

# DuPont™ WPR 1000 Series

Permanent Dry Photoresist

## Quick Reference Processing Guide



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<b>Roll Length</b> on 152.5mm (6") cores	121 m (400 ft.)
<b>Roll Width</b>	15-61 cm (6" to 14" in .25" increments)
<b>Product Thickness</b>	<b>WPR1050</b> - (50 microns) <b>WPR1075</b> - (3 mils thick) <b>WPR1100</b> - (4 mils thick)
<b>Color</b> (Initial) (After Cure)	Matte Medium Green (Transparent) Matte Green for Bake/UV Cure, and Yellow Green for UV/Bake
<b>Spectral Sensitivity</b>	320-700 nm
<b>Exposure Range</b>	350-450 nm
<b>Resolution</b>	= 125 $\mu$ m (= 5 mils)
<b>Artwork Reproduction</b> of 1.27mm (50 mil) pad openings with recommended exposure	1.24-1.27mm (49-50 mils)
<b>Material Storage</b> (Unused Rolls) (Partially Used Rolls)	5-21°C (40-70°F) & 50 $\pm$ 20% RH Last Lap Must Be Taped to Keep Roll Integrity

<b>Vacuum Lamination</b>	<u>TYPICAL RANGE</u>	<u>TYPICAL</u>
Cycle Time	50-70 seconds	60 sec.
Board Exit Temperature	60-77°C (140-170°F)	68°C (155°F)
<b>Post Lamination Hold Time</b>	1 Hr., but < 3 days	Recommended < 4hrs
<b>Exposure</b> Stouffer Step (last step with >50% coverage) Energy* Time	<u>RANGE</u> 10-12 150-300 mJ/cm <sup>2</sup> 18-40 secs.	<u>OPTIMUM</u> 11 Equipment Dependent
<b>Post-Exposure Hold Time</b>	=10 min., but < 3 days	Recommended < 8hrs.**
<b>Development</b> Breakpoint Temperature and Pressure Chemistry	40-60% of Developing Chamber 40 $\pm$ 2°C (105 $\pm$ 5°F) & > 1.4 Bar (20psi) 0.85% Anhydrous Sodium Carbonate (Soda Ash) or 1% Sodium Carbonate Monohydrate	
<b>Cure</b> (Sequence can be either Bake followed by UV, or UV first) 1. Bake 2. UV	140 -150°C (285-300°F) for 1 hour <b>at temperature</b> 4 $\pm$ 1 Joules/cm <sup>2</sup>	

This information corresponds to DuPont's current knowledge on the subject. It is offered solely to provide possible suggestions for your own experiments and is not intended to substitute for any testing you may need to conduct to determine the suitability of DuPont's products for your particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since DuPont cannot anticipate all variations in actual end-use conditions, it makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

Caution : Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement", H-51459.

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