



TRYMER 4000

TRYMER 4000 Brand Polyisocyanurate Foam Insulation

TRYMER* 4000 Brand Polyisocyanurate Foam Insulation is a polyurethane modified polyisocyanurate cellular plastic supplied in the form of bunstock for fabrication into sheets, pipe, tank and vessel covering, and other shapes¹ for a variety of thermal insulation applications. Although similar in physical form to polyurethane foams, TRYMER 4000 has improved dimensional stability over a wider range of temperatures. TRYMER 4000 has been specifically formulated to provide excellent thermal insulation properties without the use of CFC blowing agents.

TRYMER 4000 is available as bunstock 48" (122 cm) wide by 16" (40 cm) high by 36" (91 cm), 96" (244 cm) or 108" (274 cm) lengths for further fabrication into various sizes and shapes to meet various end use needs. Custom lengths are available. Contact your local Dow representative for details.

Applications

TRYMER 4000 is used extensively in industrial and commercial applications within the service temperature range of -297°F to +300°F (-183°C to +149°C)². 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 4000. Call 1-800-441-4369 or contact your local Dow representative for details. Some typical applications include:

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

Like all cellular plastics, this product will degrade upon prolonged exposure to sunlight. A covering to block ultra-violet 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 4000 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 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 by contacting your local Dow representative.

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PHYSICAL PROPERTIES (1)	ASTM METHOD	ENGLISH UNITS	ENGLISH VALUES (2)	METRIC UNITS	METRIC VALUES (2)
Density (3)	D 1622	lb/ft ³	4.0	kg/m ³	64
Compressive Strength (3) Parallel to Rise (Thickness) Perpendicular to Rise (Width) Perpendicular to Rise (Length)	D 1621	lb/in ²	80 65 80	kPa	550 450 550
Compressive Modulus Parallel to Rise (Thickness) Perpendicular to Rise (Width) Perpendicular to Rise (Length)	D1621	lb/in ²	1900 1500 1500	kPa	13100 10300 10300
Shear Strength Parallel to Rise	C 273	lb/in ²	55	kPa	375
Shear Modulus Parallel to Rise	C 273	lb/in ²	500	kPa	3450
Tensile Strength Parallel to Rise (Thickness)	D 1623	lb/in ²	75	kPa	500
Tensile Modulus Parallel to Rise (Thickness)	D 1623	lb/in ²	2500	kPa	17200
Flexural Strength Parallel to Rise	C 203	lb/in ²	110	kPa	750
Flexural Modulus Parallel to Rise	C 203	lb/in ²	3200	kPa	22000
k-Factor (75°F(24°C) mean temp.) Initial Aged 180 days @75°F (24°C)	C 518	BTU·in/hr·ft ² ·°F	0.150 0.190	W/m°C	0.021 0.027
R-Value/in (75°F(24°C) mean temp) Initial Aged 180 days @75°F (24°C)	C 518	Hr·ft ² ·°F/BTU	6.7 5.3	m ² ·°C/W	1.17 0.93
Closed Cell Content	D 2856	%	97	%	97
Water Absorption	C 272	% by Volume	0.5	% by Volume	0.5
Water Vapor Permeability	E 96	Perm-Inch	3.0	(ng/Pa·s·m)	4.4
Dimensional Stability (4) @ -40°F (-40°C), 7 days Length Volume @ 158°F (70°C)/97% Relative Humidity, 7 days Length Volume @ -10°F (-23°C), 7 days Length Volume @ 300°F (149°C), 7 days Length Volume	D 2126	% Change % Change % Change % Change % Change % Change	-0.1 -0.1 0.2 0.8 0.0 -0.1 -0.3 to 0.3 0.2	% Change % Change % Change % Change % Change % Change	-0.1 -0.1 0.2 0.8 0.0 -0.1 -0.3 to 0.3 0.2
Service Temperature (5)		°F	-297 to +300	°C	-183 to +149
Surface Burning Characteristics (1" thickness) (6)	E 84	Flame spread/smoke	15 / 360	Flame spread/smoke	15 / 360
Color			Tan		Tan

- (1) All properties are measured at 74°F, 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.

**For Technical Information:
1-800-441-4369**

Visit us at: www.styrofoam.com

**For Sales Information:
1-800-232-2436**

