

TRYMER™ 2000 XP Polyisocyanurate Foam Insulation



TRYMER™ 2000 XP polyisocyanurate foam insulation is a polyurethane modified polyisocyanurate cellular plastic. The rigid foam is supplied in the form of bunstock for fabrication into sheets, pipe shells, tank and vessel coverings, and other shapes for a variety of thermal insulation applications.

TRYMER 2000 XP insulation features improved dimensional stability over a wider range of temperatures than standard polyurethane foam insulation.

TRYMER insulation is not a known nutrient source for mold and mildew.

Applications

TRYMER™ 2000 XP insulation is suitable for applications that require a Flame Spread Index of 25 or less and Smoke Developed Index of 50 or less when tested as per ASTM E84. It is also used within the service temperature range of -297°F to +300°F (-183°C to +149°C).

Typical applications for TRYMER 2000 XP insulation include:

- industrial pipe insulation, including elbows and fittings
- commercial chilled water insulation
- tank and vessel insulation
- core material for architectural and structural panels
- insulation for shipping containers, trucks or railcars
- core material for factory-built panelized constructions
- flat or tapered board stock for roof insulation

Dow can provide general guidelines and recommendations for TRYMER 2000 XP insulation. For additional information, visit www.dowpipe.com, call 1-866-583-BLUE (2583) or contact your local Dow representative.

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 PROPERTIES

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

Consultation with local code officials and design engineers/specifiers is recommended before application.

As with all cellular polymers, TRYMER 2000 XP insulation will degrade upon prolonged exposure to sunlight. A covering to block ultraviolet radiation must be used to prevent degradation. Other coverings to protect the insulation from the elements may be required.

ENVIRONMENTAL DATA

TRYMER™ 2000 XP 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 2000 XP insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

SAFETY CONSIDERATIONS

TRYMER™ 2000 XP insulation requires care in handling. All persons working with this material must know and follow the proper handling procedures. The current Material Safety Data Sheet (MSDS) and General Handling Recommendations for TRYMER contain information on the safe handling, storage and use of this material. For copies of these documents, visit the literature library at www.dowpipe.com, call 1-866-583-BLUE (2583) or contact your local Dow representative.

Installation

TRYMER™ 2000 XP insulation is specifically formulated for easy fabrication into many shapes, such as pipe coverings, valve and fitting covers, and others to meet specific design needs.

Because of the critical technical design aspects in many applications, Dow recommends contacting qualified designers to specify the total system. For more specific instructions, contact a local Dow representative or access the literature library at www.dowpipe.com.

Availability

TRYMER™ 2000 XP insulation is distributed through Dow's extensive Authorized Fabricator Network. For more information, call: 1-866-583-BLUE (2583) (English) 1-800-363-6210 (French)

TABLE 1

| Physical Properties of TRYMER™ 2000 XP 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) | Water Vapor Permeability, ASTM E96 perm-inch (ng/Pa•s•m) | 4 (5.8) |
| Compressive Strength ⁽³⁾ , ASTM D1621, lb/in ² (kPa) | | Dimensional Stability ^{(3),(5)} , ASTM D2126 | |
| Parallel to rise – thickness | 25 (172) | At -40°F (-40°C), 7 days | |
| Perpendicular to rise – width | 24 (165) | Length, % change | 0.4 |
| Perpendicular to rise – length | 30 (207) | Volume, % change | 0.6 |
| Compressive Modulus, ASTM D1621, lb/in ² (kPa) | | At -10°F (-23°C), 7 days | |
| Parallel to rise – thickness | 650 (4,485) | Length, % change | 0.2 |
| Perpendicular to rise – width | 475 (3,278) | Volume, % change | 0.2 |
| Perpendicular to rise – length | 600 (4,140) | At 158°F (70°C), 7 days | |
| Shear Strength, ASTM C273, lb/in ² (kPa) | | Length, % change | 1.5 |
| Parallel and perpendicular, avg | 15 (104) | Volume, % change | 3.0 |
| Shear Modulus, ASTM C273, lb/in ² (kPa) | | At 158°F (70°C)/97% R.H., 7 days | |
| Parallel and perpendicular, avg | 250 (1,725) | Length, % change | 1.6 |
| Tensile Strength, ASTM D1623, lb/in ² (kPa) | | Volume, % change | 3.4 |
| Parallel to rise – thickness | 20 (138) | At 300°F (149°C), 7 days | |
| Flexural Modulus, ASTM C203, lb/in ² (kPa) | | Length, % change | 2.7 |
| Parallel to rise | 720 (4,968) | Volume, % change | 4.5 |
| Flexural Strength, ASTM C203, lb/in ² (kPa) | | Service Temperature ⁽⁶⁾ , °F (°C) | -297 to +300 (-183 to +149) |
| Parallel to rise | 33 (228) | Surface Burning Characteristics ⁽⁷⁾ , ASTM E84 | |
| k-factor, ASTM C518, BTU•in/hr•ft ² •°F (W/m•°C) | | Flame Spread | |
| Aged 180 days @ 75°F (24°C) | 0.19 (0.027) | 1" through 6" (2.5 cm through 15 cm) | 25 |
| R-Value ⁽⁴⁾ /in., ASTM C518, hr•ft ² •°F/BTU (m ² •°C/W) | | Smoke Developed | |
| Aged 180 days @ 75°F (24°C) | 5.3 (0.93) | Up to 1.0" (2.5 cm) | 50 |
| Closed Cell Content, ASTM D2856, %, min. | 90 | Up to 1.5" (3.75 cm) | 55 |
| Water Absorption, ASTM C272, 24-hr immersion, % by volume | <0.7 | 2" through 6" (5 cm through 15 cm) | 450 |
| | | Color | Blue |

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

Technical Services

Dow can provide technical information to help address questions when using TRYMER™ 2000 XP insulation. Technical personnel are available at:
 1-866-583-BLUE (2583) (English)
 1-800-363-6210 (French)

THE DOW CHEMICAL COMPANY
 Mechanical Insulation Solutions
 P.O. Box 1206
 Midland, MI 48641-1206

For Sales and Technical Information: **1-866-583-BLUE (2583)** (English); **1-800-363-6210** (French)
www.dowpipe.com

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COMBUSTIBLE: Protect from high heat sources. For more information, consult MSDS or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.

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