

Data Obtained following appropriate ASTM methods

Typical Mechanical Properties	Parylene N	Parylene C
Tensile Strength, psi	6,500	10,000
Tensile Strength, MPa	45	69
Yield Strength, psi	6,300	8,000
Tensile Strength, MPa	43	55
Tensile Modulus, Mpa	2,400	3,200
Elongation at break, %	40	200
Yield elongation, %	2.5	2.9
Density, g/cm <sup>3</sup>	1.110	1.289
Coefficient of friction:		
Static	0.25	0.29
Dynamic	0.25	0.29
Water Absorption: % (24hr)	0.01 (0.019")	0.06 (0.029")
Index of refraction	1.661	1.639

Typical Electrical Properties	Parylene N	Parylene C
Dielectric strength, short time (Volts/mil at 1 mil)	7,000	6,800
Volume resistivity 23°C, 50% RH (Ohm-cm)	1x10 <sup>17</sup>	6x10 <sup>16</sup>
Surface resistivity, 23°C, 50% RH (Ohm)	10 <sup>15</sup>	10 <sup>15</sup>
Dielectric constant:		
60Hz	2.65	3.15
1,000Hz	2.65	3.10
1,000,000Hz	2.65	2.95
Dissipation factor:		
60Hz	0.0002	0.020
1,000Hz	0.0002	0.019
1,000,000Hz	0.0002	0.013

Typical Barrier Properties	Parylene N	Parylene C
<i>Gas Permeability</i> cm <sup>3</sup> - mil/100in <sup>2</sup> - 24hr - at(23°C)		
Nitrogen	7.7	0.95
Oxygen	30	7.1
Carbon Dioxide	214	7.7
Hydrogen Sulfide	795	13
Sulfur Dioxide	1.89	11
Chlorine	74	0.35
<i>Moisture Vapor Transmission</i> g – mil/100in <sup>2</sup> - 24hr, 37°C, 90%RH 1mil = 1/1000in = 25.4 microns	1.50	0.14

Typical Thermal Properties	Parylene N	Parylene C
<i>Melting Temperature (C°)</i>	410	290
Linear Coefficient of expansion (10 <sup>-5</sup> /°C)	6.9	3.5
Thermal conductivity, @ 25°C watts/Meter. Kelvin	0.120	0.082