



Description: POLYONICS XF-541 is a polyimide film with a permanent pressure sensitive acrylic adhesive and a high opacity, MATTE Tan or “Buff” colored topcoat specifically designed for EITHER thermal transfer or dot matrix printing.

Use: POLYONICS XF-541 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. The XF-541 material when used with the appropriate ribbon will withstand exposure to a wide range of ether-polyol solvents, such as Zestron® (Dr. O.K.Wack Chemie GmbH), Prozone, or other active solvents such as Loctite 7452 Accelerator.

Properties: The print resists smearing, when immersed in Zestron for 5 minutes, and then wiped with a lint free cloth. 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. Printed in combination with the appropriate thermal transfer ribbon, passes the requirements of **MIL-STD-202G, Notice 12, Method 215K**.

Properties	Test Methods	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	40 oz/in	44 N/100 mm
	24 hour dwell	48 oz/in	53 N/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 (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 recommended thermal transfer ribbon. Labels printed with 6.7 mil X dimension bars at 2:5. Labels exposed to indicated environments.

Properties	Test Methods	Test Environment	PCS ¹	Read Rate ²
Heat/Chemical	Polyonics	Control	99%	100%
		Zestron, 5 minutes 25°C	100%	99%

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 a PSC Quick check 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

Trademark:

Zestron

Reference:

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

SI: International System of Units.



WARRANTY-LIMITATION

Polyonics' products are sold with the understanding that the Buyer will test them in actual use and determine for him/herself their adaptability to his/her intended uses. Polyonics warrants to the Buyer that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the products shown to Polyonics' satisfaction to have been defective, provided that the Buyer has complied with the handling, storage and shelf life requirements as specified by Polyonics in applicable materials specifications.

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