

Specifications for **INSUL-TEK® PVC Piping**

A preinsulated piping system for above and below ground use on systems with temperatures ranging up to 100° F.

MATERIALS:

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

CARRIER PIPE:

Polyvinylchloride (PVC) SDR - 26, Class 160 conforming to ASTM D-2241 in 20 Ft. lengths. Maximum hydrostatic working pressure of 160 psi @ 73° F.

INSULATION:

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

All exposed ends of the insulation shall be protected with a factory applied moisture barrier. (Heat shrink end seals are available as an option.)

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 (Standard):

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

FRP:

Fiberglass Reinforced Plastic (FRP) comprised of isophthalic polyester resin and fiberglass strand. Minimum wall thickness to be 1/8" thick.

HDPE:

Black High Density Polyethylene Resin Type III, Grade P34, Under ASTM D-1622

Tensile Yield Strength

3300 psi ASTM D-638

Ultimate Elongation

850% ASTM D-638

Tangent Flexural Modulus

175,000 psi

Spiral Lockseam:

Galvanized Steel, Aluminum, and Stainless Steel with standard outer lockseam.

* For optional casings, consult the Casing Selection Guide.



FITTINGS (Bell & Spigot):

On pipe sizes 1-1/2" to 8", fittings shall be constructed of PVC of the same type and pressure rating as the straight lengths of pipe to which they are connected with rubber sealing rings. Fittings for 10" and 12" shall be ductile iron.

THRUST BLOCKS:

All underground fittings such as elbows, tees, reducers, dead-ends, etc., shall be uninsulated and poured in concrete thrust blocks. The concrete thrust block will transfer the contraction and expansion of the piping system to the gasketed rubber sealing rings utilized on the straight joints.

FIELD JOINTS:

Bell by spigot pipe shall be joined with rubber ring gasket seals conforming to ASTM D-1869. Field Joints will be uninsulated.

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 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.

