



Description: POLYONICS XF-557 is a polyimide film with a permanent pressure sensitive acrylic adhesive and a high opacity, gloss white topcoat specifically designed for thermal transfer printing.

Use: POLYONICS XF-557 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-557 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 performance 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		0.0020 inch	0.050 mm
-Total		0.0047 inch	0.118 mm
Adhesion	Polyonics 80313		
-Stainless Steel	20 minute dwell	≥ 35 oz/in	38N/100 mm
	24 hour dwell	≥ 40 oz/in	44N/100 mm
Tack	Polyonics 80155	≥ 1200 g/in	
Temperature Rating:	-40 to 1000°F (-40 to 537°C)		
Shelf Life	1 year below 80°F and 60% R.H.		
UL File #	PGJ12.MH19503		
UL Tested Ribbons	DNP R510, Ricoh B110C, Armor AXR 7+, 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 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.

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:

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 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°, 10 min.	97%	100%
		Isopropanol 99%, 65-70°C, 5 min	99%	100%
		Kyzen XJN+ 30% aqueous 5 min.	99%	100%

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

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
		Solvent 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 (U.S.A.)

SI: International Systems of Units.

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.


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