

# N-12<sup>®</sup> Corrugated Dual Wall Pipe

## ASTM F2648 & AASHTO M294 Comparison

N-12 corrugated dual wall pipe was introduced in 1987 and is engineered with a material compound that provides exceptional infrastructure product with enhanced social responsibility.

Today's N-12 (per ASTM F2648) pipe is engineered with a compound of virgin and recycled high-density polyethylene (HDPE) 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. N-12 (per ASTM F2648) is available in diameters from 4"-60" (100-1500 mm).

### 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 & preferred building construction material.
- Mandated use of 100% virgin resin unnecessarily increases end-user (taxpayer) cost. By utilizing engineered compounds, we can maintain the quality and performance while minimizing the impact of excessive raw material increases on infrastructure cost.
- 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.

	ASTM F2648	AASHTO M294
<b>Pipe material</b>	Engineered compound of HDPE	Engineered compound of HDPE
<b>Resin density</b>	0.945-0.955 gm/cm <sup>3</sup>	0.945-0.955 gm/cm <sup>3</sup>
<b>Melt index</b>	<0.4 to 0.15	<0.4 to 0.15
<b>Flexural modulus</b>	758- <1103 MPa	758- <1103 MPa
<b>Tensile strength at yield</b>	21- <24 MPa	21- <24 MPa
<b>Pipe flattening</b>	Identical buckling evaluation, variable by diameter	Identical buckling evaluation, variable by diameter
<b>Brittleness</b>	Must pass impact test per ASTM D2444	Must pass impact test per ASTM D2444
<b>UV stabilizer</b>	Maximum 2% carbon black	Maximum 2% carbon black
<b>12" pipe stiffness</b>	50 psi	50 psi
<b>15" pipe stiffness</b>	42 psi	42 psi
<b>18" pipe stiffness</b>	40 psi	40 psi
<b>24" pipe stiffness</b>	34 psi	34 psi
<b>Recommended soils (backfill)</b>	Class 1, 2 & 3 per ASTM D2321	Class 1, 2 & 3 per ASTM D2321
<b>Minimum cover</b>	1' minimum for 4"-48", 2' minimum for 60"	1' minimum for 4"-48", 2' minimum for 60"
<b>Maximum cover</b>	See Technical Note 2.02	See Technical Note 2.01
<b>Build America, Buy America (BABA)</b>	Does not comply with BABA Act requirements	Complies with BABA Act requirements

