

Convergence™ Copper 2719

Advanced Bright Acid Copper



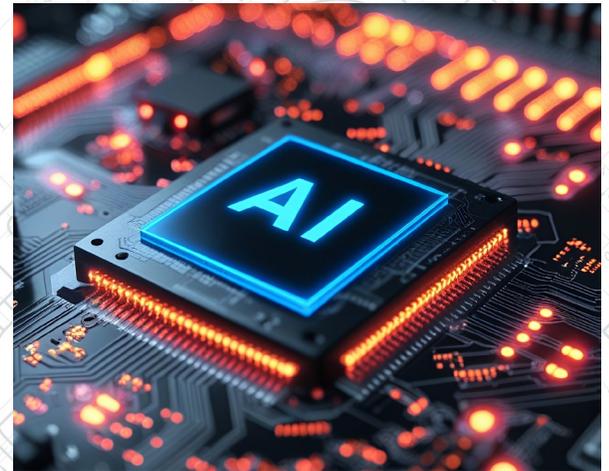
High-Conductivity Copper for Advanced Applications

Convergence™ Copper 2719 is a unique acid copper plating process specifically formulated to produce deposits with excellent conductivity, thermal and mechanical properties.

This product operates effectively across a wide range of current densities and is compatible with multiple equipment configurations, including rack mode, fountain-type platers, and reel-to-reel high-speed processing.

Convergence™ Copper 2719 supports direct current (DC), pulse, and pulse periodic reverse (PPR) mode, and is fully compatible with systems using insoluble anodes.

Particularly well-suited for AI and data center applications, it delivers uniform copper deposition and excellent conductivity. This ensures reliable high-speed interconnects and stable performance in advanced computing environments.



Benefits

- Improves conductivity and thermal properties
- Minimizes power loss and improves energy efficiency
- Ensures reliable high-speed interconnects and signal integrity
- Enhances durability under thermal and mechanical stress
- Supports stable performance in high-power computing environments
- Enables consistent, reliable performance at high processing speeds

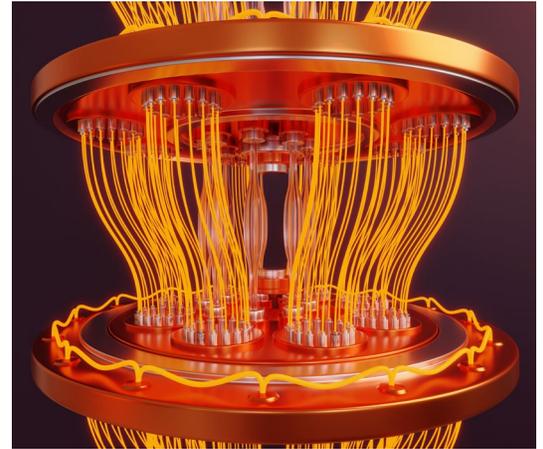
Features

- Bright, low-stress deposits with excellent thermal and mechanical properties
- Wide current density range, suitable for use in various equipment types
- Optional leveler product available for applications requiring high brightness
- Supports plating on glass, ceramics, and other non-conductive substrates when metallized
- Proven versatility across multiple applications
- Can be analyzed using Technic's EBA system

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Parameter	Range	Optimum
Copper Metal	30 – 50 g/l	40 g/l
Sulfuric Acid	70 – 90 ml/l	80 ml/l
Convergence™ Copper 2719 Carrier	12 – 17 ml/l	15 ml/l
Convergence™ Copper 2719 Brightener	5 – 10 ml/l	7.5 ml/l
Chloride Ion	60 – 80 ppm	70 ppm
Cathode Current Density	5 – 40 A/dm ² (50 – 400 ASF)	Dependent on application
Temperature	22 – 28° C (72 – 82° F)	25° C (77° F)
Solution Flow	Vigorous solution flow and mechanical movement of the cathode	
Deposition Rate at 10 A/dm ² (100 ASF)	2.5 – 3.0 μm/min (100 – 120 μin/min)	



Deposit Characteristics

Structure	Fine-grained, equiaxed
Density	8.9 g/cm ³
Conductivity	0.59 mega siemens/cm
Electrical Resistivity	1.7 – 1.8 microhm/cm
Elongation	14 – 25%
Tensile Strength	308 – 385 N/mm ² (40 – 50 KPSI)
Yield Strength	156 – 221 N/mm ²
Thermal Conductivity	400 W/mK
Modulus of Elasticity	180 – 220 GPa
Hardness	180 - 220 Knoop, as deposited, and after annealing 2 hours at 150° C (320° F)

