	Temperature (°C)	W/m°C
ASTM C177	-200	0.13	-129	0.019
	-150	0.15	-101	0.022
	-100	0.17	-73	0.025
	-50	0.19	-46	0.027
	0	0.19	-18	0.027
	50	0.18	10	0.026
ASTM C518	75	0.19	24	0.027



717 17th St.  
 Denver, CO 80202  
 (800) 866-3234  
 JM.com

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the product listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

**All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit [www.jm.com/terms-conditions](http://www.jm.com/terms-conditions) or call (800) 654-3103.**