

N-12® WITH ENGINEERED MATERIAL COMPOUND CAN PROVIDE EXCEPTIONAL INFRASTRUCTURE PRODUCT WITH ENHANCED SOCIAL RESPONSIBILITY

N-12 corrugated dual-wall pipe was introduced in 1987. Today's N-12 (per ASTM F2648) pipe is engineered with a compound of virgin and recycled high-density polyethylene resins to provide impressive material properties. The performance you've come to expect from N-12, with the added benefit of helping to promote responsible use of resources. Available in diameters from 4" to 60" (100 mm to 1500 mm), N-12 (per ASTM F2648) pipe is replacing reinforced concrete pipe as a preferred product for stormwater applications.

Benefits of using N-12 pipe (per ASTM F2648)

- Technological advances in materials science have improved quality of recycled resins. Innovative blending capabilities have made recycled products a viable and often preferred building construction material.
- Mandated use of 100% virgin resin unnecessarily increases end-user (taxpayer) costs. By utilizing engineered compounds, we can maintain the quality and performance while minimizing the impact of excessive raw material increases on infrastructure costs.
- Recycled compounds are capable of providing an equal level of performance. It is socially responsible to utilize them.
- When recycled products are purchased, incentives are created for materials to be collected, manufactured and developed into new products. This process saves resources for future generations.
- The U.S. Green Building Council's LEED rating program for sustainable design recognizes the use of recycled building materials and LEED credits can be attained for incorporating their use.
- Recycled materials have proven to be viable for construction products. Other widely-used construction materials, like steel or concrete pipe, have been utilizing recycled components for decades.

N-12 Pipe Comparison Chart (12"–60")

	ASTM F2648	AASHTO M294
Pipe Material	Engineered compound of HDPE	Virgin HDPE
Resin Density	0.945–0.955 gm/cm ³	0.942–0.955 gm/cm ³
Melt Index	<0.4 to 0.15	<0.4 to 0.15
Flexural Modulus	758– <1103 MPa	758– <1103 MPa
Tensile Strength at Yield	21– <24 MPa	21– <24 MPa
Pipe Flattening	Identical buckling evaluation, variable by diameter	Identical buckling evaluation, variable by diameter
Brittleness	Must pass Impact test per ASTM D2444	Must pass Impact test per ASTM D2444
UV Stabilizer	Maximum 2% carbon black	Maximum 2% carbon black
12" Pipe Stiffness	50 psi	50 psi
15" Pipe Stiffness	42 psi	42 psi
18" Pipe Stiffness	40 psi	40 psi
24" Pipe Stiffness	34 psi	34 psi
Recommended Soils (Backfill)	Class 1, 2 & 3 per ASTM D2321	Class 1, 2 & 3 per ASTM D2321
Minimum Cover	1' minimum for 4"–48", 2' minimum for 60"	1' minimum for 4"–48", 2' minimum for 60"
Maximum Cover	See Technical Note 2.02	See Technical Note 2.01

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