

Elevate® Gold 7990 NBV HT

Electrolytic Sulfite Gold



Cyanide-Free, Versatile Gold for Semiconductors

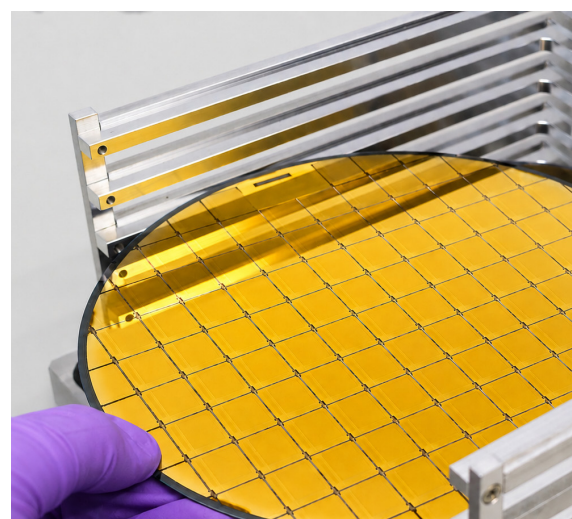
Trusted by semiconductor manufacturers around the globe, **Elevate® Gold 7990 NBV HT** is a sulfite gold process recognized for its reliable performance, process stability, and cost efficiency.

Elevate® Gold 7990 NBV HT is the only commercially available sulfite gold process that operates at an acidic pH of 6.7, providing excellent compatibility with most photoresists. Its environmentally safer formulation is free from arsenic and thallium, metallic grain refiners traditionally used in some sulfite gold processes.

Gold Savings Advantages

With the rising cost of gold, process efficiency is more important than ever. Elevate® Gold 7990 NBV HT typically delivers a bath life 2–3 times longer than many sulfite gold chemistries, reducing bath makeups and helping lower operating costs. Its exceptional bath stability also minimizes the risk of plate-outs and costs associated with unplanned bath replacement.

Via plating is an increasingly important application for advanced sulfite gold chemistries. Excellent step coverage and uniform deposition maximize gold placement inside the via while reducing excess surface deposition. This optimizes gold utilization, lowers gold consumption, and can deliver significant material cost savings.



Benefits

- Improved process reliability through enhanced bath stability and reduced risk of plate-outs
- Optimized gold utilization through excellent coplanarity and via coverage
- Reduced operating costs through extended bath life and efficient gold deposition
- Increased wafer throughput through high-speed plating performance
- Supports safer manufacturing with cyanide-, arsenic-, and thallium-free chemistry
- Compatible with R&D, manual wet bench, and fully automated production plating systems

Features

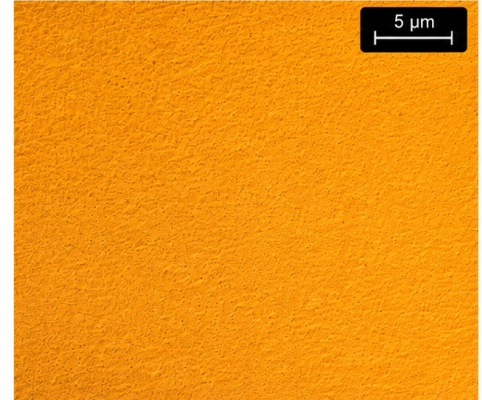
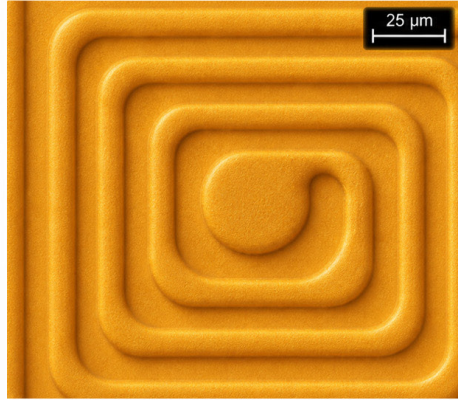
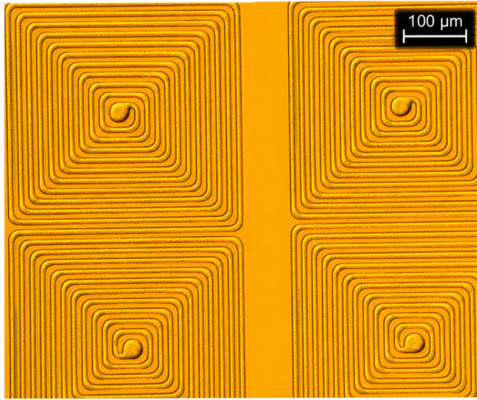
- Highly stable sulfite gold electrolyte
- Low-stress, smooth, bright gold deposit
- Arsenic- and thallium-free formulation without metallic grain refiners
- Excellent thickness uniformity across complex wafer designs
- Advanced step coverage for high-aspect-ratio via applications
- Extended bath life of 4–5 metal turnovers in most applications
- Proven performance in high-volume semiconductor manufacturing environments

