

## Technical Data Sheet

### 2 Mil Static Dissipative Polyimide – 720

**General Description:** A 2 mil polyimide label stock with a permanent pressure sensitive acrylic adhesive and high opacity gloss white topcoat specially designed for thermal transfer printing.

**Uses & Features:** The 720 is deemed to be **Static Safe** product in accordance with EIA 625, EIA 541 It is designed for bar code 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 topside of board in mixing processes and is recommended for bottom side, which is directly exposed to the wave solder environment.

**Properties:** When printed with appropriate thermal transfer ribbon, the print resists smearing even after exposure to wave soldering. Also, preheating of printed label product can enhance its durability to extreme solvent and/or abrasion exposure. Moreover, When the label is peeled from its release liner, less than 25 volts per square inch of electrostatic charge is generated, making it safe to use in static free work environment per EIA 625, EIA 541.

**Recommended Ribbons:** Nortec 103, 140 or 148 Thermal Transfer Ribbons.

	USA Units (In)	SI Units (mm)
<b>Approx. Thickness:</b> Face Film	0.0027	0.068
Adhesive	0.0020	0.050
Total	0.0047	0.118

**Adhesion:** Test Method: ASTM D-3330 (stainless Steel)

	USA Units (oz/In)	SI Units (N/100mm)
20 minute dwell	44	48
72 Hour Dwell	82	90
Tack (ASTM D2979)	25 oz	710gr

**Heat/Chemical /Abrasion Resistance<sup>1</sup>**

Test Environment	PCS <sup>2</sup>	Read <sup>3</sup> Rate	PCS after Abrasion	R/R <sup>4</sup> after Abrasion
Control	99%	100%	99%	100%
260°C heat, 5 minutes	99%	100%	99%	100%
Kyzen Corp. Aquanox SSA 30% aqueous, 40-45°C, 10 minutes <sup>5</sup>	100%	99%	100%	100%
RE-ENTRY. KNI 2000 Terpene, 40-45°C, 10 minutes <sup>5</sup>	98%	100%	98%	100%
Alpha Metals Inc. EC-7R Terpene, 40-45°C, 10 minutes	98%	100%	98%	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	99%	100%	99%	100%

<sup>1</sup> 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

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

<sup>3</sup> Read rate determined using PSC 850 laser scanner

<sup>4</sup> Read Rate

<sup>5</sup> Followed by 2 minute immersion in demonized water at 100°C

Form No.	Latest Revision	Created By	Date	Page
ND 7.5 - D	Rev12.09	Amir P.	8.11.2017	1 of 2

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**Chemical Resistance<sup>1</sup>:** Test Method MIL-STD-202F Notice 12 Method 215 J.

Test Fluid	Results
1 part IPA, 3 Parts Mineral Spirits	No Visual Effect
1,1,1 - Trichloroethene	Solvent deleted per Notice 12
Terpene Defluxer	No Visual Effect
Saponifier	No Visual Effect

**Electrical Properties:**

Test Method	Label surface	Adhesive surface
ESO/ESD S.11.11	1.0+E7 Ohms	1.0+E6 Ohms
Peel Value (EIA 625, EIA 541)		<25 Volts/Sq. In.

**Temperature performance:**

Performance 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

**Storage stability & Shelf life :** 1 year below 80°F (27°C) and 60% R.H.

**Agencies approvals:** MIL-STD-202F Notice 12 Method 215 J.

**Reference:** Aquanox SSA™ is a trademark of Kyzen Corporation. EC-7R™ is a trademark of Petroferm Inc. Polyken™ is a trademark of the Kendell Corporation. RE -ENTRY™ is a registered trademark of Environsolv Inc. References: AISI: American Iron and Steel Institute (U.S.A.) ASTM: American Society for Testing and Materials (U.S.A.) PSTC: Pressure Sensitive Tape Council (U.S.A.) SI: International Systems of Units.

**General 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 AMI 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 AMI for further information.

**Warranty:** NORTEC AMI Ltd. recommends that a selected label type be thoroughly tested to insure it meets all end user requirements. NORTEC AMI Ltd. 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..

<sup>1</sup> Samples printed with a recommended thermal transfer ribbon using a standard Thermal Transfer Printer. Labels printed with alphanumeric and 3:1 ratio barcodes with 6 mil X dimension bars. Samples subjected to 3 cycles of three-minute immersions immediately followed by a toothbrush rub after each immersion.

Form No.	Latest Revision	Created By	Date	Page
ND 7.5 - D	Rev12.09	Amir P.	8.11.2017	2 of 2