Johns Manville
A Berkshire Hathaway Company

OEM INSULATION

TRYMER® 25-50

POLYISOCYANURATE FOAM INSULATION

DATA SHEET

DESCRIPTION

Trymer® 25-50 insulation is a polyurethane modified polyisocyanurate (PIR) cellular plastic. The rigid insulation is supplied in the form of bunstock for fabrication into sheets and other shapes for a variety of thermal insulation applications. Trymer 25-50 meets the most stringent flame spread and smoke developed rating requirements. Trymer 25-50 insulation features improved dimensional stability over a wider range of temperatures than standard polyurethane insulation.

APPLICATIONS

- Transportation
- Telecommunication
- Infrastructure
- Wind Energy
- Military and Civilian Structures
- Sculpting
- Pultrusion

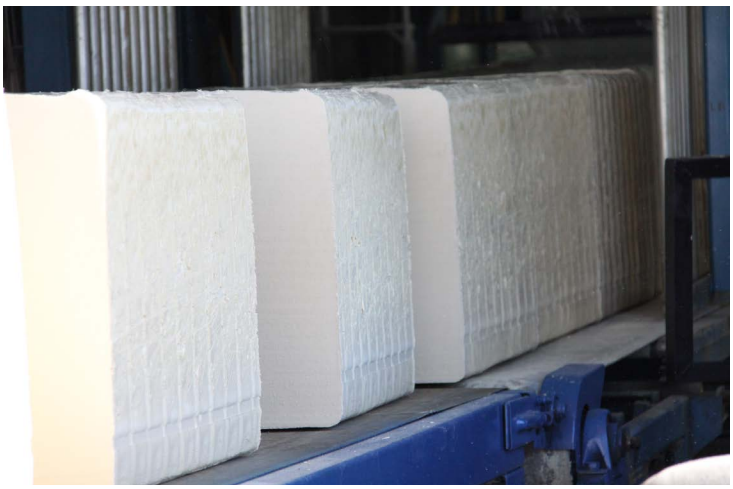
AVAILABLE FORMS AND SIZES

Height: 24" (41cm)
Width: 48" (122 cm)
Length: 36" (91cm)

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

ENVIRONMENTAL DATA

Trymer 25-50 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 25-50 insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.



PHYSICAL PROPERTIES

Trymer 25-50 insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented. Trymer 25-50 insulation is not a known nutrient source for mold and mildew. Consultation with local code officials and design engineers/specifiers is recommended before application. As with all cellular polymers, Trymer 25-50 insulation will degrade upon prolonged exposure to sunlight. A covering to block ultraviolet radiation must be used to help prevent degradation. Other coverings to protect the insulation from the elements may be required.

Trymer 25-50 insulation is suitable for applications that require a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less when tested as per ASTM E84. The excellent low flammability as indicated by the performance of Trymer 25-50 in the ASTM E84 test coupled with other properties including high closed-cell content, water resistance, and very low (good) thermal conductivity, make Trymer 25-50 the ideal insulation for use in a variety of specialty applications. Trymer 25-50 can be used within the service temperature range of -297°F to 300°F (-183°C to 149°C).

TABLE 1

PHYSICAL PROPERTIES OF TRYMER 25-50 (1,2)

ASTM C591, Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation	Complies Grade 2, Type 1		
Density, ASTM D1622	2.0 lb/ft^3 (32.0 kg/m^3)		
Compressive Strength, ASTM D1621	24 lb/in^2 (165 kPa) parallel to rise 18 lb/in^2 (124 kPa) perpendicular to rise - width 23 lb/in^2 (159 kPa) perpendicular to rise - length		
Shear Strength, ASTM C273	15 lb/in^2 (104 kPa) parallel and perpendicular avg.		
Tensile Strength, ASTM D1623	12 lb/in^2 (83 kPa) parallel to rise - thickness		
Flexural Strength, ASTM C203	33 lb/in^2 (228 kPa) parallel to rise		
Closed cell Content, ASTM D2845	90%		
k-Factor, ASTM C518, @75°F (24°C) mean temp Aged 180 Days[4]	0.19 Btu•in/hr•ft^2•°F 0.027 W/m°C		
R-value per Inch, ASTM C578, @75°F (24°C) mean temp Aged 180 Days[4]	5.3 Btu•in/hr•ft^2•°F 0.93 W/m°C		
Water Absorption, ASTM C272	<1.4% by vol. after 24-hour immersion		
Water Vapor Permeability, ASTM E96	4 perms/inch (5.8 ng/Pa•s•m)		
Service Temperature (3, 4)	-297°F to 300°F (-183°F to 149°F)		
Dimensional Stability[5], ASTM D2126 (%Change)		Length	Volume
	At -40°F (-40°C), 7 days	-0.3%	-0.2%
	At 158°F (70°C), 97% R.H. 7 days	1.3%	1.1%
	At 300°F (149°C), 97% R.H. 7 days	0.8%	0.3%
Surface Burning Characteristics (6), ASTM E84	≤ 25 Flame Spread ≤ 50 Smoke Developed (up to 1.5" thickness)		
Color	Gray		

(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 JMrepresentative.

(3) Above 300°F, discoloration and charring will occur, resulting in an increased k-factor in the discolored area.

(4) Trymer 25-50 can be used at temperatures below this but certain system design precautions may be necessary. Please consult JM for more information.

(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) This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

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