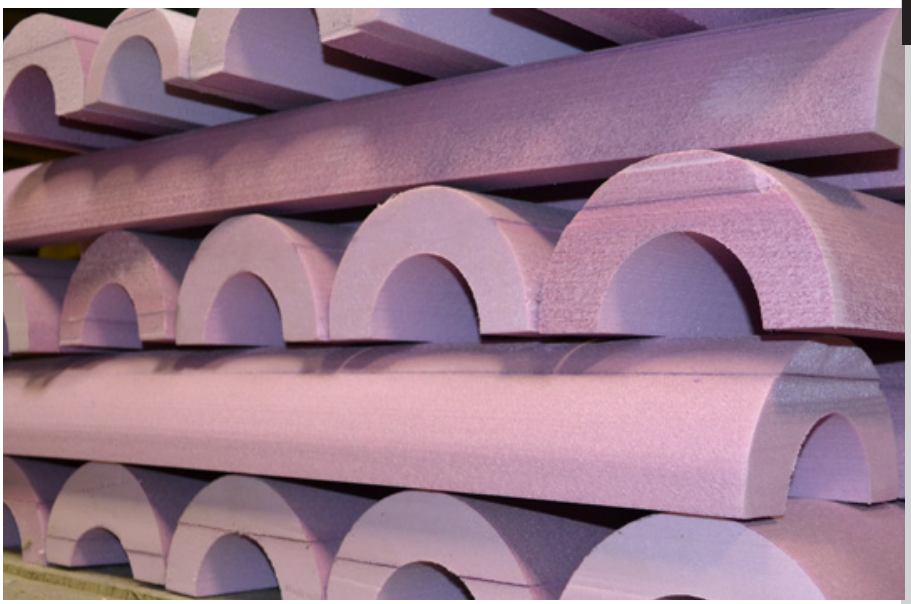
GLT Fabricators

TECHNICAL INFORMATION

Extruded Polystyrene
Fabricated Pipe Insulation



TEMP RANGE: -300°F to 165°F

EXTRUDED POLYSTYRENE ADVANTAGES

- **Does not soften or lose its strength at elevated temperatures**
- **Excellent insulator**
- **Lightweight and easy to install**
- **Minimum compressive strength at 25 psi**
- **Retains R-value even after prolonged exposure to water leakage, condensation and freeze/thaw cycles**

GLT Fabricators Extruded Polystyrene (XPS) Rigid Foam Insulation is used on mechanical applications. XPS is a closed cell material used to fabricate various shapes including preformed pipe insulation 3 ft long designed to fit piping systems.

These applications include and are not limited to vessel and duct applications, cold pipe, industrial refrigeration piping, cold storage piping, chilled water, glycol and ice rinks. It provides excellent moisture resistance, low permeability and great long term R-Value making it suitable for a wide range of pipe applications from cryogenic to mild heat.

XPS is designed for both mechanical fabrication and residential/commercial construction.

Key Applications

- Pipe
- Equipment
- Tanks
- Ducts operationg at temperature below ambient
- Food processing lines
- Beverage lines
- Refrigeration lines

COMPLIANCE DATA	ASTM METHOD C518, D1621, C272, E96 D2126, E84, E228, C578 Type IV

FITTING TYPES

90° Elbows	45° Elbows	Tees	Pipe Covering	Segmented

2902 E. Thirteenth Street, Suite 200, La Porte, TX 77571 | Ph:1-713-670-9700 | info@gltfabricators.com

Typical Physical Properties[1]

FOAMULAR® 250 Extruded Polystyrene (XPS) Rigid Foam Insulation

Property	Test Method[2]	Value
Thermal Resistance[3], R-Value (180 day) minimum, hr•ft²•°F/Btu (RSI, °C•m²/W)		
@ 75°F (24°C) mean temperature	ASTM C518	
¾" Thickness		4.0 (0.70)
1" Thickness		5.0 (0.88)
1½" Thickness		7.5 (1.32
2" Thickness		10 (1.76)
2½" Thickness		12.5 (2.20)
3" Thickness		15 (2.64)
4" Thickness		20 (3.52)
@ 40°F (4.4°C) mean temperature		
¾" Thickness		4.3 (0.76)
1" Thickness		5.4 (0.95)
1½" Thickness		8.1 (1.43)
2" Thickness		10.8 (1.90)
2½" Thickness		13.5 (2.38)
3" Thickness		16.2 (2.85)
4" Thickness		21.6 (3.80)
Long Term Thermal Resistance, LTTR-Value[3,] minimum hr•ft²•°F/Btu (RSI, °C•m²/W)		
@ 75°F (24°C) mean temperature	CAN/ULC S770-03	
¾" Thickness		N/A
1" Thickness		5.0 (0.88)
1½" Thickness		7.8 (1.37)
2" Thickness		10.6 (1.87)
2½" Thickness		13.4 (2.36)
3" Thickness		16.2 (2.85)
4" Thickness		22.0 (3.87)
Compressive Strength[4], minimum psi (kPa)	ASTM D1621	25 (172)
Flexural Strength[5], minimum psi (kPa)	ASTM C203	75 (517)
Water Absorption[6], maximum % by volume	ASTM C272	0.10
Water Vapor Permeance[7], maximum perm (ng/Pa•s•m²)	ASTM E96	1.5 (86)
Dimensional Stability, maximum % linear change	ASTM D2126	2.0
Flame Spread[8, 9]	ASTM E84	5
Smoke Developed[8, 9, 10]	ASTM E84	45-175
Oxygen Index[8], minimum % by volume	ASTM D2863	24
Service Temperature, maximum °F (°C)	—	165 (74)
Linear Coefficient of Thermal Expansion, in/in/°F (m/m°C)	ASTM E228	3.5×10^{-5} (6.3×10^{-5})

1. Properties shown are representative values for 1" thick material, unless otherwise specified.
2. Modified as required to meet ASTM C578
3. R means the resistance to heat flow; the higher the value, the greater the insulation power. This insulation must be installed properly to get the marked R-value. Follow the manufacturer's instructions carefully. If a manufacturer's fact sheet is not provided with the material shipment, request this and review it carefully. R-values vary depending on many factors including the mean temperature at which the test is conducted, and the age of the sample at the time of testing. Because rigid foam plastic insulation products are not all aged in accordance with the same standards, it is useful to publish comparison R-value data. The R-value for FOAMULAR® XPS Insulation is provided from testing at two mean temperatures, 40°F and 75°F, and from two aging (conditioning) techniques, 180 day real-time aged (as mandated by ASTM C578) and a method of accelerated aging sometimes called "Long Term Thermal Resistance" (LTTR) per CAN/ULC S770-03. The R-value at 180 day real-time age and 75°F mean temperature is commonly used to compare products and is the value printed on the product.
4. Values at yield or 10% deflection, whichever occurs first.
5. Value at yield or 5%, whichever occurs first.
6. Data ranges from 0.00 to value shown due to the level of precision of the test method.
7. Water vapor permeance decreases as thickness increases.
8. These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions.
9. Data from Underwriters Laboratories Inc.® classified. See Classification Certificate U-197.
10. ASTM E84 is thickness-dependent, therefore a range of values is given.

Physical properties are provided by Owens Corning®.