Aurotech® G-Bond 3

New mixed reaction gold for ENIG, ENEPIG, and EPAG

Electronics

Final finishing technology

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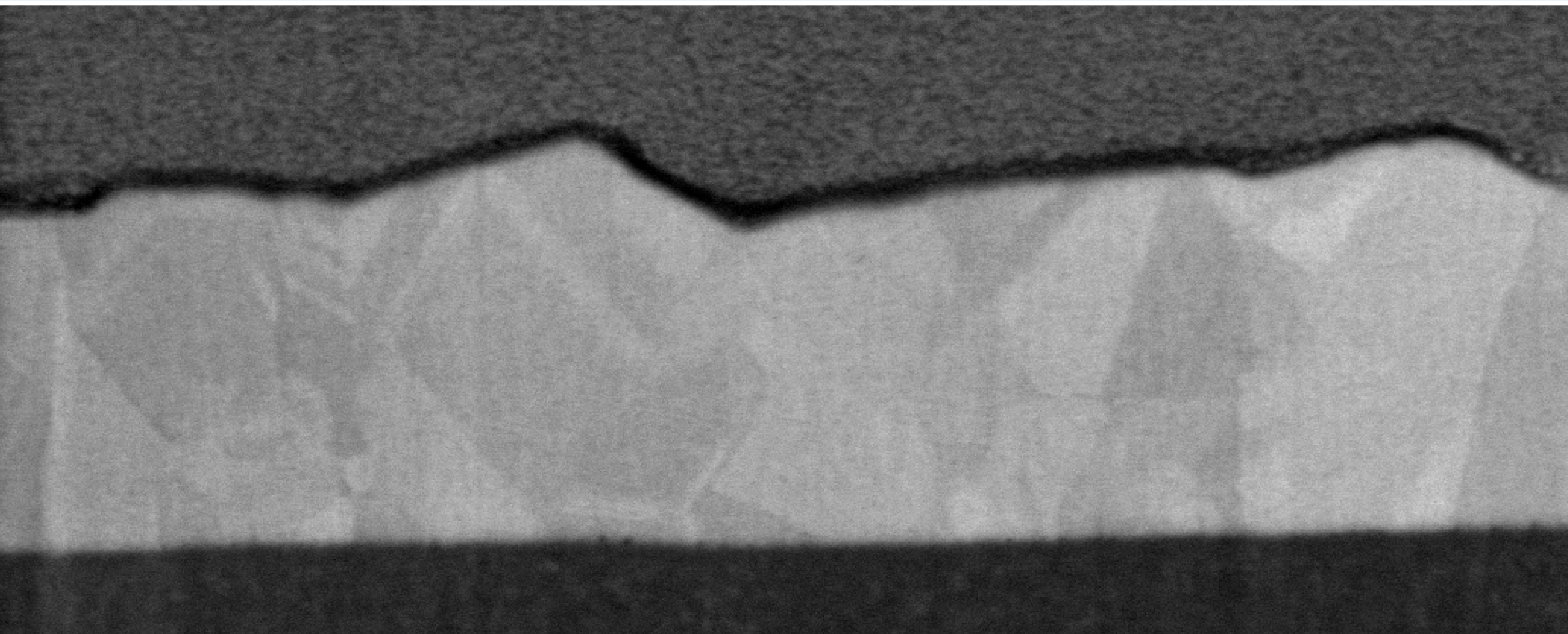

A mixed reaction gold with non-toxic stabilization

0.6

g/l gold content in plating solution

Latest generation corrosion-free gold for ENIG, ENEPIG, and EPAG

Aurotech® G-Bond 3 is the latest generation gold electrolyte that fulfills all industry standards for ENIG, ENEPIG, and EPAG plating. It exhibits autocatalytic plating properties to mitigate the attack to the underlying layer and enables the plating of high gold thickness where required. Besides offering the highest bath stability and excellent layer performance, the process exhibits the benefit of non-toxic stabilization so that no handling of KCN replenishment is required. The new process combines the known benefits of Aurotech® G-Bond 2 with outstanding stability, long bath life, and a new and toxic-free stabilizer.

The low gold content of 0.6 g/l, the long bath lifetime of 10 MTO, and the excellent thickness distribution of below 5% CoV ensures cost-competitive manufacturing for all types of gold containing final finishes.

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The state-of-the-art gold plating solution

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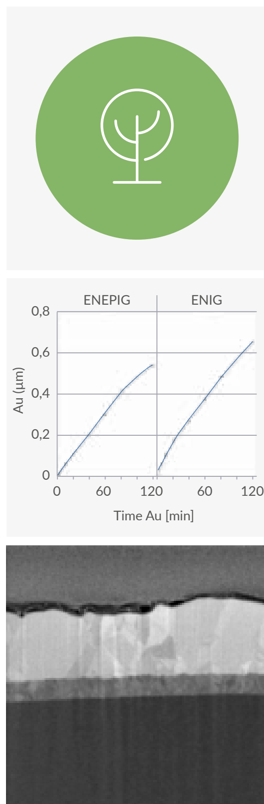

Figure 1-3:
Non-toxic stabilizer replenishment
Linear thickness increase over time
Defect-free interface at Ni/Pd/Au

Safe handling

Mixed reaction gold electrolytes with high autocatalytic properties imply the challenge to combine a highly active plating solution with user-friendly bath stability that ensures long bath life with low maintenance efforts. In the past, the continuous replenishment of the KCN solution assured the complexed gold and prevented spontaneous plate out and decomposition. With Aurotech® G-Bond 3 a new, more user-friendly process becomes available that works with a fully KCN-free stabilizer to allow easier and safer process handling.

Fulfilling latest industry demands

Due to its unique composition, Aurotech® G-Bond 3 enables versatile use for plating Ni/Au, Ni/Pd/Au, and Pd/Au deposits without needing any adjustments on the plating solution. The bath provides excellent stability and a long lifetime and allows the deposition of a high gold layer thickness on nickel and palladium. In addition, the autocatalytic dominated reaction mitigates the risk of a corrosive attack on nickel so that the latest industry standards on the corrosive attack in ENIG can be easily fulfilled. The low gold content and the excellent thickness distribution allow for keeping the gold plating cost low by reducing the drag-out losses and allowing low target layer thickness. A dosing master for automated replenishment is available to further automate process operation. It also further reduces tank cleaning and therewith needed maintenance.

Features and benefits

- Non-toxic stabilizer, no KCN handling required for replenishment
- Low Au-content (0.6 g/l)
- High bath stability, no plate out
- >95% ENIG corrosion level 0
- Excellent thickness distribution of < 5% COV
- Long bath life (10 MTO)