



Copper Plating

Through our surface treatment technology and results,
Create new values.

Copper plating is a surface treatment technology that combines high electrical conductivity, adhesion, and workability, making it indispensable for electronic components and precision instruments.

At ERG, we provide copper plating tailored to various purposes such as underplating, functional layers, and thick plating applications. We propose optimal processing conditions and coating structures that take into account compatibility with the base material and subsequent processes.

ERG's copper plating

At ERG, we offer two types of copper plating—cyanide copper plating and pyrophosphate copper plating—depending on the application and base material. Each has its own characteristics and suitability, and we propose the optimal process from the perspectives of film thickness, adhesion, workability, and safety

Item	Cyanide Copper Plating	Pyrophosphate Copper Plating
Main Component	Copper Cyanide (CuCN)	Copper Pyrophosphate (Cu(Py))
Features	Excellent adhesion, smoothness, and conductivity	Stable deposition, uniform thickness, low environmental impact
Plating Speed	Fast	Relatively slow
Thickness Control	Capable of thick plating, good workability	Uniform thickness, suitable for fine shapes
Safety & Environmental Response	Requires management due to cyanide-based process	Non-cyanide, superior safety and environmental compatibility
Applications	Thick underplating, parts requiring high conductivity	Precision components, fine shapes, environmentally conscious applications

Cyanide copper plating offers excellent conductivity, adhesion, and workability, making it well-suited for thick plating and compatibility with subsequent processes. In contrast, pyrophosphate copper plating is non-cyanide, provides higher safety, and excels in uniform thickness, making it suitable for micro-components and environmentally conscious products.

FAQ - Frequently Asked Questions

Q. What materials are suitable for copper plating?

A. Copper plating can be applied to iron, brass, stainless steel, aluminum, and other materials with proper pretreatment.

Q. What thickness range is possible for copper plating?

A. Thicknesses from several micrometers to several tens of micrometers are supported, including thick plating.

Q. Is copper plating compliant with RoHS?

A. Yes. RoHS compliance is possible with non-cyanide processes such as pyrophosphate copper plating.

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