

PROPERTIES	Method ASTM	Units	Biocompatible	
			Parylene C	Parylene N
■ Density	D1505	g/cm ³	1.289	1.10 - 1.12
■ Refractive index	Abbe refra.	n _b ²³	1.639	1.661
■ Refractive index to the square	-	-	2.69	2.76
■ Penetration power	Exp.	-	5x	40x
Mechanical				
■ Tensile modulus	D882	GPa	3.2	2.4
■ Yield strength	D882	MPa	55	42
■ Tensile strength	D882	MPa	70	45
■ Yield elongation	D882	%	2.9	2.5
■ Elongation to break	D882	%	-	10-30
■ Rockwell hardness	D785	-	R80	R85
■ Coefficient of friction - static	D1894	-	0.29	0.25
■ Coefficient of friction - dynamic	D1894	-	0.29	0.25
Thermal				
■ Melting point	DSC	°C	290	420
■ Glass transition temperature	DSC	°C	13-80	35-80
■ Continuous Service Temperature during 100,000h	-	°C	80	60
■ Continuous Service Temperature during - 1,000h	-	°C	115	95
■ Linear coefficient of expansion to 25 °C	TMA	K ⁻¹	3.5·10 ⁻⁵	6.9·10 ⁻⁵
■ Calorific value at 25 °C or 20 °C SCS	-	J/(g·K)	1/0.712	1.3/0.837
■ Thermal conductivity	C177	W/(m·K)	0.084	0.126
Electrical				
■ Dielectric constant - 60 Hz	D150	-	3.12	2.65
- 1 kHz	D150	-	2.98	2.65
- 10 kHz	-	-	-	-
- 100 kHz	-	-	-	-
- 1 MHz	D150	-	2.91	2.65
- 1 GHz	-	-	2.81	-
■ Dissipation factor - 60 Hz	D150	-	0.023	0.0002
- 1 kHz	D150	-	0.017	0.0002
- 10 kHz	-	-	-	-
- 100 kHz	-	-	-	-
- 1 MHz	D150	-	0.013	0.0006
- 1 GHz	-	-	0.001	-
■ Dielectric strength at 25µm - short-term voltage upsurge	D149	MV/m	220-250	280
■ Dielectric strength at 25µm - Stepwise voltage increase	D149	MV/m	185	235
■ Breakdown voltage DC at 1 µm	-	V	~ 1100	~ 500
- 10 µm	-	V	~ 3500	~ 4000
- 25 µm	-	V	~ 5500-6250	~ 7000
■ Volume Resistivity at 23 °C, 50 % RH	D257	Ω·cm	2.2·10 ¹⁵	1.4·10 ¹⁷
■ Surface Resistivity at 23 °C, 50 % RH	D257	Ω	6.9·10 ¹⁶	1.0·10 ¹³
Barriers				
■ Water absorption (after 24h)	D570	%	< 0.1	< 0.1
■ Water vapour transmission at 38 °C and 100 % relative humidity	F1249-06	g.mm.m ⁻² .J ⁻¹	0.1	0.75
Gas permeability at 25 °C				
■ N ₂	D1434 F3985-05	cm ³ .mm/ m ² .j.bar	0.4	3.00
■ O ₂	D1434 F3985-05	cm ³ .mm/ m ² .j.bar	2.9	15.2
■ CO ₂	D1434 F3985-05	cm ³ .mm/ m ² .j.bar	3.1	86
■ H ₂	D1434 F3985-05	cm ³ .mm/ m ² .j.bar	42	220
Degassing / Outgassing				
■ Total mass loss (TML)	E 595	%	0.13-0.28	-
■ Collected Volatile Condensable Materials (CVCM)	E 595	%	0-0.03	-
■ Water Vapour Regained (WVR)	E 595	%	0-0.02	-