

# S1.03 N-12 ST IB Pipe (per AASHTO) Specification

## Scope

This specification describes 4- through 30-inch (100 to 750 mm) N-12 ST IB pipe (per AASHTO) for use in gravity-flow land drainage applications.

## Pipe Requirements

N-1 ST IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.

- 4- through 10-inch (100 to 250 mm) pipe shall meet AASHTO M252, Type S or SP.
- 12- through 30-inch (300 to 750 mm) pipe shall meet AASHTO M294 Type S or SP, or ASTM F2306.
- Manning's "n" value for use in design shall be 0.012.

## Joint Performance

Pipe shall be joined using a bell & spigot joint meeting the requirements of AASHTO M252, AASHTO M294, or ASTM F2306. The joint shall be soil-tight and gaskets for diameters 12- through 30-inch (300-750 mm), shall meet the requirements of ASTM F477. For diameters 4- through 10-inch, the joint shall be soil-tight using an engaging dimple connection. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

## Fittings

Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294, or ASTM F2306.

## Material Properties

Material for pipe and fitting production shall be high density polyethylene conforming with the minimum requirements of cell classification 424420C for 4- through 10-inch (100 to 250 mm) diameters, and 435400C for 12- through 30-inch (300 to 750 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 12- through 30-inch (300 to 750 mm) 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.

## Installation

Installation shall be in accordance with ASTM D2321 and ADS recommended installation guidelines, with the exception that minimum cover in trafficked areas for 4- through 30-inch (100 to 750 mm) diameters shall be one foot (0.3 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1 (compacted), Class 2 (minimum 90% SPD) or Class 3 (minimum 95% SPD) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.01. Contact your local ADS representative or visit our website at [www.adspipe.com](http://www.adspipe.com) for a copy of the latest installation guidelines.

## Build America, Buy America

N-12 ST IB pipe (per AASHTO), manufactured in accordance with AASHTO M252, AASHTO M294 or ASTM F2306, complies with the requirements in the Build America, Buy America (BABA) Act.

## Pipe Dimensions

Pipe I.D. in (mm)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)
Pipe O.D.* in (mm)	4.8 (122)	6.9 (175)	9.1 (231)	11.4 (290)	14.5 (368)	18 (457)	22 (559)	28 (711)	36 (914)

\* Pipe O.D. values are provided for reference purposes only, values stated for 12 through 60-inch are ±1 inch. Contact a sales representative for exact values

