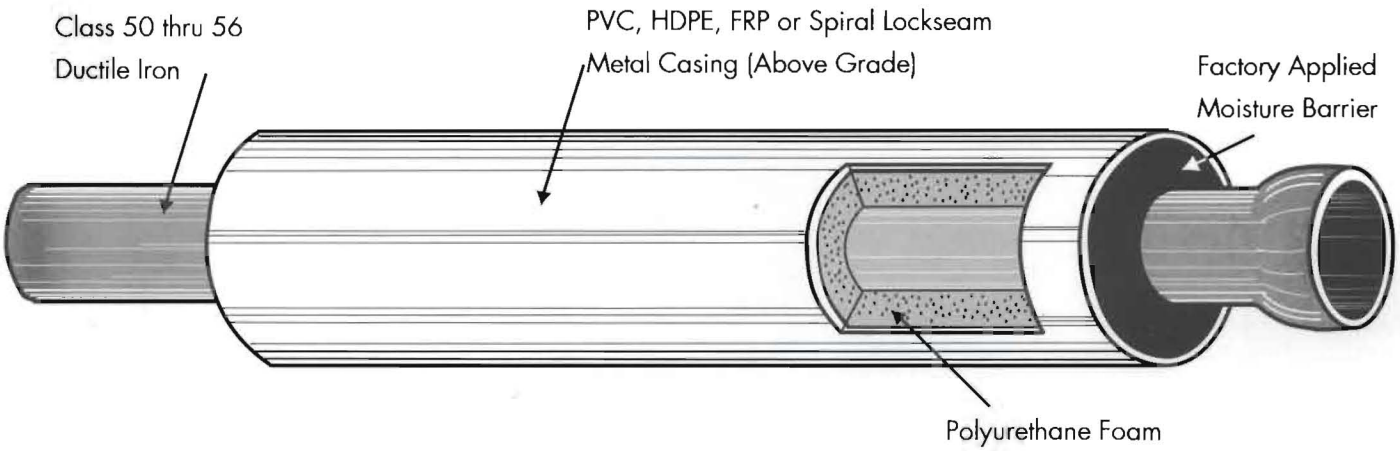
INSUL-TEK® Ductile Iron

Preinsulated piping systems for above and below ground use for service temperatures up to 225° F.

Typical Uses:

- Chilled Water Lines
- Hot Water
- Potable Water
- Sewage



The INSUL-TEK® Ductile Iron system utilizes a tough and corrosion-resistant Ductile Iron carrier pipe conforming to ANSI/AWWA C151/ A21.51. Ductile Iron Pipe offers the advantages of having the physical strengths of mild steel and the longevity of gray iron. Once insulated with our most thermally efficient polyurethane foam and protected with one of our non-corrosive protective casings, this system is an extremely tough and durable alternative to standard steel or plastic piping systems.

Preinsulated Piping Systems, Inc. offers a number of pipe joining systems, including gasketed push-on joint, mechanical joint and victaulic grooved.

This system, incorporating one of our spiral lockseam casings of galvanized steel or aluminum, is ideal for above grade applications such as bridge crossings for sewage or potable water lines.

INSUL® TEK

P.O. Box 523 • Manlius, NY 13104 • 315/656-2277 • FAX 315/656-2170

Specifications for INSUL-TEK® Ductile Iron

A preinsulated piping system for above and below ground use on systems with temperatures up to 225°F.

MATERIALS:

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

CARRIER PIPE:

Pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21-51. Push-on joints and mechanical joints for such pipe shall be in accordance with ANSI/AWWA C111/A21.11 and shall be based on laying conditions and internal pressure as specified in the project plans.

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, Class12454-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

Spiral Lockseam:

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

* For optional casings, consult the Casing Selection Guide.

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JOINING METHOD:

Pipe and fittings will be joined by push joint or mechanical joint.

FITTINGS:

All fittings shall be ductile iron and in accordance with the requirements of either ANSI/AWWA C153/A21.53 or ANSI/AWWA C110/A21.10. Mechanical joints shall conform to ANSI/AWWA C111/A21.11. Fittings shall have cement mortar lining and seal coating where applicable, in accordance with ANSI/AWWA C104/A21.4. Fittings below grade will be uninsulated and poured in concrete thrust blocks.

FIELD JOINTS:

All exposed ends of buried piping shall be fitted with a heat shrinkable end seal as manufactured by Raychem or equal. All ends of piping insulation will be sealed with a factory applied moisture barrier. Field joints will be insulated utilizing poured in-place polyurethane foam and will be sealed and jacketed with the same materials as used on the straight lengths of pipe.

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.

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