

InPro[®] SAP6

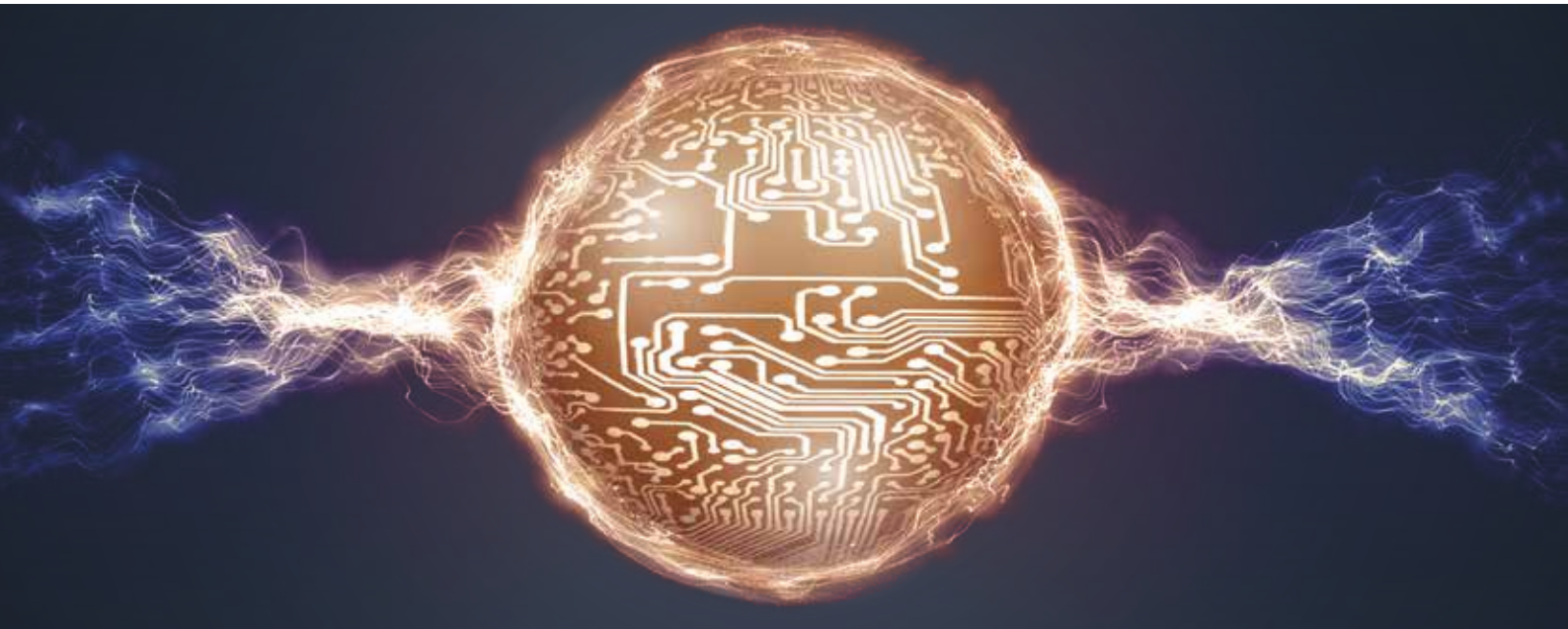
Vertical BMV filling process



Electronics

Panel and pattern plating

atotech.com



BMV filling in VCP systems for IC substrates at high current density

< 3 _{μm}

dimple size

InPro[®] SAP6 – Best performance at high current density

InPro[®] SAP6 is our new BMV filling process for vertical conveyor lines. The high-performance electrolyte for insoluble anode systems has been developed specifically for the needs of IC substrate manufacturing (SAP, amSAP) and works best when combined with our V-Plate[®] equipment.

InPro[®] SAP6 is suitable for fine line production and provides the best productivity and quality. The BMV filling process assures a consistent filling performance, high applicable current density, and a stable metal distribution on unit. It also enables defect free surface finishing.

InPro[®] SAP6 – leading edge pattern creation

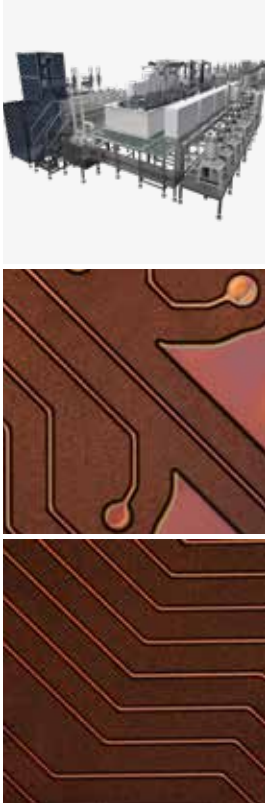


Figure 1: V-Plate[®]
Figure 2-3: Examples of patterns with lines and spaces of 9/12 μm

Chemistry and system out of one hand: InPro[®] SAP6 combined with V-Plate[®]

InPro[®] SAP6 works best when combined with our V-Plate[®] equipment. Our unique systems approach provides chemistry and equipment out of one hand. This presents sophisticated equipment features and a tight quality control thanks to leading edge software. It also provides accurate dosing possibilities and assures stable processing.

Advantages when using InPro[®] SAP6 with V-Plate[®]:

- High applicable current densities up to 6 ASD
- Unsurpassed copper within-unit thickness uniformity at high current densities
- For fine line production ($< 8/8 \mu\text{m L/S}$)
- Good pattern capability, rectangular track profile

Features and benefits

- Superior BMV filling performance, with dimple $< 3 \mu\text{m}$
- Very good copper within unit distribution on high demanding IC layers
- Good physical properties and crystal structure
- Outstanding performance in reliability tests
- Excellent stability over bath age
- High productivity and high quality for high class IC substrates
- Higher applicable CD compared to POR chemistry
- Superior surface finishing compared to POR chemistry
- Complete analyzability and control of the plating chemistry by CVS

