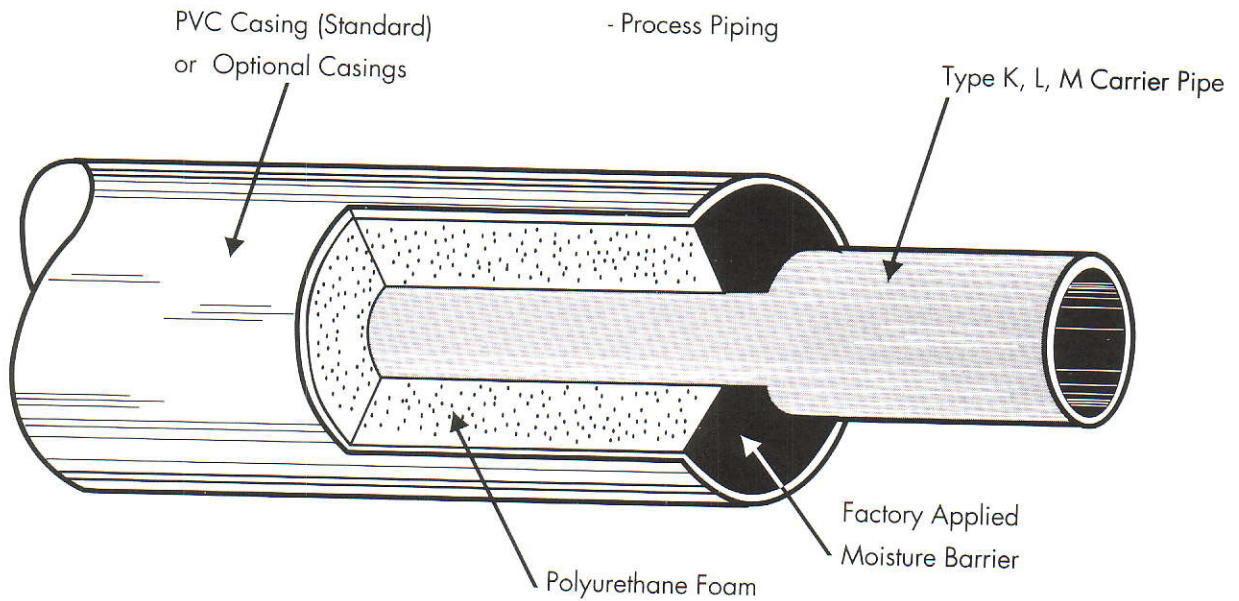


INSUL-TEK® 250 Copper

Preinsulated piping systems for above and below ground use on systems ranging from -350° F to 250° F.

Typical Uses:

- Liquid Nitrogen
- Chilled Water
- CO₂
- Hot Water
- Process Piping



The INSUL-TEK® 250 Copper system is a totally factory fabricated, insulated and jacketed system supplied in 20' lengths. The isocyanate polyurethane foam insulation utilized in this system is the most thermally efficient type of insulation available today, making this system ideal for use on both cold and hot applications.

Nominal Pipe Size	Nom. PVC Casing Size	PVC Casing Thickness	Nominal Insulation Thickness	Heat Loss †	Heat Gain ††	Weight Lbs./LF
1/2"	4.50"	.070"	1.87"	6.93	1.66	1.4
3/4"	4.50"	.070"	1.74"	8.36	2.01	1.7
1"	4.50"	.070"	1.62"	10.02	2.41	1.9
1-1/4"	4.50"	.070"	1.50"	11.81	2.85	2.0
1-1/2"	4.50"	.070"	1.37"	13.96	3.37	2.4
2"	6.00"	.070"	1.87"	12.31	2.96	3.3
2-1/2"	6.00"	.070"	1.62"	12.36	3.66	4.2
3"	6.00"	.070"	1.36"	18.97	4.59	5.2
4"	8.00"	.080"	1.85"	18.75	4.53	8.5

† BTU/HR/LF Δ T 150° F Depth of Bury 3 Ft. — Heat Loss

†† BTU/HR/LF Δ T 50° F Depth of Bury 3 Ft. — Heat Gain

* For larger sizes consult factory



Specifications for

INSUL-TEK® 250 Copper Piping

A preinsulated piping system for above and below ground use on systems with temperatures ranging from -350° F to 250° F.

MATERIALS:

All pipe shall be factory preinsulated INSUL-TEK® 250 Copper as manufactured by Preinsulated Piping Systems, Inc.

CARRIER PIPE:

Type K, L, or M Hard Drawn Copper Tubing to ASTM B-88 and WWT-799

INSULATION:

Foamed in-place closed cell polyurethane foam completely filling the annulus between the carrier pipe and jacketing.

OUTER CASINGS:

PVC:

Extruded White Polyvinyl Chloride (PVC) Type 1, Grade 1, Class 12454-B per ASTM D 1784

HDPE

Black High Density Polyethylene Resin Type III, Grade P34, under ASTM D-1248

Tensile Yield Strength
3300 psi ASTM D-638

Ultimate Elongation
850% ASTM D-638

Tangent Flexural Modulus
175,000psi ASTM D-790

Typical Mechanical Properties

Core Density

2.1 P.C.F., ASTM D-1622

Closed Cell Content

90 to 95% ASTM D-2856

"K" Factor, BTU/hr. in/ft² /°F @ 73° F

.14 ASTM C-518



FITTINGS:

All fittings shall be WROT pressure fittings complying with ANSI B16-22 and shall be factory prefabricated. The outer casing shall be constructed of the same material as the outer casing on the straight lengths of pipe.

SOLDERING & BRAZING:

Silver solder or brazing alloys with a melting point at or above 1100° F is recommended. 95/5 solder is recommended.

FIELD JOINTS:

After connecting the straight lengths of copper pipe and hydro-static testing, the field joints shall be insulated utilizing a pour foam, oversized PVC sleeve and Heatshrink wrap or Tapecoat tape.

ANCHORS:

All pipe shall be anchored per manufacturers

BACKFILLING:

The trenches shall be carefully backfilled and hand tamped in 6" layers until a cover of at least 24" from the top of the pipe has been achieved. The first 12" of all backfill shall be sand or fine gravel less than 1/2" in diameter. The remainder of the backfill shall be free of rocks, frozen earth and foreign material over 6" in diameter. The trench shall be compacted to comply with H-20 highway loading.

