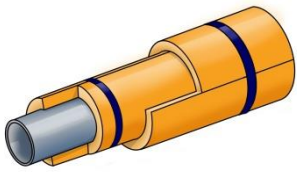


# QWIK GUIDE: ISO-C1<sup>®</sup> Polyiso Insulation in Underground Application

Dyplast<sup>®</sup> Products' ISO-C1 Polyisocyanurate Insulation is the ideal pipe insulation for lower temperature mechanical insulation systems (-297F° to +300°) in underground applications - - available in densities from 2.0-6.0 lb/ft<sup>3</sup>. Not only does ISO-C1 have relevant physical properties superior to alternatives such as cellular glass, its properties are best-in-class among competitive polyiso and polyurethane products. ISO-C1 is independently tested and audited.

### Key Physical Properties (compliant with ASTM C591)

Nominal Density (pcf)	ASTM D1622	2	2.5	3	4	6
Thermal Conductivity at +75°F -- Aged	ASTM C518	0.19	0.19	0.17	0.16	0.19
Closed Cell Content	ASTM D2856	97	97	91	93	95
Compressive Strength at +73°F (parallel)	ASTM D1621	29	41	59	81	150
Tensile Strength at +73°F (parallel)	ASTM D1623	36	60	65	88	131
Color		Tan	Tan	Tan	Tan	Tan
Surface Burning Characteristics (up to 4" thick)	ASTM E84 Flame/Smoke	<25/250	<25/250	<25/100	<25/100	<25/100

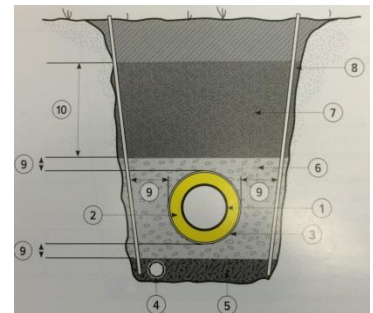


## Underground Mechanical Equipment Insulation

With its high R-factor, ISO-C1 can achieve the same insulating value with as little as half the thickness required by alternative insulating materials such as cell glass. Less insulation leads to thinner walls and fewer and tighter energy-losing seams - - further enhanced by the availability of larger pieces (for example, 24-foot segments). Less insulation in mechanical applications also equates to reduced quantities of expensive vapor retarders, jackets, and mastics. ISO-C1 can be fabricated into half-shells for single or multiple layers over any diameter pipe, or into special shapes for valves and fittings. ISO-C1 insulation is available in a range of thicknesses.

### Notes re: Image

1) Pipe	2) Rigid Insulation
3) Waterproofing jacket/membrane	4) Drain pipe
5) Gravel	6) Sand backfill
7) Rock-free backfill	8) Trenching and shoring
9) Minimum dimension around insulation	10) Minimum backfill dimension



## Installation

For many applications such as Chilled Water, only 1" of 2.0 lb/ft<sup>3</sup> ISO-C1 Insulation is typically required for pipe diameters up to 10". A qualified engineer should be consulted regarding insulation thicknesses as well as the required number of layers.

- All insulation should have a vapor barrier membrane (such as to provide additional protection for piping systems in a direct burial application).
- Earth fill around the pipe should generally be sand without contaminants that may puncture the vapor barrier. Defer to your insulation engineer for final specifications.
- A drain at the bottom of the trench or overhead soil contouring is recommended to minimize the likelihood of the trench filling with water even in light rains.