

# N-12<sup>®</sup> Plain End Pipe (per ASTM F2648)

N-12 Plain End pipe (per ASTM F2648) is a gravity-flow, watertight pipe, which has recycled content, and is available for the timber market. Plain End pipe is available in a range of diameters from 12"-48" (300-1200 mm).

N-12 Plain End pipe, which is made from high-density polyethylene (HDPE), delivers superior value, while providing physical strength and structural design that cannot be matched by traditional materials.

## Applications

- Forestry

## Features

- Available in 20' (6 m) lengths, resulting in fewer joints - pipe can be field cut to the desired length
- 12"-48" (300-1200 mm) diameters available
- Certified to meet ASTM F2648 requirements
- Superior hydraulics - smooth interior will ensure no debris or sediment build-up
- Structural strength will support H-25 or HL-93 live loads with 12" (300 mm) minimum cover

## Benefits

- Easy-to-handle, safe, light weight pipe requires less labor and equipment for faster installation and reduced costs
- Provides superior resistance to chemicals, road salt, motor oil and gasoline - will not rust or deteriorate
- Withstands repeated freeze/thaw cycles and continuous subzero temperature
- Coupling bands are available



# ADS N-12 Plain End Pipe (per ASTM F2648) Specification

## Scope

This specification describes 12- through 48-inch (300 to 1200 mm) ADS N-12 Plain End pipe (per ASTM F2648) for use in gravity-flow land drainage applications.

## Pipe Requirements

ADS N-12 Plain End pipe (per ASTM F2648) shall have a smooth interior and annular exterior corrugations.

- 12- through 48-inch (300 to 1200 mm) shall meet ASTM F2648
- Manning's "n" value for use in design shall be 0.012.

## Joint Performance

Pipe shall be joined with coupling bands covering at least two full corrugations on each end of the pipe. Standard connections shall meet or exceed the soil-tight requirements of ASTM F2648.

Gasketed connectoins shall incorporate a closed-cell synthetic expanded rubber gasket meeting the requirements of ASTM D1056 Grade 2A2. Gaskets, when applicable, shall be installed by the pipe manufacturer.

## Fittings

Fittings shall conform to ASTM F2306.

## Material Properties

Material for pipe production shall be an engineered compound of virgin and recycled high-density polyethylene conforming with the minimum requirements of cell classification 435420C, (ESCR Test Condition B) for 12- through 48-inch (300 to 1200 mm) diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The design engineer shall verify compatibility with overall system including structural, hydraulic, material and installation requirements for a given application.

## Installation

Installation shall be in accordance with ASTM D2321 and ADS' published installation guidelines, with the exception that minimum cover in trafficked areas for 12- through 48-inch (300 to 1200 mm) diameters shall be one foot (0.3 m) in single run applications. Backfill for minimum cover situations shall consist of Class 1 (compacted) or Class 2 (minimum 90% SPD) material. Maximum fill heights depend on embedment material and compaction level; please refer to Technical Note 2.02. Contact your local ADS representative or visit our website [adspipe.com](http://adspipe.com) for a copy of the latest installation guidelines.

## Pipe Dimensions\*

Pipe I.D. in (mm)	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)	42 (1050)	48 (1200)
Pipe O.D. in (mm)	14.5 (368)	18 (457)	22 (559)	28 (711)	36 (914)	42 (1067)	48 (1219)	54 (1372)

\*Check with sales representative for availability by region. \*\*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.

