

Acid copper

Decorative copper plating solutions



General Metal Finishing

Decorative coatings

atotech.com

The premier decorative copper plating process



Atotech meets virtually every need for decorative copper and copper alloy plating.

For a multitude of applications

As the world's leading supplier to the metal finishing industry, Atotech meets virtually every need for decorative copper and copper alloy plating. Whether the application is plated plastics, grounding rods, plated automotive wheels, rotogravure or non-nickel bright white finishes for skin contact use – Atotech offers the full range of products.

Even though acid coppers are mostly used as intermediate layers, their importance is critical to the overall performance of plated parts. Cupracid® and CuFlex® are MKS' Atotech main brands of acid copper processes today. Whether the process is dye-containing or dye-free, Atotech can offer the right process to the right application.

Acid copper today

Today acid copper is used in a wide variety of applications: In plastics such as ABS and ABS/PC (automotive interior and exterior parts, shower heads and sanitary parts, household appliances, cosmetics and packaging, consumer electronics, etc.), plating on aluminum (aluminum car wheels, printing cylinders, various housings), steel (printing rollers, steel furniture, fashion jewelry, door handles, bathroom and kitchen fittings), zinc die cast (furniture fittings, water taps, buckles, locks, hinges, fashion jewelry, handles) and tin-alloys (tableware, fashion jewelry, souvenirs, trims).

Features and benefits

- Ease of control
- Wide operating window
- Optimized leveling characteristics
- Excellent brightness and throwing power
- Very ductile deposits
- Ease of handling

The right process for every application

Comparison of MKS' Atotech dye-based and dye-free product families

Process	Cupracid® processes	CuFlex® processes
Dye	Yes	No
Leveling power	Medium / high ⁽¹⁾	Low / medium ⁽¹⁾
Hydrodynamic effects	Medium / high ⁽¹⁾	Low / medium ⁽¹⁾
Over-leveling (orange peel)	Medium / high ⁽¹⁾	Low / medium ⁽¹⁾
Brightness throw	Good	Good / very good ⁽¹⁾
Build-up of copper at the edges	Medium / high ⁽¹⁾	Low / medium ⁽¹⁾
Resistance to burning	Good	Excellent



⁽¹⁾ Depends on process

Main copper processes

(Diverse additives are also available for these processes, such as wetting agents, anti-pitting additives, etc.)

Apart from the well-known and recognized processes such as Cupracid® Ultra, HT, 5000, 6000 and 210, Atotech is now offering a brand new generation of high performing acid copper processes.

Cupracid® dye-based processes

Cupracid® UP 800		New generation. Excellent levelling. Good throwing power. Mirror bright finish.
Cupracid® UP 600		New generation. High temperature compatible process (up to 35 °C). Mirror bright finish. Good leveling and brightness. Good throwing power. Improved copper distribution.

CuFlex® dye-free processes

CuFlex® 730	Minimized over-leveling and hydrodynamics effects (orange peel). Low leveling. Lower tendencies to burning and build-up of copper at the edges, less susceptible to pits and pores. Clean tank walls.
CuFlex® 740	Reduced over-leveling and hydrodynamics effects (orange peel). Low to medium leveling. Lower tendencies to burning and build-up of copper at the edges, less susceptible to pits and pores and tolerant to elevated temperatures. Clean tank walls.

