



Applied Materials' Patented Low k Dielectric Technologies Provide Next-Generation Processing Solutions

August 17, 2000

SANTA CLARA, Calif.--(BUSINESS WIRE)--Aug. 17, 2000--Applied Materials, Inc. (Nasdaq:AMAT) strengthens its leadership in supplying dielectric films and technology to the global semiconductor industry with its portfolio of patented low dielectric constant (k) CVD (chemical vapor deposition) films. These advanced films allow semiconductor manufacturers to increase the speed and performance of their chips by enabling denser circuitry, especially in copper-based devices.

Applied Materials' Black Diamond(tm) low k film was introduced in 1998 as a k less than 3.0 dielectric for manufacturing interconnect structures in advanced 0.13 micron copper devices. This film can be used with the Applied Materials' BLOk(tm) (Barrier Low k) dielectric CVD barrier and etch stop film to further lower the overall k-value of a copper interconnect structure. An independent research center recently announced that it has demonstrated the extendibility of Black Diamond to an effective k-value of less than 2.4 for 0.10 micron chip designs.

"Extensive evaluations of Black Diamond by our customers, research organizations and ourselves, including material characterization, process integration and electrical performance, demonstrate that Black Diamond can be integrated into advanced manufacturing processes," said Dr. Farhad Moghadam, corporate vice president and general manager of Applied Materials' Dielectric Systems and Modules Product Group. "We expect that customers will prefer using existing, well-established CVD systems and technology to produce their next-generation, multi-level copper damascene devices due to significant advantages in cost and reliability over spin-on dielectrics."

In order to develop superior products and services for its customers, Applied Materials makes significant investments in research, development and engineering. In fiscal year 2000, this investment will amount to more than \$1 billion. Applied Materials protects the value of its pioneering technologies with patents and other intellectual property rights. Applied Materials has already obtained two U.S. patents arising from breakthrough innovations in its low k dielectric program. These are the first of a group of patents that Applied Materials expects to obtain for its family of low k dielectric technologies that cover a variety of process chemistries and deposition conditions.

Applied Materials (Nasdaq:AMAT) is a leader of the Information Age and the world's largest supplier of products and services to the global semiconductor industry. Applied Materials' web site is <http://www.appliedmaterials.com>.

--30--gdr/sf*

CONTACT: Applied Materials, Inc.

Carolyn Schwartz, 408/748-5227 (Investment Community)

Jeffrey Lettes, 408/563-5161 (Business Media)

Betty Newboe, 408/563-0647 (Editorial Media)