




SM Parylene Coating Services, Inc.

World Distributor of  dimer

“The purest name in dimer™”

6819 Highway Blvd., Ste# 510 • Katy, Tx 77494
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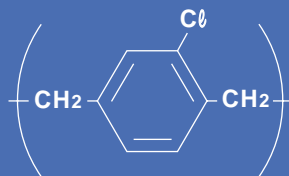
The combining of two identical molecules creates dimer, the key member in the family of polymers used in the parylene conformal coating process. This dimer (di-para-xylene) is heated to approximately 150°, resulting in conversion to a gaseous monomer. Coating thicknesses and uniformity are both controlled by the amount and the purity of the dimer used.  dimer is over 99% pure, the purest available, resulting in a more truly conformal coating, providing better protection for your substrates - meaning less product failures and leaving you with a higher profit margin.



Purity is everything in Parylene
 *dimer is the purest!*

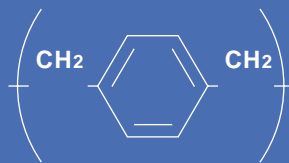
Parylene Coating Services, Inc. offers two parylene dimer variations:

The most widely used, good electrical and physical properties.

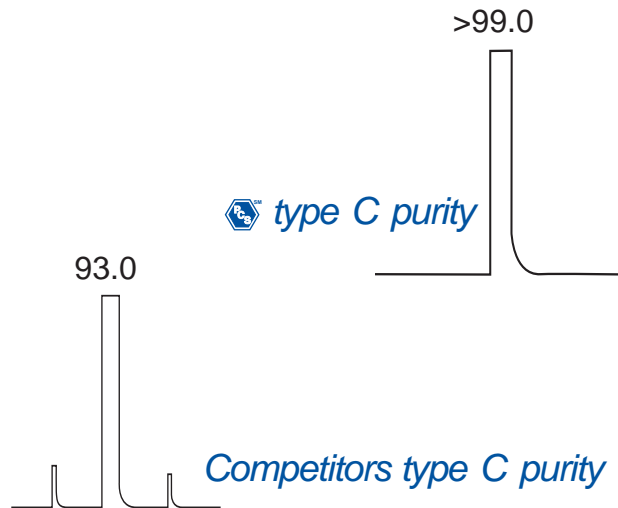
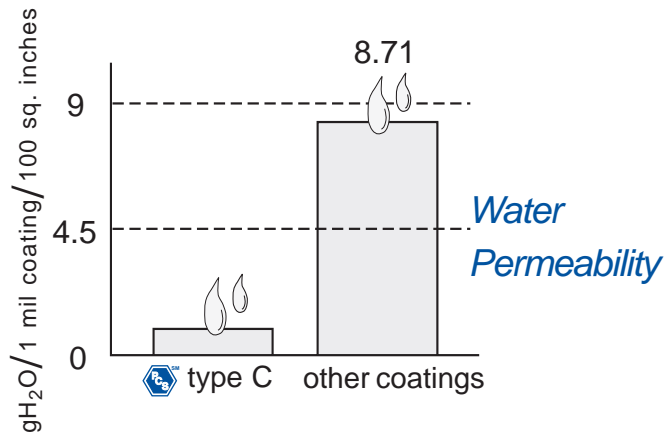


Parylene C

Selected for its high dielectric strength and where greater coating penetration is needed.



Parylene N



Properties of Parylene

Data obtained following appropriate ASTM methods

TYPICAL PHYSICAL & 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 ³	1.110	1.289
Coefficient of friction: Static	0.25	0.29
Dynamic	0.25	0.29
Water absorption: % (24 hr)	0.01 (.019")	0.06 (.029")
Index of refraction, n _o ²³	1.661	1.639

TYPICAL ELECTRICAL PROPERTIES

Dielectric strength, short time (Volts/mil at 1 mil)	7,000	6,800
Volume resistivity, 23°C, 50% RH (Ohm-cm)	1x10 ¹⁷	6x10 ¹⁶
Surface resistivity, 23°C, 50% RH (Ohm)	10 ¹⁵	10 ¹⁵
Dielectric constant:		
60Hz	2.65	3.15
1,000 Hz	2.65	3.10
1,000,000 Hz	2.65	2.95
Dissipation factor:		
60Hz	0.0002	0.020
1,000 Hz	0.0002	0.019
1,000,000 Hz	0.0006	0.013

