



Centennial Reclaimed Water HDPE for use in effluent water applications.

ASTM Standards that Centennial Reclaimed Water Pipe HDPE Meets or Exceeds:

D 2737...Standard Specification for Polyethylene (PE) Plastic Tubing.

D 2239...Standard Specification for Polyethylene Plastic Pipe (SIDR-PR)  
Based on Controlled Inside Diameter.

**Centennial Plastics Reclaimed Water Pipe HDPE Raw Material Properties**

Property	ASTM Test Method	Typical Values	
		English Units	SI Units
Density (Natural)	D 4883	-	0.944 g/cc
Density (Black)		-	0.955 g/cc
Melt Index <sup>1</sup>	D 1238	-	12.5 g/10 min
Tensile Strength			
@ Yield (2 in/min)	D 638	3300 psi	22.8 MPa
@ Break (2 in/min)	D 638	4500 psi	31.0 MPa
Elongation			
@ Break (2 in/min)	D 638	>800%	>800%
Flexural Modulus <sup>2</sup>	D 790	120,000 psi	827 MPa
Notched Izod Impact Strength	D 256	6.0 ft-lbf/in	0.32 kJ/m
Hardness (Shore D)	D 2240	68	68
Vicat Softening Point	D 1525	259° F	126° C
Brittleness Temperature	D 746	<-180° F	<-118° C
Hydrostatic Design Basis			
@ 23° C	D 2837	1600 psi	11.0 MPa
@ 60° C	D 2837	800 psi	5.5 MPa
Environmental Stress			
Crack Resistance <sup>3</sup>	D 1693	>5000 hrs.	>5000 hrs.
Notch Tensile (Pent)	F 1473	>100 hrs.	>100 hrs.
Carbon Black			
Concentration	D 1603	2.30%	2.30%
Cell Classification	D 3350	345464C	345464C

<sup>1</sup> 190°C/21600 g

<sup>2</sup> 2% Secant-Method 1

<sup>3</sup> Condition C