Elevate® Copper 1500

Superior Step Coverage for via Fill Applications

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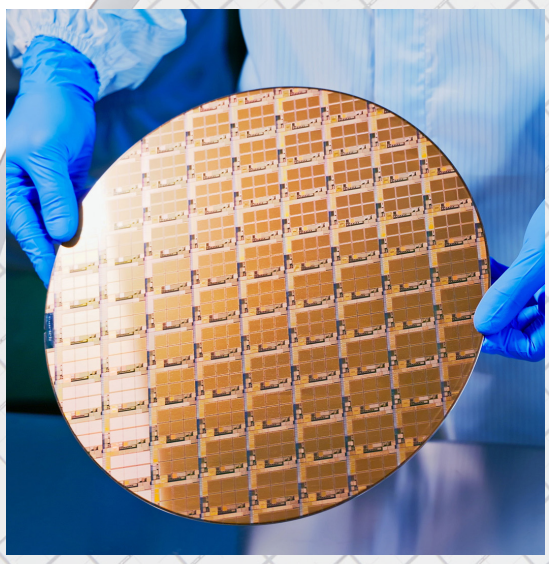
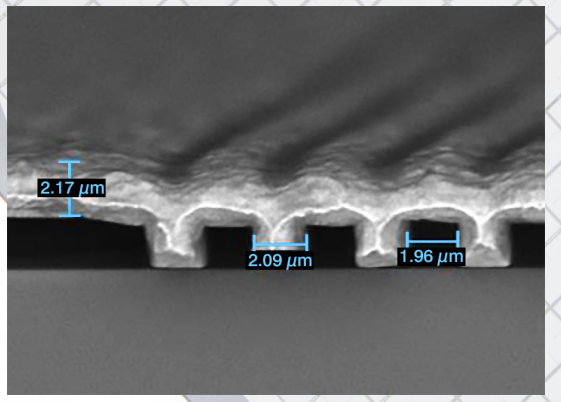
Enhanced MSA-Based Copper System

Elevate® Cu 1500 is an MSA-based copper system specifically formulated to produce superior copper deposits for via fill applications. This electrolyte enables higher copper concentrations in the solution, compared to a standard sulfuric acid copper bath, enhancing step coverage in vias, and reducing the solution's dependence on a leveler to achieve adequate via fill.



Elevate® Cu 1500 allows for the plating of various via sizes with just one bath, offering flexibility across different applications. This product has been successfully used to fill vias with aspect ratios as high as 10:1, making it ideal for high-density interconnects (HDI) and other demanding applications.

The process is stable and easy to manage, requiring just two organic additives to produce optimum results. All solution components can be accurately analyzed using Technic's Elevate Analyzer or standard CVS methods, ensuring precise control and performance.



Benefits

- Improved via fill performance, especially in high-aspect-ratio vias
- Reduced complexity vs traditional systems, thanks to only two organic components to manage
- Broad compatibility with both horizontal and vertical plating tools, enabling use with standard industrial equipment
- Higher efficiency, thanks to the ability to plate different via fill types without significant changes to the bath

Features

- Superior step coverage for consistent plating quality
- Excellent via fill capability for a range of applications
- Successfully used on vias and high-density RDL features
- Wide current density range for flexible application
- Capable of filling 10:1 aspect ratio vias for advanced packaging needs
- Easily controlled using Technic's Elevate Analyzer or standard CVS methods

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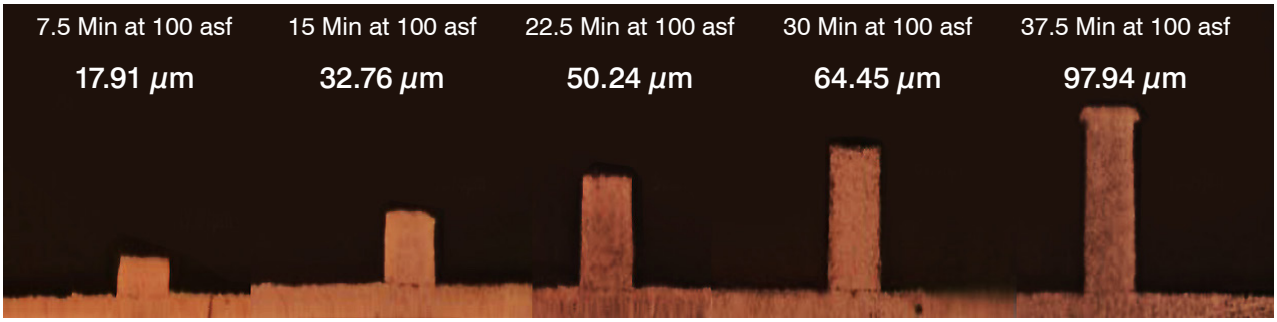
Variety of Via Fill Feature Types

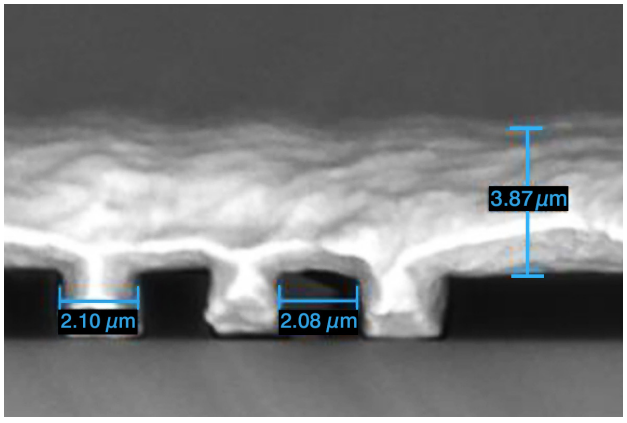
Via filled features are used in many different applications, including 3D IC's, 2.5D Interposers, Memory Stacks (HBM), Image Sensors. Since each application can have a unique set of requirements, a versatile via fill copper plating chemistry isessential to ensure success across a variety of feature types.



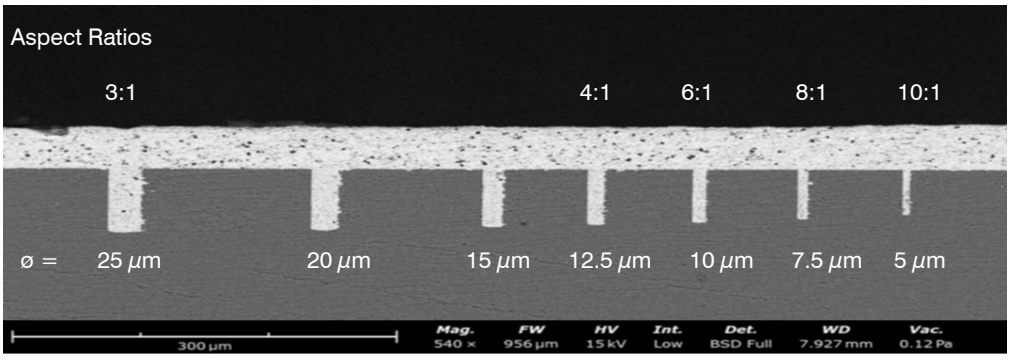
50 µm diameter via fill performance vs. plating time (plated at 100 ASF)

260 µm x 40 µm through-hole via fill on glass substrate

High Density RDL using Damascene approach
2/2 High Density Pattern on Silicon Wafer



Via Fill



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