



**Thermal Transfer Printable Polyimide
1 mil STATIC DISSIPATIVE, WHITE**

Description: POLYONICS XF-561 is a polyimide film with a permanent pressure sensitive acrylic adhesive and a high opacity, gloss white topcoat specifically designed for thermal transfer printing. **XF-561 is deemed to be a STATIC SAFE product in accordance with EIA 625, EIA 541. The Test Methods employed were in accordance with EOS/ESD S11.11.**

Use: POLYONICS XF-561 is designed for barcode or alphanumeric identification of printed circuit boards, or related electronic components. It is the ideal label to withstand surface mount board processes, on either the top or bottom side of the board. It can also be used on the top side of the board in mixed processes, and is recommended for the bottom side which is directly exposed to the wave solder environment.

Properties: The XF-561 topcoat, in combination with the appropriate thermal transfer ribbon, passes the requirements of **MIL-STD-202G, Notice 12, Method 215K**. The print resists smearing, even when the board and label are directly removed from a reflow or wave solder environment. Preheating the labeled product can further enhance print permanence in the case of extreme solvent and/or abrasion exposure, although this is not typically required for board processing applications. **Moreover, when the label is peeled from its release liner, less than 25 volts per square inch of electrostatic charge is generated, making it safe to use in a static free work environment, per EIA 625 and 541.**

Properties	Test Method	Average Results	
		USA Units	SI Units
Thickness	ASTM D1000		
-Substrate		0.0016 inch	0.041 mm
-Adhesive		0.0010 inch	0.025 mm
-Total		0.0026 inch	0.066 mm
Adhesion	Polyonics 80313		
Stainless Steel	20 minute dwell	≥ 27 oz/in	30N/100 mm
	24 hour dwell	≥ 30 oz/in	33N/100 mm
Tack	Polyonics 80155		
		≥ 1000 g/in	
Surface Resistivity	EOS/ESD S.11.11	> 10 ⁷ Ohms	
Peel Value (Volts/sq.in.)	Polyonics 80331	< 25 volts	
Temperature Rating:		-40 to 1000°F (-40 to 537°C)	
Shelf Life		1 year below 80°F (27°C) and 60% R.H.	
UL File #		PGJ12.MH19503	
UL Tested Ribbons		DNP R510, JPP1, Sony 4070	

All SI units are mathematically derived from U.S. conventional units.

Note. All values shown are averages and should not be used for specification purposes. Adhesion and tack values have a 10% tolerance allotted to the above values stated. Test data and test results contained in this document are for general information only and shall not be relied upon by POLYONICS customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact POLYONICS for further information. Labels printed with recommended thermal transfer ribbon. Labels printed with 6.7 mil X dimension bars at 2:5 ratio. Labels exposed to indicated environments.



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Properties	Test Method	Test Environment	PCS ¹	Read Rate ²
Heat/Chemical Resistance	Polyonics	Control 230°C heat, 5 min.	99%	100%
		Kyzen Corp. Aquanox SSA 30% aqueous, 40-45°C, 5 min.	100%	99%
		Re-Entry KNI 2000 Terpene 40-45°C, 5 min.	98%	100%
		Alpha Metals Inc. EC-7R Terpene, 40-45°C, 5 min.	98%	100%
		Alpha Metals Inc. 2110 Saponifier 10% aqueous, 65-70°C, 5 min.	97%	100%
		Isopropanol 99%, 65-70°C, 5 min.	99%	100%
		Kyzen XJN+ 30%, 5 min.	99%	100%

¹PCS - Print Contrast Signal. PCS determined with Quick Check 650, 0.005" aperture, 660 nm wavelength. Quick Check 650 manufactured by : Photographic Sciences Corp.

² Read rate determined using PSC 850 laser scanner

Properties	Test Method	Test Fluid	Results
Chemical Resistance	MIL-STD-202G, Notice 12, Method 215K		
		Solvent A- 1 part IPA, 3 parts Mineral Spirits	No visible effect
		Solvenet B- 1,1,1 Trichloroethane	Solvent deleted per notice 12
		Solvent C- Terpene Defluxer	No visible effect
		Solvent D- Saponifier	No visible effect

References:

ASTM: American Society for Testing and Materials (USA)
SI: International Systems of Units.

Trademarks:

XJN & Aquanox SSA-™ is a trademark of Kyzen Corporation.
EC-7R™ is a trademark of Petroferm Inc.
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