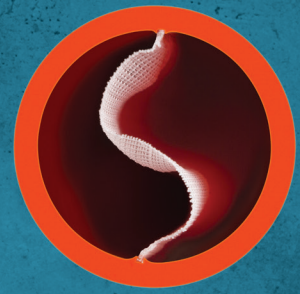


Milliken® Infrastructure

Vis™ Divide

Segmented HDPE Rigid Conduit



Technical Data

Vis Divide conforms to the following industry standards and specifications for dimensional and material requirements:

- ASTM F-2160: Standard Specification for Solid Wall High Density Polyethylene Conduit based on Controlled Outside Diameter
- ASTM D-3350: Standard Specification for PE Plastics Pipe and Fittings Materials

Specifications for ASTM F-2160 DR 11 controlled OD smooth walled conduits.

Nominal Size	Nominal OD, in.	Minimum Wall, in.	Average ID, in.	Weight, lbs/ft	Min. Bending Radius @ 73.4F	Safe Pulling Strength, lbs*	Standard Reel Length	Standard Truck Load	Steel Reel Size
1-1/2"	1.900"	0.173"	1.530"	0.411	> 25 times OD	1,400	4,000 ft	56,000 ft	84" x 42" x 36"

* Safe pulling strength is under ideal conditions. Other consideration should be given to hole size, ground conditions, mud, bending radius and operator experience.

HDPE Material Specifications

Typical Properties ¹	English	SI Units	ASTM Method
Density	na	0.948 g/cc	D 4883
Melt Index 190C/2160g	na	0.22 g/10 min	D 1238
Tensile Strength			
- @ yield (2 in/min)	3,400 psi	23.4 Mpa	D 638
- @ break (2 in/min)	4,500 psi	31.0 Mpa	D 638
Elongation @ Break (2in/min)	> 800 %	> 800 %	D 638
Flexural Modulus	130,000 psi	897 MPa	D 790
Hardness (shore D)	68	68	D 2240
Deflections Temperature			
- @ 66 psi	156 F	69 C	D 648
Brittleness Temperature	< -180 F	< -118 C	D 746
OIT @ 200 deg C	> 20 min		D 3895 Modified
Environmental Stress Crack Resistance			
- Condition B, 10% Igepal F10	> 96 hrs	> 96 hrs	D 1693
- Condition C, 100% Igepal F20	> 192 hrs	> 192 hrs	D 1693
Cell classification	335430A	335430A	D 3350
UV Protection	Minimum 1 year outside storage on colors and with use of end caps. Black is manufactured with carbon black for added UV protection.		

¹Typical properties will vary within specification limits

Vis Divide is manufactured from High Density Polyethylene copolymers which conform to the specifications as defined in ASTM D-3350 and ASTM F-2160. These standards defines the physical properties of the HDPE material into ranges, or cell classifications, that is appropriate for the application. These copolymers are selected particularly for use in telecommunications, CATV and electrical/power utility ducting applications. The copolymer properties are selected to provide the toughness and crush strength required in the telecommunication and electrical/power applications.

Vis Divide Physical Test Data

Tested in accordance to ASTM F-2160 and Bellcore GR 356 CORE
 Vis Divide 1-1/2 Inch DR 11 Conduit

Test	Results	Requirement	Test Method
Tensile Properties, psi	3,392	na	F-2160 referenced
Elongation @ Break, %	664	> 400%	ASTM D638-10
Impact Resistance	PASS		F-2160 referenced ASTM D2444-99
Pulling Strength	2,907	> 2100	GR 356 Section 4.3.1
Elongation, %	1.46	< 2.5%	GR 356 Section 4.3.2
Pre-Placement OD Compression, %	PASS	< 4%	GR 356 Section 4.3.3
Post-Placement OD Compression, %	PASS	< 4%	referenced ASTM D2412-11
Burst Strength	PASS	No Observed Pressure Loss	GR 356 Section 4.3.3 referenced ASTM D1599-99

Vis Divide identification markings are as specified in ASTM F-2160. Every run is marked with: Application specification, nominal duct size, DR rating, sequential footage markings every two feet, shift and date of manufacture