

## ADS N-12<sup>®</sup> LOW HEAD PIPE SPECIFICATION

### Scope

This specification describes 24- through 60-inch (600 to 1500 mm) ADS N-12 low head pipe for use in low head / low pressure applications.

### Pipe Requirements

N-12 Low Head pipe shall have a smooth interior and annular exterior corrugations.

- 24- through 60-inch (600 to 1500 mm) shall meet AASHTO M294, Type S or ASTM F2306 with the modifications listed herein.
- Manning's "n" value for use in design shall be 0.012.
- Where low head applications sustain continuous pressure, the sustained pressure shall not exceed 5psi and the surge pressure shall not exceed 10 psi.

### Joint Performance

The 24- through 60-inch (600 to 1500 mm) pipe shall be watertight according to the requirements of ASTM D3212. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. Integral bell shall be reinforced with multiple ceramic polymer wraps installed by the manufacturer. Spigot shall have two gaskets which can be fully inserted into the bell.

### Fittings

Fittings shall conform to AASHTO M294 or ASTM F2306. Fittings shall be fabricated from the same materials as the pipe.

### Field Pipe and Joint Performance

To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM2487. Appropriate safety precautions must be used when field-testing any pipe material. Contact the manufacturer for recommended leakage rates.

### Material Properties

Virgin material for pipe and fitting production shall be high-density polyethylene conforming with the minimum requirements of cell classification 435400C for the corrugated exterior profile, and 445464A, for the interior liner as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 24- through 60-inch (600 to 1500mm) virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306 respectively. The interior liner resin shall have a material designation code of PE3408 by the Plastic Pipe Institute and a Hydrostatic Design Basis of 1600 psi

### Installation

Installation shall be in accordance with ASTM D2321 and ADS published installation guidelines for low head irrigation pipe with the exceptions that only Class I and II backfill materials shall be acceptable and minimum cover in traffic areas for 24- through 48-inch (600 to 1200mm) shall be one foot (0.3m) and for 60-inch (1500mm) diameters, the minimum cover shall be 2-feet (0.6m). Contact your local ADS representative or visit our website at [www.ads-pipe.com](http://www.ads-pipe.com) for a copy of the installation guidelines.

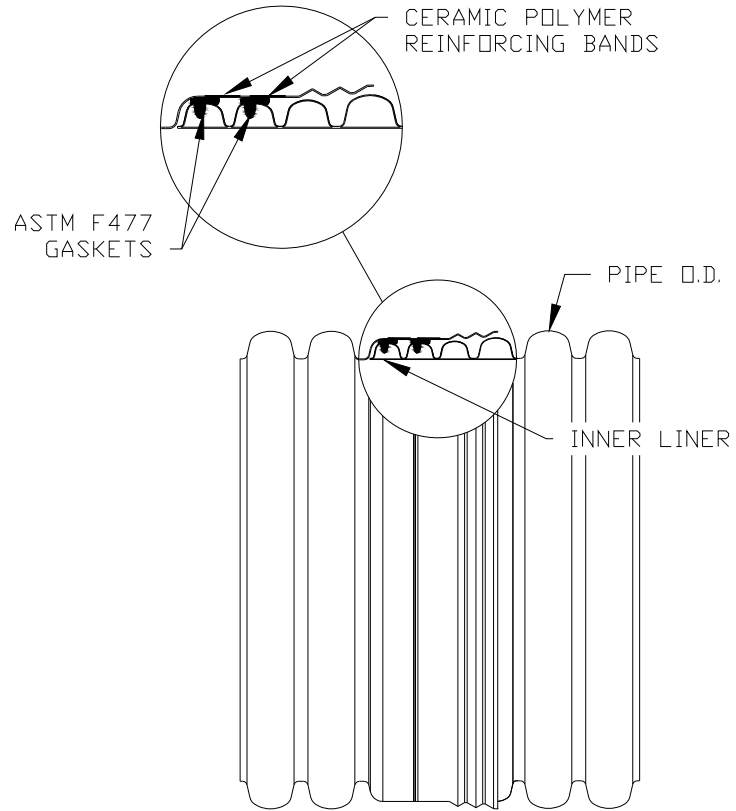
### Pipe Dimensions\*

Pipe I.D. in (mm)	Nominal Diameter					
	24 (600)	30 (750)	36 (900)	42 (1050)	48 (1200)	60 (1500)
Pipe O.D.* in (mm)	27.8 (719)	36 (914)	42 (1067)	48 (1219)	54 (1372)	67 (1702)
Inner Liner Thickness In. (mm)	0.07 (18)	0.07 (18)	0.095 (24)	0.105 (27)	0.105 (27)	0.105 (27)
Min. Pipe Stiffness @5% Deflection #/in./in. (kN/m <sup>2</sup> )	28 (195)	28 (195)	22 (150)	20 (140)	18 (125)	14 (95)

\*Pipe O.D. values are provided for reference purposes only, values stated for 24- through 60-inch are  $\pm 0.5$  inch. Contact a sales representative for exact values.

## N-12<sup>®</sup> LOW HEAD JOINT SYSTEM

*(Joint configuration & availability subject to change without notice. Product detail may differ slightly from actual product appearance.)*



24" - 60"  
(600-1500 MM)