



RUTHUNA® 490 Black Ruthenium Electrolyte

Dark ruthenium coatings without strike gold plating

RUTHUNA® 490 Black is a neutral electrolyte for brightness retaining, dark grey to anthracite coatings. The black ruthenium electrolyte is easy to operate and has a good colour constancy.

RUTHUNA® 490 Black permits the direct plating of copper, nickel, brass or bronze. This means that strike gold plating or strike plating with palladium or palladium alloys is not necessary, which leads to enormous precious metal cost savings.

The black ruthenium electrolyte is suitable for decorative applications, above all in the clothing industry. It can be used for rack and barrel plating operations. Due to its high abrasion resistance, subsequent lacquering is not necessary, reducing the number of further process steps. Its positive features make themselves apparent even at a low ruthenium concentration of just 2 g/l.



Electrolyte characteristics

Electrolyte type	Neutral
Metal content	2 (1.8 - 2.2) g/l Ru
pH value	7.0 (6.5 - 9.0) at 65 °C
Operating temperature	65 (60 - 70) °C
Current density range	1.0 (0.5 - 3.0) A/dm ²
Plating speed	Approx. 0.02 µm/min at 1.0 A/dm ²
Anode material	Pt/Ti or MMO (type PLATINODE® 167 or 177)

Coating characteristics

Coating

Black ruthenium

Purity	99 wt. % Ru
Colour of deposit	Grey to anthracite (black)
Brightness	Bright

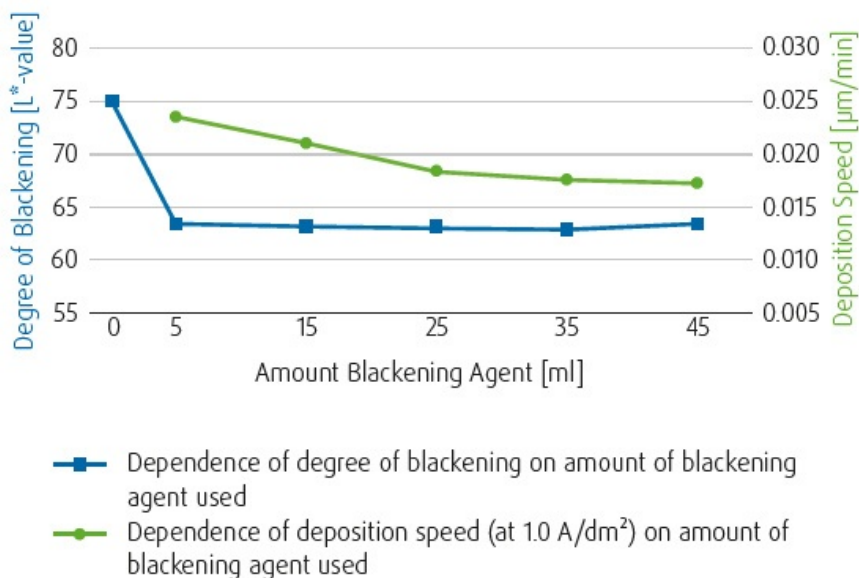
Advantages

- Neutral black ruthenium electrolyte
- Simple bath maintenance
- Dark grey to anthracite coatings
- For decorative applications
- High abrasion resistance
- No lacquer finish is needed
- Good colour constancy
- Direct deposition on bronze or nickel possible
- No intermediate layers of expensive palladium or gold necessary
- Enormous precious metal cost savings
- Suitable for rack and barrel

Applications

- Accessories in the clothing industry
- Baby clothing
- Car interiors

Influence of Blackening Agent (RUTHUNA® 490 Black)



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