

Specialty Coating Systems Parylene D Poly (P-Xylylene) Coating

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

Material Notes:

Parylene D is a polymer of para-xylylene modified by the substitution of chlorine atoms for two of the aromatic hydrogen atoms. Parylene D is similar in properties to Parylene C with the added ability to withstand slightly higher use temperatures. SCS Parylene conformal coatings are ultra-thin, pinhole-free polymer coatings that provide a number of high-value surface treatment properties such as excellent moisture, chemical and dielectric barrier properties, thermal and UV stability, and dry-film lubricity. Parylene coatings are used in a number of applications throughout the medical device, electronics, automotive, military and aerospace industries. Information provided by Specialty Coating Systems (SCS) .

Order this product through the following link:

http://www.lookpolymers.com/polymer_Specialty-Coating-Systems-Parylene-D-Poly-P-Xylylene-Coating.php

Physical Properties	Metric	English	Comments
Water Vapor Permeability	0.0900 g mil/ (m ² day) @Temperature 37.0 Â°C	0.00581 g mil/ (100 in ² day) @Temperature 98.6 Â°F	90% RH; ASTM E96
Density	1.418 g/cc	0.05123 lb/inÂ³	ASTM D1505
Water Absorption	<= 0.10 % @Time 86400 sec	<= 0.10 % @Time 24.0 hour	ASTM D570
Oxygen Transmission	12.6 cc-mm/mÂ²-24hr- atm @Temperature 25.0 Â°C	32.0 cc-mil/100 inÂ²- 24hr-atm @Temperature 77.0 Â°F	ASTM D1434
Nitrogen Transmission	1.80 cc-mm/mÂ²-24hr- atm @Temperature 25.0 Â°C	4.57 cc-mil/100 inÂ²- 24hr-atm @Temperature 77.0 Â°F	ASTM D1434
Carbon Dioxide Transmission	5.10 cc-mm/mÂ²-24hr- atm @Temperature 25.0 Â°C	13.0 cc-mil/100 inÂ²- 24hr-atm @Temperature 77.0 Â°F	ASTM D1434

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	80	80	ASTM D785
Tensile Strength, Yield	62.1 MPa	9000 psi	ASTM D882
Elongation at Break	<= 200 %	<= 200 %	ASTM D882
Elongation at Yield	3.0 %	3.0 %	ASTM D882

Mechanical Properties	Metric	English	Comments
Coefficient of Friction, Dynamic	0.31	0.31	ASTM D1894
Coefficient of Friction, Static	0.33	0.33	ASTM D1894

Thermal Properties	Metric	English	Comments
CTE, linear	38.0 Åµm/m-Å°C	21.1 Åµin/in-Å°F	via TMA
Melting Point	380 Å°C	716 Å°F	via DSC
Maximum Service Temperature, Air	100 Å°C	212 Å°F	Continuous
	120 Å°C	248 Å°F	Short Term
Softening Point	125 Å°C	257 Å°F	T5 Point; modulus = 690 MPa (100,000 psi)
	240 Å°C	464 Å°F	T4 point; modulus = 70 MPa (10,000 psi)

Optical Properties	Metric	English	Comments
Refractive Index	1.669	1.669	n_D; Abbe Refractometer
Transmission, Visible	87 % @Wavelength 400 nm	87 % @Wavelength 400 nm	
UV Transmittance	<= 1.0 % @Wavelength 290 nm	<= 1.0 % @Wavelength 290 nm	cutoff
	30 % @Wavelength 300 nm	30 % @Wavelength 300 nm	
	80 % @Wavelength 350 nm	80 % @Wavelength 350 nm	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.20e+17 ohm-cm	1.20e+17 ohm-cm	50% RH; ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	50% RH; ASTM D257
Dielectric Constant	2.8 @Frequency 1.00e+6 Hz	2.8 @Frequency 1.00e+6 Hz	ASTM D150
	2.82 @Frequency 1000 Hz	2.82 @Frequency 1000 Hz	ASTM D150

Electrical Properties	Metric	English	Comments
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150
Dielectric Strength	217 kV/mm	5500 kV/in	ASTM D149
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
	0.0030	0.0030	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	0.0040	0.0040	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	ASTM D150

Descriptive Properties	Value	Comments
Hydrogen Transmission	94.5 cc-mm/mÅ ² -24hr-atm	ASTM D1434
UV Stability	> 2000 hours	ASTM G154

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China