

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.

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

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



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.

