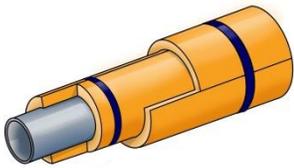


QWIK GUIDE: ISO-C1[®] Polyiso Insulation

Dyplast[®] ISO-C1 *Polyisocyanurate (PIR) Insulation* is the ideal pipe and panel insulation for low-temperature insulation systems (-297°F to +300°F) where superior, sustainable thermal performance is expected - - available in densities from 2.0 to 6.0 lb/ft³. Not only does ISO-C1 have relevant physical properties superior to alternatives such as cellular glass and XPS, its properties are best-in-class among competitive polyiso and polyurethane products. ISO-C1/2.0 is independently tested and audited, and is listed with FM Approvals as a Specification Tested Identified Component - Combustible Core for Insulated Building Panels under FM 4880. Applications include:

- LNG
- Refrigeration Systems
- Cryogenic
- Chilled Water
- Cold Rooms/Transportation

Key Typical Physical Properties (Compliant with ASTM C591)



Nominal Density (lb/ft ³)	ASTM D1622	2	2.5
Thermal Conductivity - - Aged (BTU-in/hr-ft ² -°F)	ASTM C177	0.19	0.19
Water Absorption (% volume)	ASTM C272 (*D2842)	0.47	0.27
Closed Cell Content (%)	ASTM D6226	97	97
Compressive Strength (parallel) (psi)	ASTM D1621	29	41
Tensile Strength (parallel) (psi)	ASTM D1623	36	60
Color		Tan	Tan
Surface Burning Characteristics	ASTM E84 Flame/Smoke up to 4" thick	Class 1	Class 1

Equipment and Panel Insulation

With its high R-factors, ISO-C1 can achieve the same insulating value with as little as half the thickness required by alternative insulating materials. Less insulation leads to thinner walls, less weight, more space, and fewer and tighter energy-losing seams - - further enhanced by the availability of larger pieces (for example, 24-foot long). Less insulation in insulation applications also equates to reduced quantities of expensive vapor retarders, jackets, and mastics. ISO-C1 can be fabricated into virtually any shape, length, or width with very close dimensional tolerances.



Pipe Insulation Installation

For indoor Chilled Water applications, only 1 inch of 2.0 lb/ft³ ISO-C1 Insulation is typically required for pipe diameters up to 10 inches. For larger diameters, for unconditioned/outdoor environments, or for Refrigerant/Cryogenic applications a qualified engineer should be consulted regarding insulation thicknesses as well as the required number of layers.

- Pipe should be clean and dry
- Joints/seams should be butted and offset from adjacent seams/joints
- Vapor stops and expansion joints should be per engineer recommendations
- Outermost joints/seams should be buttered with joint sealant, but should not overflow
- Rust preventive coatings may be appropriate depending on pipe materials and environment
- Density of insulation for pipe supports should be per engineer recommendations
- Zero-perm vapor barriers and appropriate protective jacketing are recommended