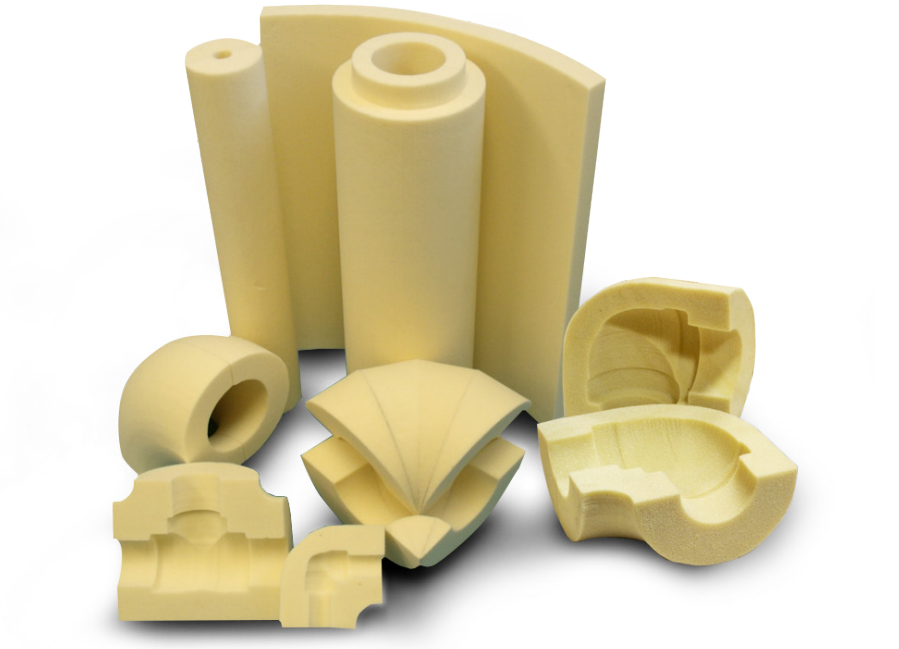
GLT Fabricators

TECHNICAL INFORMATION

Polyisio

Fabricated Pipe Insulation



TEMP RANGE: -297°F to 300°F

POLYISOCYANURATE ADVANTAGES

- Greater dimensional stability over wider service temperature range
- Low thermal conductivity
- Lightweight and easy to install
- Wide choice of adhesives and coatings can be used for bonding
- Excellent moisture resistance

GLT Fabricators line of fabricated ISO-C1 Polyisocyanurate pipe insulation has superior physical characteristics, excellent water and moisture resistance, 2 lb/ft^3 density, high R-factor of 5.7, and zero ozone depletion potential (zero-ODP). This makes it a cost-effective and environmentally friendly choice. Suitable for service temperatures between -297°F and +300°F, Polyisocyanurate Pipe Insulation is well suited to a wide range of applications from chilled water pipe insulation to refrigeration insulation to cryogenic insulation.

Applications include:

- Insulated panels, including unfaced or structural insulated panels
- Commercial refrigeration insulation
- Warehouse insulation
- Walk-in cooler insulation and freezer insulation
- Refrigerated transportation containers
- Duct insulation
- Fabricated foam shape for low to mid-temperature mechanical insulation
- Chilled water pipe and equipment insulation
- Ammonia refrigerant pipe insulation
- Cryogenic insulation / LNG insulation
- Commercial HVAC insulation
- Tank insulation

FITTING TYPES

90° Elbows	45° Elbows	Tees	Pipe Covering	Segmented

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Polyisio
Fabricated Pipe Insulation

Description

Polyisocyanurate rigid foam	
Blowing agents:	CFCs/HCFCs-free
Approvals, Homologations, Compliances	ASTM C591 - Type II Grade 2

Characteristics

Color			Green
Nominal density	ASTM D1622/EN 1602/EN ISO 845	lb/ft^3 (kg/m^3)	2.5 (40)
Compressive resistance – Parallel (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	45.0 (0,309)
Compressive resistance - Perpendicular (74°F/23°C)	ASTM D1621/EN 826	psi (MPa)	31.0 (0,213)
Compressive resistance – Parallel (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	>50.8 (0,350)
Compressive resistance - Perpendicular (-265°F/-165°C)	ASTM D1621/EN 826	psi (MPa)	>37.7 (0,260)
Tensile strength - Parallel (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	63.0 (0,435)
Tensile strength - Perpendicular (74°F/23°C)	ASTM D1623-A/EN 1607	psi (MPa)	49.0 (0,340)
Tensile strength - Parallel (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	>55.0 (0,379)
Tensile strength - Perpendicular (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	>42.0 (0,290)
Tensile E-modulus - Parallel (-265°F/-165°C)	ASTM D1623-A/EN 1607	psi (MPa)	<670 (4,6)
Shear strength - Perpendicular (74°F/23°C)	ASTM C273/EN 12090	psi (MPa)	28.0 (0,195)
Thermal conductivity - Initial (75°F/24°C)	ASTM C518/EN 12667	BTU·in/hr·ft^2·°F (mW/mK)	0.159 (22,8)
Thermal conductivity - 180 days (75°F/24°C)	ASTM C518/EN 12667	BTU·in/hr·ft^2·°F (mW/mK)	0.183 (26,0)
Coefficient of thermal stress resistance CTSR (-265°F/74°F, -165°C/+23°C)	CINI 2.7.01		>4.0
Poisson's Ratio (-265°F/-165°C)	ASTM D1623/EN 1607		0.4
Coefficient of linear thermal expansion CTE (-321°F/ +74°F,-196°C/+23°C)	ASTM D696/EN 13471	1/°F·10E-6 (1/K·10E-6)	<27.8 (50)
Surface burning characteristics	ASTM E84	FSI	<25
Surface burning characteristics	ASTM E84	Smoke Dev.	<450
Leachable chlorides	ASTM C871/EN 13468	ppm	<20
pH	ASTM C871/EN 13468		6.0-7.0
Dimensional stability (-40°F/-40°C, 7 days) - linear change (length)	ASTM D2126/EN 1604	%	0.5
Dimensional stability (+212°F/+100°C, 7 days) - Linear change (length)	ASTM D2126/EN 1604	%	1.0
Dimensional stability (+158°F/70°C, 97% R.H., 7 days) - Linear change (length)	ASTM D2126/EN 1604	%	±1.5
Water vapour transmission rate (74°F/23°C, 50% R.H.)	ASTM E96/EN 12086	grains/h·ft^2 (g/h·m^2)	<1.66 (1,16)
Water vapor permeability (74°F/23°C,50% R.H.)	ASTM E96/EN 12086	Perm-inch (ng/s·m·Pa)	3.5 (5,1)
Water absorption by volume	ASTM C272	%	<0.5
Water absorption by volume	ASTM D2842/EN 12087/ISO 2896	%	<3.5
Operating temperature		°F (°C)	-320/+300 (-196/+149)
R-Value - 180 days, 1 inch (75°F/24°C)	ASTM C518/EN 12667	hr·ft^2·°F/BTU	5.46 (0,97)
Closed-cell content	ASTM D6226/EN ISO 4590	%	>95
Hot-Surface Performance (300°F/149°C)	ASTM C411		Pass

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