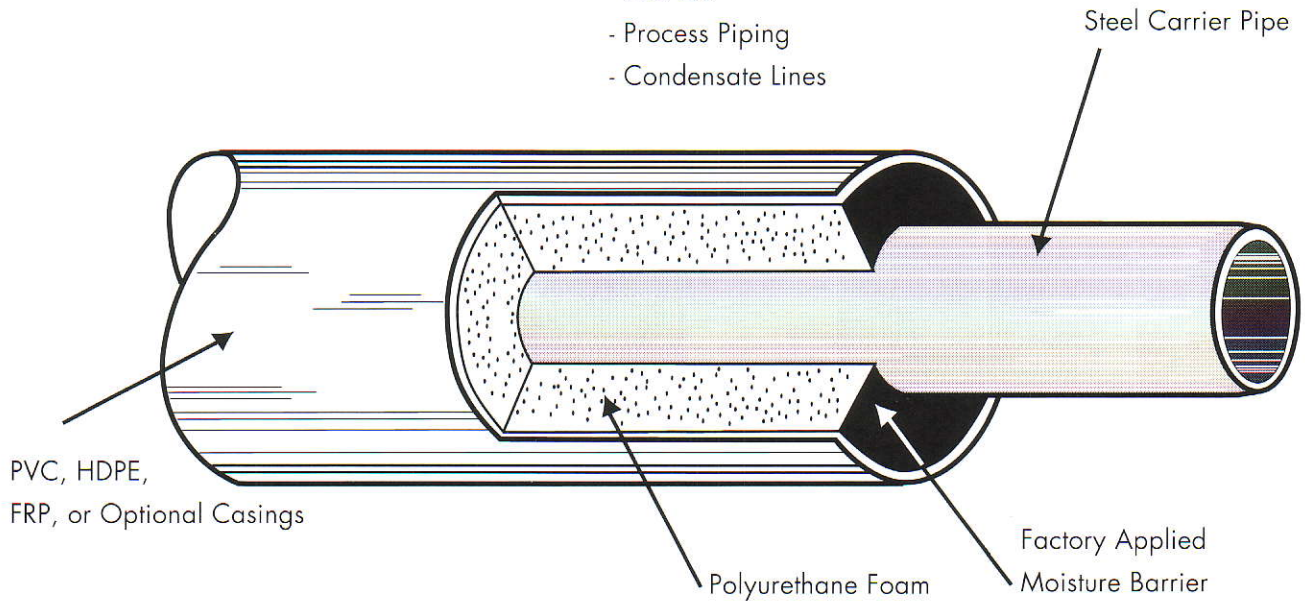


INSUL-TEK® 250 Steel System

Preinsulated piping systems for above and below ground use for service temperatures up to 250° F.

Typical Uses:

- Hot Water
- Chilled Water
- Fuel Oil
- Process Piping
- Condensate Lines



The INSUL-TEK® 250 Steel System is intended for use on systems ranging in temperature from -350° F to 250° F. It is suitable for use above and below ground. INSUL-TEK® 250 Steel utilizes the most energy efficient insulation available today, isocyanate polyurethane foam.

The standard protective casings utilized in the system are PVC, HDPE, and FRP. Optional casings, including steel and aluminum, are available.

INSUL-TEK® 250 Steel is available in 20' or 40' lengths. Fittings can be prefabricated or field fabricated as site conditions dictate.

Pipe Size	Nominal Casing Size	HDPE Casing Thickness	PVC Casing Thickness	FRP Casing Thickness
1.00	4	0.125	0.070	.125
1.25	4	0.125	0.070	.125
1.50	4	0.125	0.070	.125
2.00	6	0.125	0.070	.125
2.50	6	0.125	0.070	.125
3.00	6	0.125	0.070	.125
4.00	8	0.150	0.080	.125
5.00	8	0.150	0.080	.125
6.00	10	0.175	0.100	.125
8.00	12	0.175	0.120	.125
10	14	0.175	0.140	.188
12	16	0.175	0.160	.188
14	18	0.200	0.180	.188

*For larger sizes consult factory



Specifications for **INSUL-TEK® 250 Steel 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 Steel, as manufactured by Preinsulated Piping Systems, Inc.

CARRIER PIPE:

Schedule 40 or Schedule 80 ASTM A53 Grade B beveled for welding, or other as specified.

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
175,000 psi ASTM D-790

FRP:

Fiberglass Reinforced Plastic (FRP) comprised of isophthalic polyester resin and fiberglass strand. Minimum wall thickness to be 1/8" thick. Vinylester resin is also available. Please consult factory for recommendation.

* For optional casings, consult the Casing Selection Guide.



FITTINGS:

All fittings will conform to the pipe type and size and will be factory prefabricated. The outer casing on the fittings shall consist of hand-laminated fiberglass-reinforced plastic (FRP) comprised of fiberglass matt and isophthalic polyester resin and will have a minimum wall thickness of 1/8".

FIELD JOINTS:

After welding and hydrostatic testing, all field joints shall be insulated and sealed following manufacturer's recommendations.

ANCHORS:

Prefabricated steel anchor plates shall be welded to the internal piping. A steel ring with the same diameter as the casing shall be welded to the plate. The casing shall be tightly sealed to the ring with a heat shrinkable sleeve or a hand lay-up of FRP by the manufacturer. On pipe sizes up to 10" in size, 3/8" thick steel plate shall be used, 1/2" thick steel plate for pipe sizes 12" - 16", and 3/4" thick steel plate for all larger pipe sizes.

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 void of rocks, frozen earth, and foreign material over 6" in diameter. The trench shall be compacted to comply with H-20 highway loading.

