



### Scope

This specification designates the requirements for 12- through 48- inch I.D. Prinsco ECOFLO WT® pipe for use in gravity-flow drainage applications.

### Pipe Requirements

Prinsco GOLDFLO pipe shall have annular exterior corrugations with a smooth interior allowing for a Manning's "n" design value of .012 and shall meet the following standards:

- 12- through 48- inch shall meet ASTM F2306 or AASHTO M294, Type S with the exception that the material formulation shall contain a minimum of 50% recycled polyethylene.

### Materials

ECOFLO WT pipe and fabricated fittings shall be manufactured using High Density Polyethylene (HDPE) meeting the minimum requirements of cell classification of 435420C, as defined and described in ASTM D3350 except the carbon black content should not exceed 4%. The material formulation shall contain not less than 50% post-consumer recycled HDPE, as defined by USGBC in LEED version 2.2 rating system.

The HDPE pipe material shall be tested for slow crack growth resistance using the notched constant ligament-stress (NCLS) test as specified in sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306, respectively. Average failure time of the five test specimens shall not be less than 24 hours.

### Joint Performance

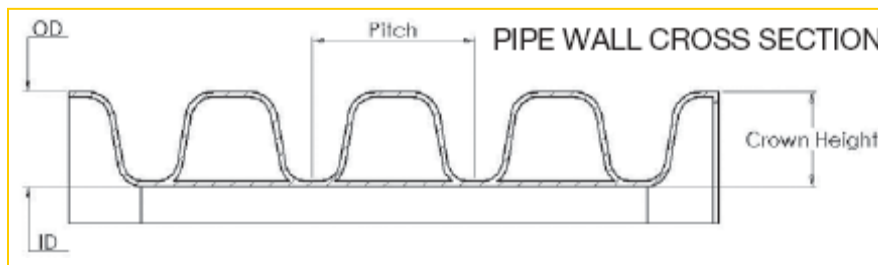
ECOFLO WT pipe shall be joined using watertight bell and spigot type joints meeting AASHTO M294 or ASTM F2306. The integral joints shall be watertight according to ASTM D3212. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477 and shall be installed by the manufacturer. An approved joint lubricant, available from the manufacturer, shall be applied to the bell and gasket during installation. ECOFLO WT joints shall be assembled in accordance with the manufacturer's requirements to ensure installed watertight performance.

### Fittings

Fittings shall meet the requirements of AASHTO M294 or ASTM F2306, with the exception that recycled HDPE shall be used in the manufacture of the fittings as defined in the Materials section of this specification.

### Physical Pipe Dimensions

Nominal ID (in)	Approximate OD (in)	Length (ft)	Corrugation Pitch (in)	Approximate Weight/foot (lb)	Min. Pipe Stiffness @ 5% Deflection (psi)
12"	14.2	10, 20	2.00	3.1	50
15"	17.7	10, 20	2.67	4.5	42
18"	21.6	11, 20	3.00	6.5	40
24"	28.4	11, 20	4.00	11.0	34
30"	34.5	11, 20	4.00	14.6	28
36"	41.0	11, 20	4.00	19.0	22
42"	47.5	11, 20	6.00	25	20
48"	54	11, 20	6.00	30	18





## **Installation**

Pipe and fittings shall be installed in accordance with ASTM D2321 and Prinsco's published installation guidelines. Minimum cover for AASHTO H-25 loads shall be 12" to sub-grade in trafficked areas where flexible pavement is installed and shall be 12" to the surface of rigid pavement. Contact your local Prinsco representative or visit [www.prinsco.com](http://www.prinsco.com) for the latest installation guidelines.

## **Reference Specifications**

This specification references the latest edition and revisions of the following standard specifications:

- AASHTO M294 – *Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm Diameter*
- ASTM F2306 – *Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications*
- ASTM F2648 – *Standard Specification for 2 to 60 inch [50 to 1500mm] Annular Corrugated Profile Wall Polyethylene (PE) Pipe and Fittings for Land Drainage Applications*
- ASTM D3350 – *Standard Specification for Polyethylene Plastics Pipe and Fittings Materials*
- ASTM F477 – *Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe*
- ASTM D3212 – *Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals*
- ASTM D2321 – *Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications*
- ASTM F2487 – *Standard Practice for Underground Infiltration and Exfiltration Acceptance Testing of Installed Corrugated High Density Polyethylene Pipelines*