



Applied Materials Introduces New High-Performance Gas Chemistry for Critical Etch Applications

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Business Editors/High-Tech Writers

SANTA CLARA, Calif.--(BUSINESS WIRE)--Sept. 28, 1999--

New C4F6 Chemistry Developed With Ausimont Delivers Technology and Environmental Advantages

Applied Materials, Inc., in collaboration with Ausimont, a company of the Montedison Group and a leading provider of fluorine chemistry, introduces Sifren(R) 46, a new environmentally friendly, high-performance C4F6, etch chemistry for its Dielectric Etch IPS(TM) Centura(R) and Dielectric Etch Super e(TM) Centura systems. The new Sifren(R) 46 provides higher etch rates, better profile control and higher selectivity to photoresist in critical dielectric etch applications. Several patents have been filed by Applied Materials regarding the use of Sifren 46 which is now available to customers through major gas distributors.

"Sifren 46 gas improves dielectric etch process results in key areas such as copper dual damascene, self-aligned contact and high aspect ratio contact etch applications, including low K materials," said Gerald Yin, vice president of Applied Materials' Etch Group. "It also exhibits significant environmental benefits over current etch chemistries, which is an important issue for our customers. We are currently testing Sifren 46 with several customers to etch a variety of devices and have demonstrated significant advantages on small features. Chipmakers using our dielectric etch systems can benefit from these advanced process capabilities as they move their designs to 0.15 micron and beyond."

The semiconductor industry has been investigating new gas chemistries in an effort to reduce global warming emissions. In addition to improving etch process performance, C4F6 gas features low global warming emissions and zero ozone depletion potential.

Massimo Malavasi, vice president of Ausimont's Research & Development, said, "Working with Applied Materials on this new chemistry gives us the opportunity to team with the largest etch company in the world on an exciting innovation in semiconductor processing. As we expand our presence in the semiconductor industry, we are happy to have Applied Materials as a technology partner in finding new solutions to improve customers' environmental safety and process results."

According to Dataquest, a market research firm, equipment for dielectric etching is the largest and fastest growing etch market segment, totaling \$954 million in 1998 and projected to grow to \$2.2 billion by 2003. Dielectric etching is one of the key technologies involved in the transition to copper-based semiconductor chips.

Ausimont is a multinational company that has maintained a leadership position in high-performance fluorinated products for over 50 years. Today, Ausimont is the second largest fluorochemical producer in the world. Ausimont's web site is www.ausiusa.com.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol "AMAT." Applied Materials' web site is www.appliedmaterials.com.

Note to Editors: In the above mentioned chemical formula "C4F6" the "4" and "6" should be subscripted. In the product name "Super e" mentioned above the second "e" should be italicized.

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