TYPICAL BARRIER PROPERTIES

GAS PERMEABILITY cm ³ - mil/100 in ² -24 hr - atm(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
MOISTURE VAPOR TRANSMISSION g-mil/100 in ² -24 hr,37°C,90%RH		
	1.50	0.14
1 mil = 1/1000 in = 25.4 microns		

TYPICAL THERMAL PROPERTIES

Melting temperatures (°C)	410	290
Linear coefficient of expansion (10 ⁻⁶ /°C)	6.9	3.5
Thermal conductivity, @ 25°C watts/Meter.Kelvin	0.120	0.082

The Parylene Coating Process

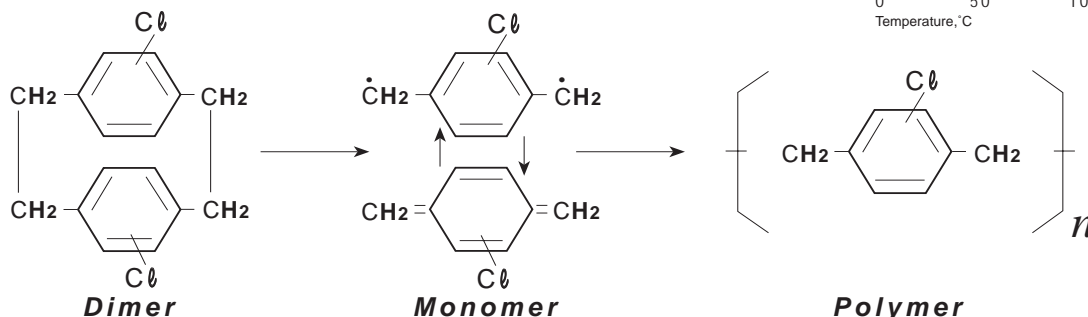


Fig. 1

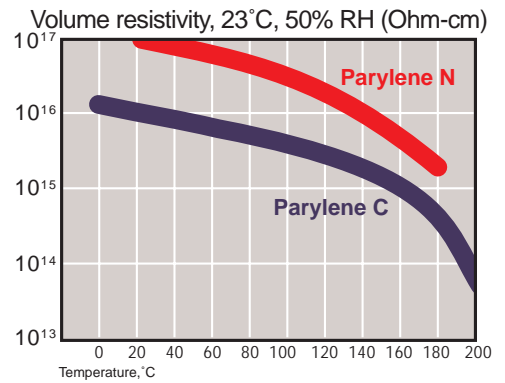


Fig. 2

Dielectric constant, 1,000 Hz

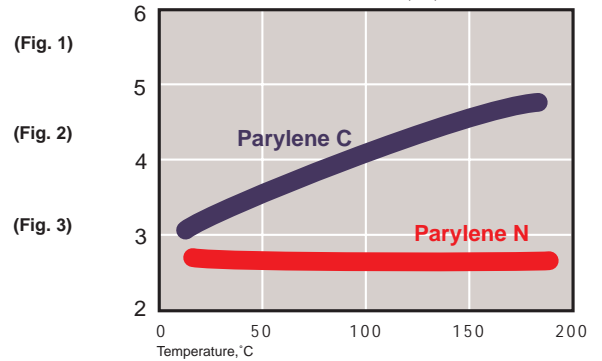
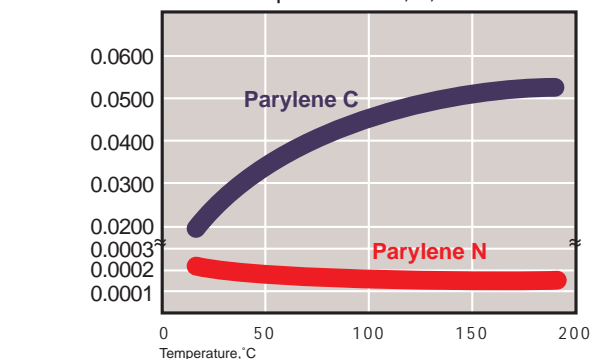


Fig.3

Dissipation factor, 1,000 Hz



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Please visit our web site at: www.paryleneinc.com