

HD100EC PIPE

PRODUCT

HD100EC PIPE is a dual wall high density polyethylene (HDPE) pipe with a smooth interior and corrugated exterior manufactured for all drainage applications. Integrated bell and spigot couplers are provided on nominal 20' pipe lengths with diameters ranging from 6" to 60". Manning's roughness coefficient (i.e. Manning's n value) is conservatively factored to 0.012 for in-service design.

JOINT PERFORMANCE

Lane's HD100EC pipe affords the full range of joint performance available today, from soil-tight to water-tight (per ASTM D3212). Standard bell-and-spigot pipe joints include a manufacturer installed gasket (elastomeric seal per ASTM F477).

PIPE STANDARDS AND RAW MATERIAL

HD100EC PIPE is certified and marked as ASTM F2648 pipe and is produced from an engineered compound of virgin and recycled HDPE resins meeting the cell classification and material performance requirements of both ASTM F2648 and AASHTO M252/M294R. HD100EC PIPE is engineered to a higher standard than that required by ASTM F2648 to ensure superior service life. The resin compound used to manufacture HD100EC PIPE contains a minimum 40% post-consumer recycled material that is subject to a quality assurance program that ensures compliance with cell classification requirements. Lane qualifies its recycled blends to superior service life by engineering a compound with ample slowcrack-growth (SCG) resistance, the primary material property that relates quality and the critical component for assessing service life. SCG resistance is measured using the Notched Constant Ligament Stress (NCLS) test per ASTM F2136. HD100EC PIPE is certified to exceed the SCG resistance requirements of AASHTO M252/M294R as well as all other corrugated HDPE pipe specifications.

The US Green Building Council's (www.usgbc.org) rating system to certify green building and construction, commonly known as LEED (Leadership in Energy and Environmental Design), recognizes recycled material and assigns credits for related use. HD100EC PIPE qualifies for "Recycled Content" LEED credits under the "Materials and Resources" credit category. Although specified as containing a minimum 40% post-consumer recycled material, the target percentage is 50% and this value may be used in the application process.

SERVICE LIFE

HD100EC PIPE exceeds the AASHTO and ASTM pipe material standards by using HDPE resin compounds with enhanced long-term properties. Lane's higher material standards are aimed to ensure a minimum 100-year service life. Raw material and finished pipe are routinely tested to ensure consistency with the industry parameters used to establish 100-year service life.

CERTIFICATION

All polyethylene pipe products with the Lane logo and the ASTM F2648 marking are manufactured, tested and supplied in accordance with the above-described specifications, and as a minimum meets the material performance requirements of both ASTM F2648 and AASHTO M252/M294. All HD100EC pipe products with the Lane logo and the AASHTO marking are manufactured, tested and supplied in accordance with the National Transportation Product Evaluation Program (NTPEP), a division of AASHTO. Under this program Lane certifies that products (resin or pipe) it produces meets or exceeds the requirements of AASHTO M252/M294R.

MANUFACTURER'S WARRANTY

Lane ensures, certifies and documents that HD100EC shipped to the job site meets the above claims and standards, and warranties the product is free of any material or workmanship defects.

| HDPE Modulus of Elasticity (psi) | |
|----------------------------------|---------|
| Minimum | |
| Initial | 110,000 |
| 50-yr | 22,000 |
| 75-yr | 21,000 |
| 100-yr | 20,000 |

| HDPE Tensile Strength (psi) | |
|-----------------------------|-------|
| Minimum | |
| Initial | 3,000 |
| 50-yr | 900 |
| 75-yr | 900 |
| 100-yr | 800 |

| ASTM D3350 Cell Classification | |
|--------------------------------|---------|
| Minimum | |
| Dia. 6 to 10-in | 424400C |
| Dia. 12 to 60-in | 435400C |

HD100 Pipe Offerings in Accordance with AASHTO M252/M294R Include:

Fittings (manifolds, tees, elbows, et al.)

Partially Perforated Pipe (Class 1 Perforations)

Fully Perforated Pipe (Class 2 Perforations)

Installation in Accordance with ASTM D2321 or AASHTO Bridge Construction Specifications, Section 30.

See also Lane's HD100/HD100EC Pipe Installation Guide for minimum and maximum allowable cover depths.

| Nominal Pipe ID (in) | 6 | 8 | 10 | 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | 60 |
|-------------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Nominal Pipe OD (in) | 7.05 | 9.40 | 12.00 | 14.50 | 17.50 | 21.50 | 28.00 | 34.50 | 41.00 | 47.50 | 54.50 | 66.71 |
| Average Handling Weight (lb/ft) | 1.25 | 2.00 | 2.50 | 3.75 | 5.50 | 7.50 | 12.00 | 17.50 | 21.25 | 28.75 | 32.50 | 43.83 |
| Nominal Lay Length (ft-in) | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 20-0 | 19-6 | 19-6 |
| Average Pipe Stiffness (psi) | 61.5 | 62.0 | 64.1 | 56.9 | 50.2 | 49.8 | 41.0 | 35.6 | 27.8 | 24.0 | 22.1 | 17.1 |
| AASHTO Minimum Pipe Stiffness (psi) | 49.3 | 49.3 | 49.3 | 50.0 | 42.0 | 40.0 | 34.0 | 29.0 | 22.5 | 21.0 | 20.0 | 15.0 |

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