

Technical Data Sheet

Gloss White Polyimide (1mil) Polyester liner – 822

General Description: White 1 mil polyimide film with a permanent pressure sensitive acrylic adhesive and a high opacity, gloss white topcoat specifically designed for thermal transfer printing.

Uses & Features: Designed for barcode or alphanumeric identification of printed circuit boards, or related electronic components. It is the ideal product for applications requiring a high durability white label that will withstand the temperatures and solvents encountered in surface mount board processes. 822 is suitable for both direct wave (bottom side) and reflow (top side) applications. It can also be used on the topside of the board in mixed processes, and is recommended for the bottom side that is directly exposed to the wave solder environment and barcode applications. The material is particularly useful in manufacturing processes where dimensional stability of the label is critical.
The polyester liner makes it perfect for use with auto applies devices.

Properties: 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.

Other Recommended TT Ribbons: Nortec 103, 104 or 140 Thermal Transfer Ribbons.

Thickness:

	Average Results USA Units	SI Units
Substrate	0.0017 inch	0.043 mm
Adhesive	0.0010 inch	0.025 mm
Total	0.0027 inch	0.068 mm

Adhesion:

	Test Methods	Average Results USA Units	SI Units
Stainless steel	ASTM D1000 20 minute dwell	48 oz/in	53 N/100 mm
	72 hour dwell	85 oz/in	93 N/100 mm
Tack Polyken™ Probe 1 second dwell	ASTM D2979	25 oz	710 grams
Drop Shear	PSTC	> 100 hrs	> 100 hrs

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 Nortec 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 Nortec for further information.

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Temperature performance:

Performace properties	Test Method	Typical results
Short Term High Service Temperature	2 minutes at 572°F (300°C)	No visible effect to label
Short Term High Service Temperature	1 minute at 662°F (350°C)	No visible effect to label
Short Term High Service Temperature	10 seconds at 842°F (450°C)	No visible effect to label

* longer times at high temperatures might cause sum discoloration.

Heat/Chemical/Abrasion Resistance¹

Test Environment	PCS ²	Read Rate ³	PCS after Abrasion	R/R ⁴ after Abrasion
Control	99%	100%	99%	100%
270°C heat, 5 minutes ⁵	99%	100%	99%	100%
Alpha Metals Inc. 2110 Saponifier 6% aqueous, 65-70°C, 10 minutes	97%	100%	97%	100%
Isopropanol 99%, 82°C, 10 minutes	99%	100%	99%	100%
Deionized Water, 100°C 10 minutes ⁶	99%	100%	99%	100%

Edge Lift or Curl:

The 822 exhibits no edge curl when tested according to procedure # 90236.

Shelf life:

One year.

Warranty:

Nortec AMI recommends that a selected label type be thoroughly tested to insure it meets all end user requirements. Nortec AMI warrants only the purchaser that its products are free from defects in material and workmanship. Nortec AMI limits its obligation under this warranty and at its option to repair or replace the product. This warranty is in lieu of any other warranty, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. Nortec AMI is not liable for any damages, including lost profits, lost savings, or other incidental or consequential damages arising out of the use of or inability to use such product.

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¹ Samples printed with a recommended thermal transfer ribbon using standard TT printer. Labels printed with 3:1 ratio barcodes with 6 mil X dimension bars. Samples exposed to indicated environments. Abrasion Performance tested with 100 strokes of stainless steel ball (AISI302, 0.3125" diameter) with 300-gram load.

² PCS - Print Contrast Signal. PCS determined with Quick Check 650, 0.005" aperture, 660 nm wavelength. Quick Check 650 manufactured by Photographic Sciences Corp.

³ Read rate determined using PSC 850 laser scanner

⁴ Read Rate

⁵ 270C for 10 minutes with minor visible signs of browning, labels applied to a steel panel in laboratory oven

⁶ Followed by 2 minute immersion in deionized water @ 100c