**SMOOTH-FLOW F-477 F-2648 PIPE SPECIFICATIONS**

- **Diameter:** 4"-60" (100-1500mm)
- **Length:** 20’ Sections, other lengths also available
- **Joint System:** Bell & Spigot
- **Joint Performance:** Soil-Tight
- **Gasket:** meets or exceeds ASTM F477
- **Specifications:** ASTM D3350, ASTM F477, ASTM F667, ASTM F405, ASTM F2648

**Description**

This specification includes Haviland Smooth-Flow F-477 dual wall pipe, diameters 4’-60” (100-1500mm), for use in non-pressure gravity flow applications, including storm sewers, culverts, highway drains, and various other gravity flow drainage applications.

**Pipe Requirements**

Smooth-Flow F-477 pipe meets or exceeds specifications set forth in ASTM F667/F405 and meets ASTM F2648 structural and cell class requirements. This pipe is available in solid and perforated styles. Perforated pipe contains 8 rows of holes, from 3/16” to 3/8” diameter depending on the size of the pipe, 4” thru 15” perforations are slots. All perforated pipes exceed the minimum water inlet area per foot. Perforations shall conform to Class 2 unless otherwise specified.

**Material Properties**

Raw materials used in the manufacture of Smooth-Flow F-477 pipe and fittings are high density polyethylene conforming to the requirements of ASTM D3350, with a minimum cell class of 424420C (4” thru 10”), and 435420C (12” thru 60”).

**Joint Performance**

Smooth-Flow F-477 pipe is joined with a bell & spigot joint system, made soil-tight by compressing a rubber gasket between the bell and spigot ends of the pipe. The gasket conforms to the requirements of ASTM F477. Gaskets are installed before shipment and protected by a removable plastic wrap. During pipe installation and joint assembly, a joint lubricant is to be used. This lubricant is available from Haviland Drainage Products Co.