Parylene Coating Services N Poly (P-Xylylene)

Category : Polymer , Thermoplastic , Poly (P-Xylylene)

Material Notes:

Monomer is para-xylylene. Parylene N has a lower coefficient of friction and therefore is recommended where lubricity is needed. Parylene N exhibits a slight haze at thicknesses over 5 microns.Parylene is a generic name for poly-para-xylylene polymers used as conformal coatings in protective applications.The coating process exposes objects to the gas-phase monomer at low pressure. Through vacuum deposition, Parylene condenses on the surface in a polycrystalline fashion, providing a coating that is truly conformal and pinhole free.Compared to liquid processes, the effects of gravity and surface tension are negligible -- so there is no bridging, thin-out, pinholes, puddling, run-off or sagging. And, since the process takes place at room temperature, there is no thermal or mechanical stress on the object.Parylene is physically stable and chemically inert within its usable temperature range. Parylene provides excellent protection from moisture, salt spray, corrosive vapors, solvents, airborne contaminants and other hostile environments.Property data obtained following ASTM methods. Information provided by Parylene Coating Services, Inc. (PCS)

Order this product through the following link:
http://www.lookpolymers.com/polymer_Parylene-Coating-Services-N-Poly-P-Xylylene.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in³	
Water Absorption	0.010 %	0.010 %	0.019 inches; 24 hrs.
Moisture Vapor Transmission	0.591 cc-mm/m²-24hr-atm	1.50 cc-mil/100 in²-24hr-atm	37°C; 90% RH
Oxygen Transmission	11.8 cc-mm/m²-24hr-atm	30.0 cc-mil/100 in²-24hr-atm	23°C
Nitrogen Transmission	3.03 cc-mm/m²-24hr-atm	7.70 cc-mil/100 in²-24hr-atm	23°C
Carbon Dioxide Transmission	84.3 cc-mm/m²-24hr-atm	214 cc-mil/100 in²-24hr-atm	23°C
Hydrogen Sulfide Transmission	313 cc-mm/m²-24hr-atm	795 cc-mil/100 in²-24hr-atm	23°C
Sulfur Dioxide Transmission	0.744 cc-mm/m²-24hr-atm	1.89 cc-mil/100 in²-24hr-atm	23°C
Chlorine Transmission	29.1 cc-mm/m²-24hr-atm	74.0 cc-mil/100 in²-24hr-atm	23°C

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	44.8 MPa	6500 psi	
Tensile Strength, Yield	43.4 MPa	6300 psi	
Elongation at Break	40 %	40 %	

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.40 GPa	348 ksi	
Coefficient of Friction, Dynamic	0.25	0.25	
Coefficient of Friction, Static	0.25	0.25	

Thermal Properties	Metric	English	Comments
CTE, linear	69.0 µm/m-°C @Temperature 20.0 °C	38.3 µin/in-°F @Temperature 68.0 °F	
Thermal Conductivity	0.120 W/m-K	0.833 BTU-in/hr-ft²-°F	
Melting Point	410 °C	770 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.661	1.661	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	50% RH
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	50% RH
Dielectric Constant	2.65 @Frequency 60 Hz	2.65 @Frequency 60 Hz	
	2.65 @Frequency 1000 Hz	2.65 @Frequency 1000 Hz	
	2.65 @Frequency 1e+6 Hz	2.65 @Frequency 1e+6 Hz	
Dielectric Strength	276 kV/mm	7000 kV/in	Short Time; 1 mil
Dissipation Factor	0.00020 @Frequency 60 Hz	0.00020 @Frequency 60 Hz	
	0.00020 @Frequency 1000 Hz	0.00020 @Frequency 1000 Hz	
	0.00060 @Frequency 1e+6 Hz	0.00060 @Frequency 1e+6 Hz	

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