

TRYMER™ Supercel Phenolic Insulation – 2.5 lb/ft³ Density

Description

TRYMER Supercel is a closed-cell rigid phenolic foam insulation. This rigid insulation is supplied in the form of large buns for fabrication into pipe shells, curved segments, sheets, tank and vessel coverings, and other shapes for a variety of thermal insulation applications.

The buns will yield these dimensions:

- 41.5 inches (1054 mm) tall (rise direction)
- 37 inches (940 mm) long (length direction)
- 27 inches (686 mm) wide (width direction)

Applications

TRYMER Supercel Phenolic Insulation has a very low (good) thermal conductivity and an exceptionally low flammability.

TRYMER Supercel can be used for pipe temperatures of -297°F to +257°F (-183°C to 125°C).

TRYMER Supercel has ASTM E84 flame spread/smoke developed indices of ≤25/50 making it ideal for use in applications which require this stringent performance including pipe insulation located in air plenums of commercial buildings.

For pipe insulation located outside of air plenums, ITW recommends the use of TRYMER 2000XP PIR Insulation which meets flame spread/smoke developed indices of ≤25/450 which is typically required for pipe

insulation in non-plenum locations of a commercial building.

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

Physical Properties

TRYMER Supercel Phenolic Insulation has the properties and characteristics indicated in the table on the next page when tested as shown.

As with all cellular polymers, TRYMER Supercel Insulation will degrade upon prolonged exposure to sunlight. A covering to block ultra-violet radiation and to protect the insulation from the elements or physical abuse must be used to help prevent degradation in outdoor and most indoor applications.

Environmental Data

TRYMER Supercel Insulation is specifically formulated to provide excellent thermal insulating performance without the use of chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) blowing agents. In compliance with the Montreal Protocol and the Clean Air Act, TRYMER Supercel Insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential (0 ODP).

ITW recommends that all specifications require the insulation to have a 0 ODP.

Fabrication

TRYMER Supercel 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. Pipe shells should be cut so that the longitudinal dimension of the pipe shell comes from the 37" long (length) direction of the bun.

Installation

Because of the critical design aspects present in many applications, ITW recommends that qualified engineers specify the total system. ITW offers an installation guideline for Trymer Supercel Phenolic Insulation in chilled water mechanical insulation applications. This can be found in the mechanical insulation library at www.itwinsulation.com.

Safety Considerations

TRYMER Supercel 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.itwinsulation.com, call 1-800-231-1024 or contact your regional ITW representative.

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| Property & Units | Test Method | Value |
|--|---------------------------------------|--------------------------------|
| Color | | Grey/Purple |
| Density, minimum, lb/ft ³ (kg/m ³) | ASTM D1622 | 2.50 (40) |
| Temperature Limits, °F (°C) | | -297 to +257 (-183 to +125) |
| Compressive Strength, psi (kPa) | ASTM C1621, Proc. A | |
| -Parallel to Rise | | 32.6 (225) |
| -Length | | 27.7 (191) |
| -Width | | 29.5 (203) |
| Compressive Modulus, psi (kPa) | ASTM C1621, Proc. A | |
| -Parallel to Rise | | 1078 (7430) |
| -Length | | 948 (6540) |
| -Width | | 843 (5810) |
| Thermal Conductivity, maximum, Btu-in/hr-ft ² -°F (W/m-°C) | EN 12667 (equivalent to ASTM C518) | |
| -At 50°F mean temperature | | 0.150 (0.0216) |
| -At 75°F mean temperature | | 0.150 (0.0216) |
| Dimensional Stability after Thermal & Humid Aging for 1 Week, % linear change | ASTM D2126 | |
| -40°F (-40°C) and ambient RH | | -0.35 |
| 158°F (70°C) and 97% RH | | +0.70 |
| +257°F (125°C) and ambient RH | | -1.56 |
| Water Absorption, % by volume | ASTM C209 | 0.87 |
| Water Vapor Permeability, perm-in (ng/Pa-s-m) | ASTM E96 | 2.14 (3.10) |
| Closed Cell Content, % | ASTM D6226 | 96.6 |
| Surface Burning Characteristics ¹ at 3" thick | ASTM E84 | |
| -Flame Spread Index, max | | 25 |
| -Smoke Developed Index, max | | 50 |

¹This numerical flame spread data is not intended to reflect hazards presented by this or any other material under actual fire conditions.

TRYMER™ Supercel Phenolic Insulation meets the requirements of ASTM C1126 Type III, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.

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. This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of ITW Insulation Systems. ITW Insulation Systems assumes no legal responsibility for use or reliance upon this data. For information regarding specific applications of the product please contact ITW Insulation Systems.

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