



21670 Hamburg Ave <> Lakeville, MN 55044 Tel: (952) 469-2198 <> Fax: (888) 270-9447

Geothermal Specification for polyethylene plastic molding and extrusion material – PE 4710

Typical Raw Material Properties

	Values		ASTM
	English Units	SI Units	Method
Density			
Natural		0.949 g/cc	D 4883
Black		0.959 g/cc	
Melt Index 190°C/ 5.0 kg		.30 g/10min	D 1238
Melt Index 190°C/ 21.6 kg		8.5g/10 min	D 1238
Tensile Strength (2 in/min)			
@ Yield	3540 psi	24.4 MPa	D 638
@ Break	5100 psi	35.2 MPa	D 638
Elongation (2 in/min)			
@ Break	>600%	>600%	D 638
2% Secant Modulus	130,000 psi	900 MPa	D 790
DSC Induction Temperature	500° F	260° C	D3350
Hardness (Shore D)	64	64	D 2240
Vicat Softening Point	259° F	126° C	D 1525
Brittleness Temperature	<-180° F	<-118° C	D746
Thermal Stability	464° F	240° C	D3350
Hydrostatic Design Basis			
@23° C	1600 psi	11.0 MPa	D 2837
@60° C	1000 psi	6.9 MPa	D 2837
Notch Tensile (PENT) (hrs.)	>2000	>2000	F 1473
Minimum Carbon Black Concentration	2%	2%	D 1603
Cell Classification	445576C	445576C	D 3350
Oxidative Resistance Classification	CC3	CC3	D3350