

TRYMER 2000i Polyisocyanurate Insulation

TRYMER* 2000i polyisocyanurate insulation is a polyurethane modified polyisocyanurate cellular plastic. It is supplied in the form of bunstock for fabrication into sheets, pipe shells and other shapes for a variety of thermal insulation applications.

Applications

TRYMER 2000i insulation is used only in applications that do not require a flame spread index of 25 or less and smoke developed index of 50 or less when tested as per ASTM E84 and primarily in industrial applications. It is also used within the service temperature range of -297°F to +300°F (-183°C to +149°C). For insulation needs requiring a flame spread index of 25 or less and smoke developed index of 50 or less, use TRYMER 2000 insulation.

Dow can provide general guidelines and recommendations on many typical applications for TRYMER 2000i insulation. Call 1-866-583-BLUE (2583) or contact your local Dow representative for details.

Typical applications for TRYMER 2000i insulation include:

- industrial pipe, tank and vessel insulation
- insulation for elbows and fittings
- 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 board stock for roof insulation

SIZE

Height:	24" (61 cm)
Width:	48" (122 cm)
Length:	36" (91 cm) 96" (244 cm) 108" (274 cm)

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

PHYSICAL/CHEMICAL PROPERTIES

TRYMER 2000i insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented.

As with all cellular plastics, TRYMER 2000i insulation 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 2000i 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 2000i 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 2000i insulation requires care in handling. All persons working with this material must know and follow the proper handling procedures. The current MSDS and handling guide contain information on the safe handling, storage and use of this insulation. This information can be obtained by calling 1-866-583-BLUE (2583) or contacting your local Dow representative.

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TABLE 1

Physical Properties of TRYMER 2000i Polyisocyanurate Insulation			
Property ⁽¹⁾ and Test Method ⁽²⁾	Value	Property ⁽¹⁾ and Test Method ⁽²⁾	Value
Density ⁽³⁾ , ASTM D1622, lb/ft ³ (kg/m ³)	2.05 (32.8)	Dimensional Stability ^{(3), (5)} , ASTM D2126	
Compressive Strength ⁽³⁾ , ASTM D1621, lb/in ² (kPa)		At -40°F (-40°C), 7 days	
Parallel to rise – thickness	25.0 (172.3)	Length, % change	0.4
Perpendicular to rise – width	24.0 (165.4)	Volume, % change	0.6
Perpendicular to rise – length	30.0 (206.8)	At -10°F (-23°C), 7 days	
Flexural Strength, ASTM C203, lb/in ² (kPa)		Length, % change	0.2
Parallel and perpendicular	33.0 (227.5)	Volume, % change	0.2
k-Factor, ASTM C518, 75°F mean temp., Aged 180 days at 75°F (24°C), BTU•in/hr•ft ² •°F (W/m•°C)	0.19 (0.027)	At 300°F (149°C), 7 days	
R-Value ⁽⁴⁾ /in., ASTM C518, 75°F mean temp., Aged 180 days at 75°F (24°C), hr•ft ² •°F/BTU (m ² •°C/W)	5.3 (0.93)	Length, % change	2.7
Closed Cell Content, ASTM D2856, %, min.	90.0	Volume, % change	4.5
Water Absorption, (96-hour immersion) ASTM D2842, % by volume	1.16	At 158°F (70°C), 7 days	
Water Vapor Permeability, ASTM E96, perms-inch (ng/Pa•s•m)	4.0 (5.8)	Length, % change	0.7
		Volume, % change	1.2
		At 158°F (70°C)/97% R.H., 7 days	
		Length, % change	1.6
		Volume, % change	3.4
		Service Temperature ⁽⁶⁾ , °F (°C)	-297 to +300 (-183 to +149)
		Surface Burning Characteristics ⁽⁷⁾ , ASTM E84	25/100 up to 1.5" thickness; 25/450 2" to 6" thickness
		Flame Spread/Smoke Developed, FS/SD	
		Color	Tan

(1) All properties measured at 74°F (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 Dow 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 considerations must be made in systems that cycle frequently.
 (6) Above 300°F (149°C), discoloration and charring will occur, resulting in an increased k-factor in the discolored area.
 (7) Meets U.S. building code requirements for industrial insulation applications. For areas outside the U.S., check your local building code.

Installation

TRYMER 2000i 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, Dow recommends that qualified designers or consultants should design the total system. Contact a local Dow represen-

tative or access the resource library at www.dowpipe.com for more specific instructions.

Availability

TRYMER 2000i insulation is distributed through an extensive network of fabricators and distributors. For more information, call 1-800-232-2436.

Technical Services

Dow can provide technical information to help address questions when using TRYMER 2000i insulation. Technical personnel are available at 1-866-583-BLUE (2583).

IN THE U.S.:

- For Technical Information: **1-866-583-BLUE (2583)**
- For Sales Information: **1-800-232-2436**

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- Building Materials • 200 Larkin • Midland, MI 48674
- www.dowpipe.com

IN CANADA:

- For Technical Information: **1-866-583-BLUE (2583)** (English); **1-800-363-6210** (French)
- For Sales Information: **1-800-232-2436** (English); **1-800-565-1255** (French)

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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 Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.



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