

TDR™ Ultra

HDPE Corrugated Pipe

Scope

This specification designates the requirements for 4- through 60- inch TDR™ Ultra pipe and fittings for use in gravity-flow drainage applications.

Pipe Requirements

TDR™ Ultra pipe shall have dual wall - Corrugated exterior with reinforced double-arch corrugations and smooth interior orange liner and dual layer co-extruded integrated bell. Manning's n value for use in design shall be 0.010

- 4- through 10- inch shall meet AASHTO M252, ASTM F2648 and ASTM F667
- 12- through 60- inch shall meet AASHTO M294, ASTM F2306, ASTM F2648 and ASTM F667

Materials

TDR™ Ultra Pipe and fittings must be manufactured using high-density polyethylene (HDPE) meeting the minimum requirements of cell classification 435420C/E for all pipe sizes as defined and described in ASTM D3350. Carbon black content shall be between 2 and 4%. Materials for 12- through 60- inch pipe sizes shall comply with NCLS test according to sections 9.4 and 5.1 of AASHTO M294 and ASTM F2306 respectively.

Joint Performance

TDR™ Ultra pipe shall be joined using a watertight dual wall integrated bell and spigot joint meeting the requirements of AASHTO M252, AASHTO M294, ASTM F2306 and ASTM F2648. The joint shall be watertight according to ASTM D3212. Pre-installed gaskets shall meet the requirements of ASTM F477. A joint lubricant provided by TDR or any other water-based lubricant shall be used during the joint assembly. Please refer to TDR Installation Guideline for more details.

Fittings

Fittings shall meet the requirements of AASHTO M252, AASHTO M294, ASTM F2306 and ASTM F2648. Standard fittings are available on TDR's website and custom fittings may be manufactures according to customer specific requirements.

Installation

Pipe and fittings shall be installed in accordance with ASTM D2321 and TDR's published Installations Guideline. Minimum cover for trafficked areas shall be 12" (0.3m). Maximum cover height depends on materials used for embedment and haunching. Please refer to TDR's Technical Service for more detail. Contact your TDR's representative for the latest installations guideline and recommendations.

Dimensions

Nominal ID in (mm)	4" (100)	6" (150)	8" (200)	10" (250)	12" (300)	15" (375)	18" (450)	24" (600)	30" (750)	36" (900)	42" (1050)	48" (1200)	60" (1500)
OD $\pm 1\%$ in (mm)	4.7" (120)	6.9" (176)	9.1" (232)	11.4" (290)	14.1" (359)	17.5" (445)	21.1" (536)	27.9" (709)	34.6" (879)	41.4" (1052)	47.5" (1208)	55.7" (1415)	68.1" (1729)