

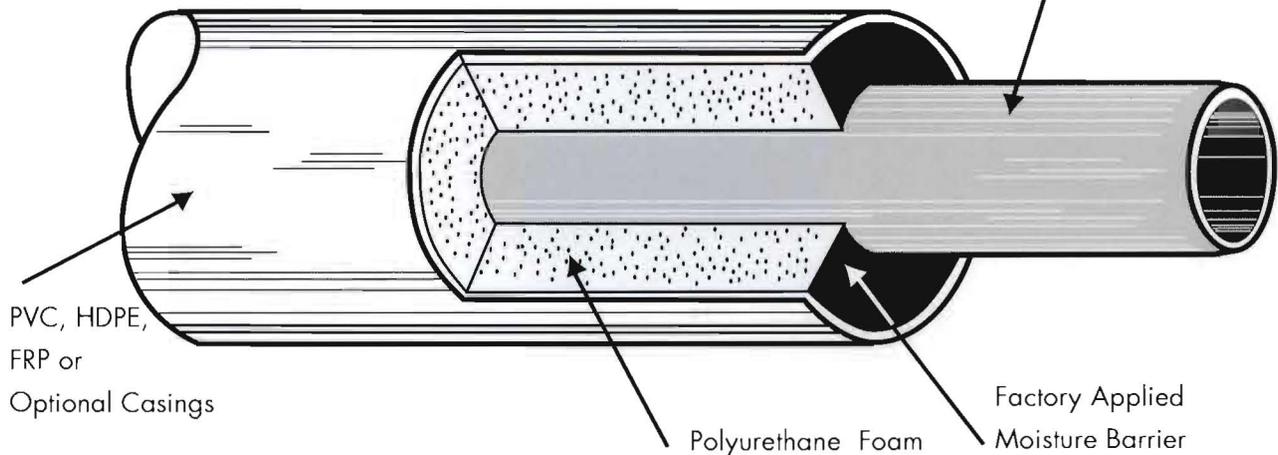
# INSUL-TEK® 250 FRP

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

## Typical Uses:

- Low Temp. Hot Water
- Chilled Water
- Fuel Oil
- Chemical Process
- Condensate

Ameron, A.O. Smith,  
or Fibercast Carrier Pipe



The INSUL-TEK® 250 FRP system is intended for use on systems with service temperatures up to 250° F and maximum pressures up to 150 psig. It is suitable for use above and below ground. INSUL-TEK® 250 FRP utilizes the most energy efficient insulation available today, isocyanate polyurethane foam.

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

INSUL-TEK® 250 FRP is available in nominal 20' and 30' lengths with integrally sealed ends. The FRP carrier pipe offers the distinct advantages of being non-corrosive in nature. It will not rot, rust, or corrode and is impervious to electrolysis. It is also lightweight, often weighing as little as

1/6 the weight of steel. FRP pipe has the ability to accommodate for expansion and contraction, thus allowing for the elimination of costly expansion loops and expansion fittings.

Pipe Size	Casing Size	Unit Overall Length	Weight/Unit
2"	4"	20 Ft.	35 Lbs.
3"	6"	20 Ft.	55 Lbs.
4"	8"	20 Ft.	90 Lbs.
6"	10"	20 Ft.	125 Lbs.
8"	12"	20 Ft.	170 Lbs.
10"	14"	20 Ft.	225 Lbs.
12"	16"	20 Ft.	250 Lbs.

Weight and Dimensions of INSUL-TEK 250 FRP  
Based Upon Bondstrand Series 2000 and PVC Casing  
\* Please note other insulation thicknesses are available.  
30 Ft. lengths are also available.



# Specifications for INSUL-TEK® 250 FRP Piping

**A** preinsulated piping system for above and below ground use on systems with temperatures ranging from +40° F up to 250° F. Maximum pressure rating of 150 psig.

## **MATERIALS:**

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

## **CARRIER PIPE:**

Fiberglass Reinforced Plastic (FRP) as specified. (Consult PPS for recommendation).

## **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/ft<sup>2</sup> /°F @ 73° F**

.14 ASTM C-518

## **OUTER CASINGS:**

### **PVC (Standard) :**

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 Resins are also available. Please consult factory for recommendations.

\* For optional casings, consult the Casing Selection Guide.



### **JOINING METHOD:**

Pipe and fittings will be joined per FRP manufacturer's recommendations.

### **FITTINGS:**

All fittings on below ground service shall be uninsulated and thrust blocked per FRP manufacturer's recommendation. All fittings on above ground service shall be insulated utilizing a poured foam and sealed in a water-tight jacketing material similar to that utilized on the straight lengths.

### **FIELD JOINTS:**

After joining straight lengths of pipe per FRP manufacturer's recommendations and hydrostatic testing, the field joints shall be insulated and sealed per manufacturer's recommendation.

### **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.

