



Press release

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Henkel Develops Disruptive Die Attach Technology; New WBC for Stacked Die Packages Challenges Die Attach Film Stronghold

Recognized for its ease of use and cost-effectiveness with die attach processes for leadframe packages, Henkel has extended its Wafer Backside Coating (WBC) portfolio to also include a solution for stacked die packages. Ablestik WBC-8901UV has been designed to address the demanding requirements of multiple die stack applications for the memory market segment, including packages such as TSOPs, MCPs and FMCs (Flash Memory Cards).

The unique formulation of Ablestik WBC-8901UV offers a robust and cost-effective alternative to current film-based solutions for die stacking processes, reducing the total cost of ownership as compared to film by as much as 30% to 50%. Process flexibility is also enhanced with Ablestik WBC-8901UV, as packaging specialists can now adjust die attach thickness based on specific manufacturing requirements and can also select their dicing tape of choice. Film die attach materials are generally supplied in pre-determined thicknesses as a bundled product which incorporates the dicing tape.

Applied via a spray coating method following the wafer thinning process, Ablestik WBC-8901UV is precisely deposited across the back of the silicon wafer following which the material is B-staged using a UV irradiation process. After this step, dicing tape is laminated to the wafer, backgrinding tape is removed and the wafer is diced in preparation for die pick-up and placement. Henkel is currently partnering with spray technology and backgrinding equipment manufacturers to deliver an integrated, in-line process solution for this unique WBC advance.



“In our view, Ablestik WBC-8901UV is a game-changing technology,” says Jonathan Poo, Henkel Global Marketing Manager for Advanced Packaging. “The material thicknesses, tolerances and reliability results we have been able to achieve – all at a substantially lower cost than film – are impressive.”

Traditional deposition methods have challenged WBC for applications that dictate ultra-thin wafers (less than 75 microns) and coating thicknesses of 10 microns or less. Screen and stencil printing, while viable on thicker wafers, may not be able to accommodate today’s ultra thin wafers and material uniformity may be impacted by screen mesh marks or the “scooping” effect that comes from squeegee traverse. Historically, spin coating resulted in material waste of 70% or greater, which negated the material cost savings. Ablestik WBC-8901UV and new spray coating technology have resolved these issues, delivering a precise wafer coating as thin as 10 microns with a total thickness variation across the wafer of +/- 10% and remarkably low material waste of less than 20%. Wafers as thin as 50 microns have been successfully processed using this method.

“Now, packaging specialists have a reliable, robust and less costly die attach alternative to film-based processes for wafer stacking applications,” confidently concludes Poo. “But, we’re not finished; come 2011, we expect to be able to achieve 5 micron coating thicknesses or better with further development of Ablestik WBC-8901UV.”

For more information on Henkel’s latest WBC innovation or any of the material leader’s semiconductor packaging technologies, log onto www.henkel.com/electronics or call the company’s headquarters at 949-789-2500.

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Henkel in North America

Henkel markets a wide range of well-known consumer and industrial brands in North America, including Dial® soaps, Purex® laundry detergents, Right Guard® antiperspirants, got2b® hair gels, and Loctite® adhesives. Visit www.henkeln.com for more information.

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