



Description: POLYONICS XF-546 is a polyimide film with a permanent pressure sensitive silicone adhesive and a high opacity, gloss white topcoat specifically designed for thermal transfer printing.

Use: POLYONICS XF-546 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. **It can withstand temperatures of 700°F for several hours**, and gives the highest temperature resistance available in synthetic film label materials.

Properties: The XF-546 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.

Properties	Test Method	Average Results	
		USA Units	SI Units
Thickness	ASTM D1000		
-Substrate		0.0027 inch	0.068 mm
-Adhesive		0.0018 inch	0.046 mm
-Total		0.0045 inch	0.114 mm
Adhesion	Polyonics 80313		
-Stainless Steel	20 minute dwell	40 oz/in	44N/100 mm
	24 hour dwell	44 oz/in	48N/100 mm
Tack	Polyonics 80155		
		>1500 g	
Temperature Rating:	-100°F to 1000°F (-73 to 537°C)		
Shelf Life	6 months 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 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 a recommended thermal transfer ribbon using a Zebra 90Xi printer. Labels printed with 2:5 ratio barcodes with 6 mil X dimension bars. Labels exposed to indicated environments

Properties	Test Method	Test Environment	PCS ¹	Read Rate ²
Heat/Chemical Resistance	Polyonics L1579-79	Control	99%	100%
		230°C heat, 5 minutes	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 Environment	Results
Chemical Resistance	MIL-STD-202G, Notice 12, Method 215K	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.

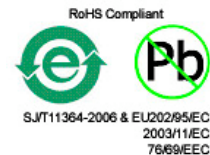
EC-7R™ is a trademark of Petroferm Inc.

RE-ENTRY™ is a registered trademark of Environsolv Inc.

References:

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

SI: International Systems of Units.



WARRANTY-LIMITATION

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XF-546

**Thermal Transfer Printable
Polyimide
WHITE**

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