TRYMER 2000

TRYMER 2000 Brand Polyisocyanurate Foam Insulation

TRYMER* 2000 Brand Polyisocyanurate Foam Insulation is a polyurethane modified polyisocyanurate cellular foam 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 foams, TRYMER 2000 has better dimensional stability over a wider range of temperatures. TRYMER 2000 has been specifically formulated to provide excellent thermal insulation properties without the use of CFC blowing agents.

TRYMER 2000 is available as bunstock 48" (122 cm) wide by 24" (61 cm) high by 36" (91 cm), 96" (244 cm) or 108" (274 cm) lengths for further fabrication into various sizes and shapes to meet a variety of end use needs. Custom lengths are available. Contact your local Dow representative for details.

Applications

TRYMER 2000 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. Dow can provide general guidelines and recommendations on many typical applications for TRYMER 2000. Call 1-800-441-4369 or contact your local Dow 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

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 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.

Safety Considerations

TRYMER 2000 Brand Polyisocyanurate foam 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 1-800-441-4369 or contacting your local Dow representative.

COMBUSTIBLE: Protect from flame and other high heat sources. For more information, consult MSDS and/or call Dow (1-800-441-4369). In an emergency, call (1-517-636-4400). Local building codes may require a protective or thermal barrier. Contact your local building inspector for more information.

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PHYSICAL PROPERTIES [1]	ASTM METHOD	ENGLISH UNITS	VALUES [2]	METRIC UNITS	VALUES [2]
Density [3]	D 1622	lb/ft^3	2.05	kg/m^3	32.8
Compressive Strength [3]	D 1621	$lb/in.^2$		kPa	
Parallel to Rise (Thickness)			24		165
Perpendicular to Rise (Width)			13		90
Perpendicular to Rise (Length)			24		165
Compressive Modulus	D 1621	$lb/in.^2$		kPa	
Parallel to Rise (Thickness)			550		3790
Perpendicular to Rise (Width)			325		2240
Perpendicular to Rise (Length)			550		3790
Shear Strength	C 273	$lb/in.^2$		kPa	
Parallel and Perpendicular			24		165
Shear Modulus	C 273	$lb/in.^2$		kPa	
Parallel and Perpendicular			300		2070
Tensile Strength	D 1623	$lb/in.^2$		kPa	
Parallel to Rise (Thickness)			27		186
Perpendicular to Rise (Width)			24		165
Perpendicular to Rise (Length)			29		200
Tensile Modulus	D 1623	$lb/in.^2$		kPa	
Parallel to Rise (Thickness)			1500		10300
Perpendicular to Rise (Width)			600		4130
Perpendicular to Rise (Length)			1500		10300
Flexural Strength	C 203	$lb/in.^2$		kPa	
Parallel and Perpendicular			44		303
Flexural Modulus	C 203	$lb/in.^2$		kPa	
Parallel and Perpendicular			1000		6890
k-Factor (75°F [24°C] mean temp.)	C 518	BTU•in./hr•ft^2•°F		W/m°C	
Initial			0.141		0.020
Aged 180 days @75°F (24°C)			0.190		0.027
R-Value/in. (75°F [24°C] mean temp.)	C 518	Hr•ft^2•°F/BTU		m^2•°C/W	
Initial			7.1		1.25
Aged 180 days @75°F (24°C)			5.3		0.93
Closed Cell Content	D 2856	%	92	%	92
Water Absorption • (96 hr. immersion)	D 2842	% by Volume	2	% by Volume	2
		lb/ft^2	0.04	g/cm^2	0.02
Water Absorption • (24 hr. immersion)	C 272	% by Volume	0.15	% by Volume	0.15
Water Vapor Permeability	E 96	Perm-Inch	4	ng/Pa•S•m	6.25
Dimensional Stability [3] [4]	D 2126				
@ –40°F (–40°C), 7 Days					
length		% Change	–0.2	% Change	–0.2
volume		% Change	–0.5	% Change	–0.5
@ 158°F (70°C)/97% Relative Humidity, 7 Days					
length		% Change	2.0	% Change	2.0
volume		% Change	3.0	% Change	3.0
@ –10°F (–23°C), 7 Days					
length		% Change	0.3	% Change	0.3
volume		% Change	0.7	% Change	0.7
@ 300°F (149°C), 7 Days					
length		% Change	3.0	% Change	3.0
volume		% Change	3.5	% Change	3.5
@ 158°F (70°C)					
length		% Change	–0.1	% Change	–0.1
volume		% Change	0.8	% Change	0.8
Service Temperature [5]		°F	–297 to +300	°C	–183 to +149
Surface Burning Characteristics [6]					
Flame Spread, 1"through 6" (2.5 through 15 cm)	E 84		25		25
Smoke Generation, up to 1.5" (3.8 cm)			50		50
2" through 6" (5 through 15 cm)			90		90
Color			Blue†		Blue

(1) All properties are 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 foam cross section.
(4) 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.
(5) Above 300°F, discoloration and charring will occur, resulting in an increased k-factor in the discolored area.
(6) This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.
† The color Blue is a trademark of The Dow Chemical Company.

For Technical Information:
1-800-441-4369

For Sales Information:
1-800-232-2436

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