

N-12[®] HDPE Plain End Pipe (CSA B182.8 or BNQ 3624-120)

N-12 Plain End pipe is a gravity-flow pipe, which is available in a range of diameters from 100-1500 mm (4"-60") diameters. N-12 pipe is certified to meet CSA B182.8 or BNQ 3624-120 requirements.

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

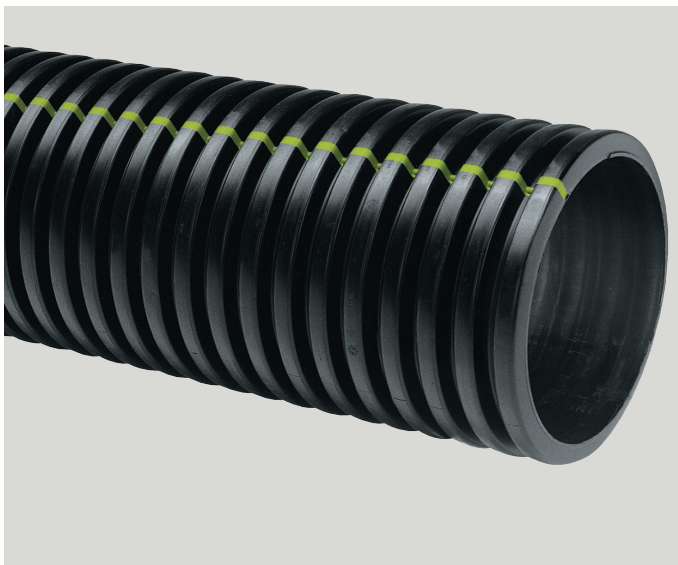
- Culverts & cross drains
- Slope & edge drains
- Golf, turf & recreation
- Foundation drains
- Retention & detention systems
- Storm sewers
- Parking lot drainage
- Mining, forestry & industrial

Features

- Available in 6.1 m (20') lengths, resulting in fewer joints - pipe can be field cut to the desired length
- 100-1500 mm (4"-60") diameters available
- Certified to meet CSA B182.8, Type 3 or BNQ 3624-120 requirements
- Available pipe stiffness of 210 kPa or 320 kPa at 5% deflection per CSA B182.8
- HS-25, HL-93 & CL-625 (highway traffic loads) rated with a minimum of 0.3 m (12") of cover for 100-1200 mm (4"-48") diameters and 0.6 m (2') cover for 1500 mm (60") pipe

Benefits

- Easy-to-handle, safe, lightweight pipe requires less labor and equipment for faster installation and reduced costs
- Superior hydraulics - smooth interior will ensure no debris or sediment build-up
- 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



N-12 HDPE Plain End Pipe (CSA B182.8 or BNQ 3624-120) Specification

Scope

This specification describes 100 to 1500 mm (4"-60") N-12 Plain End pipe pipe for use in gravity-flow drainage applications.

Pipe Requirements

N-12 Plain End pipe to meet CSA B182.8 or BNQ 3624-120 and shall have a smooth interior and annular exterior corrugations.

- 100 to 1500 mm (4"-60") shall be certified by an accredited certification body to meet CSA B182.8 or BNQ 3624-120
- 100 to 900 mm (4"-36") shall meet a minimum pipe stiffness of 320 kPa (46.4 psi) or 210 kPa (30.5 psi) where applicable when tested in accordance with ASTM D2412
- 1050 to 1500 mm (42"-60") shall meet a pipe stiffness requirement that is variable based on the diameter when tested in accordance with ASTM D2412. Minimum requirements are provided within CSA B182.8 or BNQ 3624-120
- 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. The joint shall meet or exceed the soil tight Type 3 requirements of CSA B182.8 or BNQ 3624-120. Gasketed connections, when applicable, 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.

Material Properties

Material for pipe production shall be high-density polyethylene conforming with the minimum requirements of cell classification 424400C for 100-250 mm (4"-10") and 435400C for 300 to 1500 mm (12"-60") diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. Virgin pipe material shall comply with the notched constant ligament stress (NCLS) test as described in clause 8.5 of CSA B182.8 or clause 7.3.7 of BNQ 3624-120. The average failure time of the five test specimens shall exceed 24 hours with no single test specimen's failure time less than 17 hours. Recycled pipe material shall comply with the un-notched constant ligament stress (UCLS) test as clause 8.7 of CSA B182.8 or clause 7.3.8 of BNQ 3624-120. The average failure time for five specimens shall be greater than or equal to the minimum average failure time based on a weighted design tensile stress of 3.4 MPa at a service temperature of 23° C. None of these five specimens shall have an average failure time below 18 hours and the average failure time of these specimens shall exceed 34 hours.

Installation

Installation shall be in accordance with CSA B182.11 or BNQ 1809-300, and ADS published installation guidelines with the exception that minimum cover in trafficked areas for 100 to 1200 mm (4-48 inch) diameters shall be 0.3 m (1 ft.) and for 1500 mm (60 inch) diameter shall be 0.6 m (2 ft) in single run applications. Backfill for minimum cover situations shall consist of Class I, Class II (minimum 90% SPD) or Class III (minimum 95% SPD) material. Maximum fill heights depend upon embedment material and compaction level; please refer to Technical Note 2.01C or Technical Note 2.01Q. Contact your local ADS representative or visit our website www.adspipe.ca for a copy of the latest installation guidelines.

Pipe Dimensions*

Pipe I.D. mm (in)	100 (4)	150 (6)	200 (8)	250 (10)	300 (12)	375 (15)	450 (18)	600 (24)	750 (30)	900 (36)	1050 (42)	1200 (48)	1500 (60)
Pipe O.D. mm (in)	122 (4.8)	175 (6.9)	231 (9.1)	290 (11.4)	368 (14.5)	457 (18.0)	559 (22.0)	711 (28.0)	914 (36.0)	1067 (42.0)	1219 (48.0)	1372 (54.0)	1702 (67.0)
Minimum Pipe Stiffness* kPa (psi)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	140 (20)	125 (18)	95 (14)
							210 (30.5)	210 (30.5)	210 (30.5)	210 (30.5)			

*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 ±1 inch. Contact a sales representative for exact values.

