TRICON Piping Systems, Inc.®

Energy Task Force
Pre-insulated Pipe

# HDPE

## Service Pipe:

All service pipes shall be High Density Polyethylene (HDPE) with the properties listed below. Pipe and fittings are manufactured from polyethylene and fabricated to Standard Dimension Ratio (SDR) wall thickness.

HDPE carrier pipe materials & properties:

- Std. Spec. for Polyethylene Plastic Pipe (SDR-PR) based on OD.
  ASTM F-714
- Resin Type III, Grade P34, Cat. 5, CL C
  ASTM D-3350
- Long Term Hydrostatic Strength 1600 psi
  ASTM D-2837
- Std. PE for Water Distribution 4”-63”
  AWWA C-906

## Insulation: *

The insulation shall be a foamed-in-place closed-cell polyurethane which completely fills the annular space between the carrier pipe and the exterior casing. The insulation shall have the following physical properties:

- Minimum Density (lb./cu. ft.) 2.0 ASTM D-1621
- 90-95 % Closed Cell ASTM D-2856
- “K” Factor BTU/Hr. sq. ft. °F/in. . . .147 ASTM C-177
- Maximum operating temperature shall not exceed 75°F.

## Exterior Casing: **

The casing shall be High Density Polyethylene (HDPE) with the following properties:

- ASTM D-3350…Resin Type III, Grade P34
- ASTM D-638…Ultimate Elongation 850%
- ASTM D-638…Tensile Yield Strength 3300 psi

- ASTM D-790…Tangent Flexural Modules 175,000 psi

## Sub-Assemblies:

All fittings shall be HDPE, factory insulated, and fusion welded to the HDPE service pipe and sealed to the outer jacket. Field-installed fittings are insulated and sealed with our supplied insulation kits.

## Field Joints:

After thermal butt fusion welding and hydrostatic testing of the carrier pipe, HDPE jacketed straight field joints shall be insulated with polyurethane foam half-shells to the thickness specified, and sealed water-tight with a heat-shrink sleeve.

## Installation:

No Piping shall be installed in standing water. Trenches shall be maintained dry until final field closure is complete. The installing contractor shall handle the piping system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The carrier piping shall be hydrostatically tested to 1-1/2 times the operating pressure, or as specified in the contract documents. The test shall be maintained for a minimum time of 1 hour. EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM.

## Backfill:

A 4-inch layer of sand or fine gravel, less than ½" in diameter, shall be placed and tamped in the trench to provide uniform bedding for the **HDPE** system. Once the system is in place, the trenches shall be carefully backfilled with similar material and hand tamped in 6" layers until a minimum of 12" above the top of the pre-insulated pipe has been achieved. The remainder of the backfill shall be void of rocks, frozen earth, and foreign material. The trench shall be compacted to comply with H-20 Highway loading.