

## News Release

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### **Circuits, LLC Now Offers Rigid-Flex**

#### FOR IMMEDIATE RELEASE

Murrysville, PA. January 18, 2010. Combining rigid and flexible substrates into a single printed circuit board offers designers the ability to improve reliability by reducing connector counts and complex wiring configurations. With the addition of an innerlayer adhesion promotion system, Circuits, LLC's engineering team released the rigid-flex PCB manufacturing operations to production to offer a more dependable and cost effective alternative for their customers. Rigid-flex PCBs enable weight-reduction and more compact packaging with improved performance ideal for many military, aerospace and medical applications.

Circuits, LLC is well-equipped to take on rigid-flex PCB processing. The 50,000 square foot fabricating and testing facility houses a built-to-purpose, flow-optimized workspace specifically designed and equipped to produce consistent, high-quality flexible printed circuits with minimum handling and transport. The PCB manufacturing facility features a fully-integrated Class 1,000 clean room, a laser driller/router and a custom plating line configured for the production of complex circuits.

Rather than using a traditional oxide treatment in the manufacture of rigid-flex, Circuits chose an innerlayer adhesion promotion system that combines micro-etching and surface adhesion promotion to influence the flow of the pre-preg resin yielding significant interlaminar bond strength between resin and the copper surface. The COBRA Bond™ process (developed by OMG Electronic Chemicals) is designed to work with multiple types of foils, is scratch resistant and has lower overall processing costs. "The new system offers many benefits for Circuits and their customers," according to Michael Carano, Global Manager Strategic Business Development and Marketing, OMG Electronic Chemicals, "plus the COBRA Bond™ process meets with Circuits' "clean manufacturing" strategy because it is more environmentally sound than traditional oxide processes."

As both the mechanical and electrical aspects are a consideration when designing rigid-flex applications, Circuits, LLC offers their staff of experts to help customers design for manufacturability early in their process to insure the highest yields possible through the fabrication and the assembly process.

#### About Circuits, LLC

Circuits, LLC is a quality-driven, customer-focused manufacturer of highly reliable built-to-spec flexible printed circuit boards serving the defense, industrial, and medical markets with consistent quality and on-time delivery unsurpassed by competitors.

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#### About OMG Electronic Chemicals

OMG Electronic Chemicals is a diversified global developer, producer and marketer of value-added specialty chemicals and advanced materials that are essential to complex chemical and industrial processes. Key technology-based end-use applications include affordable energy, portable power, clean air, clean water and proprietary products and services for the microelectronics industry. Headquartered in Cleveland, Ohio, OMG Electronic Chemicals operates manufacturing facilities in the Americas, Europe, Asia and Africa. For more information, visit [www.omgi.com](http://www.omgi.com).

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