



# POLYMER INDUSTRIES

## Densetec SHIELD Typical Properties

Property	ASTM Test Method	English Units	Metric Units
<b>Physical and Mechanical Properties</b>			
Density	D792	63.05 lbs/ft <sup>3</sup>	1.01 g/cc
Tensile strength @ Yield, MPa (ksi)	D638	2,800 psi	19.3 MPa
Tensile strength @ Break, MPa (ksi)	D638	5,800 psi	40.0 MPa
Elongation at Break	D638	300%	300%
Coefficient of Friction, Static	D1894	0.15-0.2	0.15-0.2
Coefficient of Friction, Kinetic	D1894	0.05-0.08	0.05-0.08
Notched Izod Impact Strength	D256	No Break ft-lbf/in	No Break J/m
Izod Impact Strength	D4020, Method A	> 28.4 ft-lbf/in <sup>2</sup>	> 60 KJ/m <sup>2</sup>
Charpy Impact	ISO 11542-2	> 37.9 ft-lbf/in <sup>2</sup>	> 80 KJ/m <sup>2</sup>
Durometer Hardness	D2240	62 Shore D	62 Shore D
Water Absorption @ Saturation	D570	0.01%	0.01%
Average Intrinsic Viscosity	D4020	---	28 dl/g
<b>Thermal Properties</b>			
Heat Deflection Temperature @ 66 psi	D648	174 oF	79 oC
Vicat Softening Temperature	D1525	262 oF	128 oC
Melting Point	-----	271 oF	133 oC
Coefficient of Linear Thermal Expansion	D696	8.3 X 10 <sup>-5</sup> in/in/oF	1.49 X 10 <sup>-4</sup> cm/cm/oC
Thermal Conductivity	C177	2.8 Btu-in/h-ft <sup>2</sup> -oF	0.39 W/m-oK
Specific Heat	C351 / D150	0.48 Btu/lb/oF	0.62 KJ/Kg/oC
Continuous Use Temperature		100°F to 180°F	73°C to 82°C
<b>Electrical Properties</b>			
Dielectric Strength	D149	2290 V/mil	90.3 KV/mm
Dielectric Constant	D150	2.3	2.3
Volume Resistivity	D257	3.9 X 10 <sup>13</sup> ohm-in	1 X 10 <sup>14</sup> ohm-cm
Surface Resistivity	D257	1 X 10 <sup>12</sup> ohm	1 X 10 <sup>12</sup> ohm