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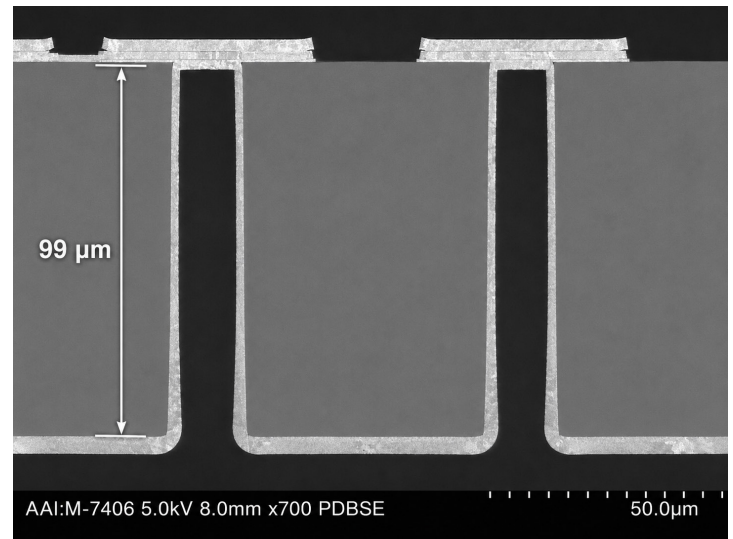
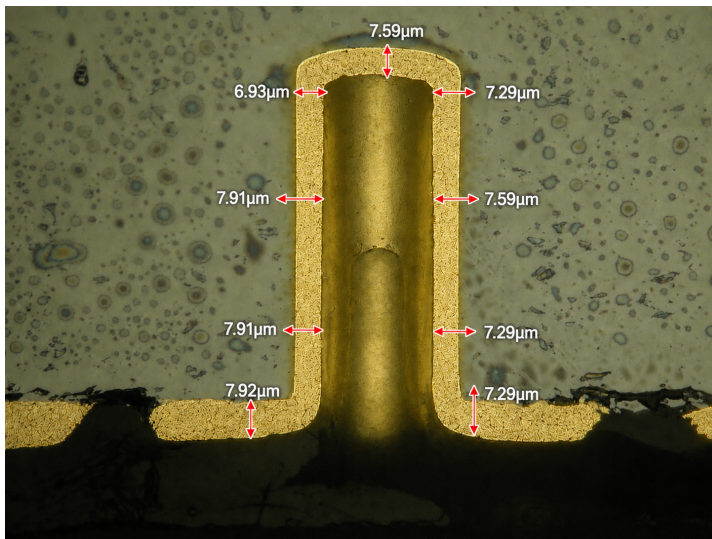
Smooth and Bright Deposit

Elevate® Gold 7990 NBV HT produces smooth, bright, low-stress gold deposits without the use of arsenic or thallium based metallic grain refiners. The process is capable of achieving deposits with an average Ra roughness of approximately 10 nm, providing consistent surface quality throughout the operating life of the bath.



Cost-effective Via Plating

Gold via plating requires precise control of deposit distribution to minimize unnecessary gold usage. Elevate® Gold 7990 NBV HT provides excellent step coverage, achieving near 1:1 surface-to-via deposition ratios in many applications. By reducing excess surface overburden while maximizing gold placement inside the via, manufacturers can significantly improve gold utilization and reduce material costs.



Images shown demonstrate the excellent conformal plating and via filling capabilities of Elevate® Gold 7990 NBV HT. This unique process enables uniform gold deposition within challenging via structures while maintaining efficient plating conditions.