

Parker Chomerics CHO-SHIELD® 4994 Conductive Flexible Coating

Category : Polymer , Adhesive

Material Notes:

Description: CHO-SHIELD® 4994 is a smooth, highly conductive flexible silver-filled polyurethane coating designed for military/aerospace airframe applications. Both coatings provide superior adhesion, excellent solvent rub and wear resistance, and are resistant against numerous operational and environmental fluids. CHO-SHIELD® 4494 can be applied to aluminum as well as non-conductive substrates and are designed to be used with primers and with external topcoat systems. CHO-SHIELD® 1091 can be used as a primer for ensuring improved performance on aluminum substrates. Information provided by Chomerics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Parker-Chomerics-CHO-SHIELD-4994-Conductive-Flexible-Coating.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.10 g/cc	2.10 g/cc	Wet; ASTM D1475
Volatile Organic Compounds (VOC) Content	596 g/l	596 g/l	USEPA Method 24
Thickness	0.0760 - 0.102 microns	0.00299 - 0.00402 mil	Recommended Dry Film

Mechanical Properties	Metric	English	Comments
Impact Test	>= 102 J	>= 75.0 ft-lb	Intrusion; ASTM D2794
	>= 102 J	>= 75.0 ft-lb	Extrusion; ASTM D2794
Taber Abrasion, mg/1000 Cycles	0.16	0.16	[mg/cycle], Wear Index; ASTM D4060
	1000	1000	Wear Cycles per Mil; ASTM D4060

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	85.0 °C	185 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	<= 0.075 ohm	<= 0.075 ohm	CEPS-0002
	<= 0.075 ohm	<= 0.075 ohm	MIL-T-5624 JP-8; CEPS-0002
	@Temperature 22.2 °C, Time 1.21e+6 sec	@Temperature 72.0 °F, Time 336 hour	
	<= 0.075 ohm	<= 0.075 ohm	MIL-H-5606 Hydraulic Fluid; CEPS-0002
	@Temperature 71.1 °C, Time 605000 sec	@Temperature 160 °F, Time 168 hour	

Electrical Properties	Metric	English	Comments
	<= 0.075 ohm @Temperature 71.1 °C, Time 605000 sec	<= 0.075 ohm @Temperature 160 °F, Time 168 hour	0002
	<= 0.075 ohm @Temperature 85.0 °C, Time 1.21e+6 sec	<= 0.075 ohm @Temperature 185 °F, Time 336 hour	CEPS-0002
	<= 0.075 ohm @Temperature -40.0 °C, Time 1.21e+6 sec	<= 0.075 ohm @Temperature -40.0 °F, Time 336 hour	CEPS-0002
	<= 0.075 ohm @Temperature 85.0 °C, Time 2.59e+6 sec	<= 0.075 ohm @Temperature 185 °F, Time 720 hour	CEPS-0002
Shielding Effectiveness	85 dB @Frequency 2.00e+8 - 1.00e+10 Hz	85 dB @Frequency 2.00e+8 - 1.00e+10 Hz	Modified Chomerics TP-08

Processing Properties	Metric	English	Comments
Cure Time	120 min @Temperature 54.0 °C	2.00 hour @Temperature 129 °F	at Standard Conditions + 2 hrs
	10100 min @Temperature 15.5 - 21.0 °C	168 hour @Temperature 59.9 - 69.8 °F	40-60% RH
Pot Life	180 min	180 min	ASTM D4212
Shelf Life	6.00 Month	6.00 Month	From date of Manufacture

Descriptive Properties	Value	Comments
Adhesion	5B	ASTM D3359
Color	Metallic Light Brown	
Conical Bend	=>32.0%	Cracking: No Evidence; ASTM D522 - Test Method A
Coverage	250 sq ft/gal	at 3.0 mil Dry Film Thickness; Typical; ASTM D2697
Cross Hatch Adhesion	5B	85°C for 14 days; ASTM D3359
	5B	-40°C for 14 days; ASTM D3359
	5B	85°C, 85% RH for 30 days; ASTM D3359
Filler	Silver	

Descriptive Properties	Value	Comments
Mix Ratio	100:18.33:1.36:20.91	A:B:C:D
Resin	Polyurethane	
Solvent Rub Resistance	Pass	CHO-TM 95-40-6013
	Pass	22.2°C for 14 days; MIL-T-JP-8; CHO-TM 95-40-6013
	Pass	71.1°C for 14 days; MIL-H-5606 Hydraulic Fluid; CHO-TM 95-40-6013
	Pass	71.1°C for 14 days; MIL-L-7808 Lubrication Oil; CHO-TM 95-40-6013
Visual Inspection	Pass	85°C for 14 days; CHO-TM 95-40-6013
	Pass	-40°C for 14 days; CHO-TM 95-40-6013
	Pass	85°C, 85% RH for 30 days; CHO-TM 95-40-6013
	Pass	22.2°C for 14 days; MIL-T-JP-8; CHO-TM 95-40-6013
	Pass	71.1°C for 14 days; MIL-H-5606 Hydraulic Fluid; CHO-TM 95-40-6013
	Pass	71.1°C for 14 days; MIL-L-7808 Lubrication Oil; CHO-TM 95-40-6013

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