



XF-451
Thermal Transfer Printable
Polyester
WHITE

Description: POLYONICS XF-451 is an opaque, 4 mil matte white polyester film coated with a 5 mil permanent pressure sensitive acrylic adhesive and a printable topcoat specifically designed for thermal transfer printing.

Use: POLYONICS XF-451 is designed for barcode or alphanumeric identification on metals and other high energy surfaces. Can be used for labeling applications in automotive, lawn and garden equipment. Primarily for product id name plates, tracking, warning and/or directions labeling among others.

Properties: The XF-451 topcoat, in combination with a recommended 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		0.004 inch	0.1016 mm
-Adhesive		0.005 inch	0.1300 mm
-Total		0.009 inch	0.2316 mm
Adhesion	Polyonics 80313		
-Stainless Steel	20 minute dwell	44 oz/in	48 N/100 mm
	72 hour dwell	82 oz/in	90 N/100 mm
Tack	ASTM D2979		
		25 oz.	710 grams
Temperature Rating:	-40 to 300°F (-40 to 148°C)		
Shelf Life	1 year below 80°F (27°C) and 60% R.H.		

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. 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.



XF-451
Thermal Transfer Printable
Polyester
WHITE

Properties	Test Methods	Test Environment	PCS ¹	Read Rate ²
Heat / Chemical	Polyonics	Control 200C for 5 minutes	99%	100%
		Kyzen Corp. Aquanox SSA 30% aqueous, 40-45°C, 10 min.	100%	100%
		RE-ENTRY. KNI 2000 Terpene, 40-45 ° C, 10 min.	98%	100%
		Alpha Metals Inc. EC-7R Terpene, 40-45° C, 10 min.	98%	100%
		Alpha Metals Inc. 2110 Saponifier 6% aqueous, 65-70°C, 10 min.	97%	100%
		Isopropanol 99%, 82°C, 10 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.

Samples printed with recommended thermal transfer ribbon using a Zebra 90Xi printer. Labels printed with alpha- numerics and 3:1 ratio barcodes with 6 mil X dimension bars.

Properties	Test Method	Test Fluid	Results
Chemical Resistance	MIL-STD-202G, Notice 12, Method 215K		
	Solvent A	1part 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:

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

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.

The above warranties extend solely to Buyer and all warranty claims must be made by Buyer. Rework or Replacement shall neither extend nor decrease the original warranty period. The term of all warranty periods shall not exceed thirty (30) days from the date of the original shipment.

THE ABOVE WARRANTIES ARE EXCLUSIVE OF AND IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE. NO IMPLIED STATUTORY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. POLYONICS SHALL NOT BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, OR FROM DELAY IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE WARRANTY.