## ADS $\mathrm{N}-12^{\circledR}$ ST IB PIPE (per AASHTO) SPECIFICATION

## Scope

This specification describes 4- through 60-inch (100 to 1500 mm ) ADS N-12 ST IB pipe (per AASHTO) for use in gravity-flow drainage applications.

## Pipe Requirements

ADS N-12 ST IB pipe (per AASHTO) shall have a smooth interior and annular exterior corrugations.

- 4 - through10-inch ( 100 to 250 mm ) shall meet AASHTO M252, Type S.
- 12 - through 60 -inch ( 300 to 1500 mm ) shall meet AASHTO M294, Type S 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 AASHTO M252, AASHTO M294 or ASTM F2306. The joint shall be soil-tight and gaskets, when applicable, shall meet 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. A joint lubricant supplied by 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 spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

## Material Properties

Virgin material for pipe and fitting production shall be high density polyethylene conforming with the minimum requirements of cell classification 424420 C for 4 - through 10 -inch ( 100 to 250 mm ) diameters, or 435400 C for 12- through 60 -inch ( 300 to 1500 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 60 -inch ( 300 to 1500 mm ) 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.

Installation
Installation shall be in accordance with ASTM D2321 and ADS's published installation guidelines, with the exception that minimum cover in trafficked areas for 4 - through 48 -inch ( 100 to 1200 mm ) diameters shall be one foot. ( 0.3 m ) and for $54-$ and 60 -inch ( 1350 and 1500 mm ) diameters, the minimum cover shall be 2 ft . ( 0.6 m ) in single run applications. Backfill for minimum cover situations shall consist of Class 1, Class 2 (minimum $90 \%$ SPD) or Class 3 (minimum $90 \%$ ) 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.ads-pipe.com for a copy of the latest installation guidelines.

Pipe Dimensions

| Nominal Diameter, in (mm) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pipe I.D. in (mm) | $\begin{gathered} 4 \\ (100) \\ \hline \end{gathered}$ | $\begin{gathered} 6 \\ (150) \\ \hline \end{gathered}$ | $\begin{gathered} 8 \\ (200) \\ \hline \end{gathered}$ | $\begin{gathered} 10 \\ (250) \\ \hline \end{gathered}$ | $\begin{gathered} 12 \\ (300) \\ \hline \end{gathered}$ | $\begin{gathered} 15 \\ (375) \\ \hline \end{gathered}$ | $\begin{gathered} 18 \\ (450) \\ \hline \end{gathered}$ | $\begin{gathered} 24 \\ (600) \\ \hline \end{gathered}$ | $\begin{gathered} 30 \\ (750) \\ \hline \end{gathered}$ | $\begin{gathered} 36 \\ (900) \\ \hline \end{gathered}$ | $\begin{gathered} 42 \\ (1050) \\ \hline \end{gathered}$ | $\begin{gathered} 48 \\ (1200) \\ \hline \end{gathered}$ | $\begin{gathered} 54^{*} \\ (1350) \\ \hline \end{gathered}$ | $\begin{gathered} 60 \\ (1500) \\ \hline \end{gathered}$ |
| $\begin{aligned} & \text { Pipe O.D.** } \\ & \text { in (mm) } \end{aligned}$ | $\begin{gathered} 4.8 \\ (122) \\ \hline \end{gathered}$ | $\begin{gathered} 6.9 \\ (175) \\ \hline \end{gathered}$ | $\begin{gathered} 9.1 \\ (231) \\ \hline \end{gathered}$ | $\begin{gathered} 11.4 \\ (290) \\ \hline \end{gathered}$ | $\begin{array}{r} 14.5 \\ (368) \\ \hline \end{array}$ | $\begin{gathered} 18 \\ (457) \\ \hline \end{gathered}$ | $\begin{gathered} 22 \\ (559) \\ \hline \end{gathered}$ | $\begin{gathered} 28 \\ (711) \end{gathered}$ | $\begin{gathered} 36 \\ (914) \\ \hline \end{gathered}$ | $\begin{gathered} 42 \\ (1067) \\ \hline \end{gathered}$ | $\begin{gathered} 48 \\ (1219) \\ \hline \end{gathered}$ | $\begin{gathered} 54 \\ (1372) \\ \hline \end{gathered}$ | $\begin{gathered} 61 \\ (1549) \\ \hline \end{gathered}$ | $\begin{gathered} 67 \\ (1702) \\ \hline \end{gathered}$ |
| Perforations | All diameters available with or without perforations |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Check with sales representative for availability by region. <br> ${ }^{* *}$ Pipe O.D. values are provided for reference purposes only, values stated for 12 - through 60 -inch are $\pm 1$ inch. Contact a sales representative for exact values. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## $\mathrm{N}-12^{\text {® }}$ ST IB (per AASHTO) JOINT SYSTEM

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

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