



**Thermal Transfer Printable Polyester
STATIC DISSIPATIVE, WHITE**

PRELIMINARY

Description: POLYONICS XF-443 is a polyester film with a removable pressure sensitive acrylic adhesive and a high opacity, gloss white finish specifically designed for thermal transfer printing. **XF-443 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-443 is designed for barcode or alphanumeric identification of printed circuit boards, or related electronic components. XF-443 is the ideal label to withstand many surface mount board processes, but is not well suited for temperatures above 400°F (204°C).

Properties: The XF-443 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 Methods	Average Results	
		USA Units	SI Units
Thickness	ASTM D1000		
-Substrate		0.0020 inch	0.0508 mm
-Adhesive		0.0018 inch	0.0457 mm
-Total		0.0038 inch	0.0965 mm
Adhesion	ASTMD 3330		
-Stainless Steel	20 minute dwell	≥ 19 oz/in	21 N/100 mm
	24 hour dwell	≥ 27 oz/in	30 N/100 mm
Tack	Polyonics 80155	≥ 710 g/in	
Surface Resistivity	EOS/ESD S. 11.11 Label Surface 10 ⁷ - 10 ⁸		
Peel Value (Volts/sq.in)	Polyonics 80313	<25 volts	
Temperature Rating:	-40 to 400°F (-40 to 204°C)		
Shelf Life	1 year below 80°F (27°C) and 60% R.H.		
UL File #	TBD		
UL Tested Ribbons	TBD		

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 & Tack values have a 10% tolerance allotted to the above stated values. 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.

PRELIMINARY

Properties	Test Method	Test Environment	PCS ¹	Read Rate ² :
Heat/Chemical Resistance	Polyonics	Control	99%	100%
		Kyzen Corp. Aquanox SSA 30% aqueous, 40-45°C, 5 min.	100%	99%
		Re-entry KNI 2000 Terpene 40-45°C, 5M	98%	100%
		Alpha Metals Inc. EC-7R Terpene 40-45°C 10 min. ³	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%, 5min.	99%	100%

Labels should be printed with the recommended thermal transfer ribbon. Labels printed with 6.7 mil X dimension bars at 2:5 ratio. Labels exposed to indicated environments.

¹PCS - Print Contrast Signal. PCS determined with Quick Check 650, 0.005" aperture, 660 nm wavelength. Quick Check 650.

²Read rate determined using PSC 850 laser scanner.

³Followed by 2 minute immersion in deionized water at 100°C

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

Trademarks:

XJN+ & Aquanox SSA™ is a trademark of Kyzen Corporation Inc.

EC-7R™ is a trademark of Petroferm Inc.

RE-ENTRY™ is a registered trademark of Environ solv Inc.

References:

AISI: American Iron and Steel Institute (U.S.A.)

ASTM: American Society for Testing and Materials (U.S.A.)

PSTC: Pressure Sensitive Tape Council (U.S.A.)


WARRANTY-LIMITATION

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