



## CENFUSE 4710 HDPE MATERIAL DATA SHEET

**CENFUSE 4710 HDPE MEETS OR EXCEEDS:**  
 ASTM D 3035  
 ASTM D 3350, CELL CLASSIFICATION PE 445576C

**CENFUSE 4710 PIPE FOR:**  
 GEOTHERMAL, GROUND SOURCE HEAT  
 PUMP APPLICATIONS.

### NOMINAL PIPE PROPERTIES

	ASTM METHOD	ENGLISH UNITS	SI UNITS
DENSITY (BLACK)	D 4883	-	.959 g/cc
MELT INDEX <sup>1</sup>	D 1238	-	8.5 g/10 min
HYDROSTATIC DESIGN BASIS @ (23° C)	D 2837	1600 psi	11.0 MPa
HYDROSTATIC DESIGN BASIS @ (60° C)	D 2837	1000 psi	6.9 MPa
CARBON BLACK CONCENTRATION	D 1603	2.30%	2.30%

### NOMINAL RAW MATERIAL PROPERTIES

<b>TENSILE STRENGTH</b>			
@ YIELD (2 in/min)	D 638	3625 psi	25.0 MPa
@ BREAK (2 in/min)	D 638	5500 psi	38.0 MPa
<b>ELONGATION</b>			
@ BREAK (2 in/min)	D 638	>600%	>600%
FLEXURAL MODULUS <sup>2</sup>	D 790	150,000 psi	1,035 MPa
NOTCHED IZOD IMPACT STRENGTH	D 256	9.0 ft-lbf/in	0.49 kJ/m
HARDNESS (SHORE D)	D 2240	66	66
VICAT SOFTENING POINT	D 1525	259° F	126° C
BRITTLENESS TEMPERATURE	D 746	<-180° F	<-118° C
ENVIRONMENTAL STRESS CRACK RESISTANCE <sup>3</sup>	D 1693	>5000 hrs.	>5000 hrs.
NOTCH TENSILE (PENT)	F 1473	>10,000 hrs.	>10,000 hrs.
CELL CLASSIFICATION	D 3350	445576C	445576C

<sup>1</sup> 190°C/21600 g

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

<sup>3</sup> Condition C

Available in Size 3/4" - 8"  
 SDR 9 - 17.

Centennial Plastics is an ISO 9001 certified company.  
 CenFuse is certified by NSF.  
 CenFuse meets AWWA C901 and C906 Requirements.  
 CenFuse HDPE 4710 is certified by NSF Standards 14 and 61.