

# XT/duroid® 8000 and XT/duroid 8100 High Performance Circuit Material Quick Reference Processing Guide

<b>Material Description:</b>	Ultra-thin copper clad cores using a filled, high Tg resin system.
<b>Storage:</b>	Ambient
<b>INNER LAYER PREPARATION</b>	
<b>Tooling:</b>	Compatible with most pinless and round or slotted hole systems.
<b>Surface Preparation for Photoresist Applications:</b>	Chemical preparation
<b>Photoresist Applications:</b>	Standard film and liquid resists & procedures
<b>DES Processing:</b>	Thin cores may require leader boards or support frames. Preserve post-etch surface topography
<b>Oxide Treatment:</b>	Oxide treat as required for chosen prepreg or bondply and use procedures recommended by vendor of the oxide or oxide alternative process
<b>BONDING</b>	
<b>Final Preparation:</b>	125°C to 150°C (257°F-302°F) Pre-bake required to pre-dry layers
<b>Multilayer Adhesive System:</b>	Cores are compatible with most thermoplastic and thermoset bonding films including RO4450F™ prepregs.
<b>Multilayer Bond Cycle:</b>	Use bond parameters associated with adhesive system.
<b>PTH AND OUTER LAYER/DOUBLE SIDED CIRCUIT PROCESSING</b>	
<b>Drilling:</b>	Rigid and supportive entry/exit materials such as pressed phenolic. Use new drills. Controlled infeeds, speeds, and retract rates. Hit count determined by inspection of PTH's.
<b>Deburring:</b>	Mechanical debur/scrub not recommended. Very light applied pressure if debur is required.
<b>Hole Preparation:</b>	A two step plasma process required first to desmear/texture hole walls and second to improve the wettability of surfaces to be plated. A glass etch may be required to reduce the risk of plated nodules.
<b>Metallization:</b>	Electroless copper (low or regular dep rates preferred over heavy dep processes) or direct deposit processes are acceptable. Flash plate recommended prior to outer-layer imaging.
<b>PTH PLATING AND OUTER-LAYER IMAGING</b>	
<b>Outer-Layer Imaging</b>	Standard processing of outer-layer features. Copper plate, tin plate, and SES as standard
<b>Final Surfaces:</b>	Compatible with most final metals surfaces and OSP's. Preserve post-etch surface and bake cores prior to application of LPI.
<b>Final Circuitization:</b>	Rout & punch as required. Material support and sharp edges on cutting tools required through mechanical processes.

The information in this processing guideline is intended to assist you in designing with Rogers' circuit materials. It is not intended to and does not create any warranties express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on this processing guideline will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers' circuit materials for each application.

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