



Version: 2 August 2019

RHODUNA[®] 471 BLACK

RHODIUM ELECTROLYTE



Abrasion-resistant and crack-free dark layers

RHODUNA[®] 471 Black gives jewelry a high-end anthracite to black finish. The level of darkness can be adjusted. The electrolyte is easy to use and the deposits are sure to impress with good color consistency and brightness retention. Thanks to its good corrosion resistance, the electrolyte is ideal for applications where black ruthenium cannot meet abrasion requirements.

The electrolyte produces crack-free surfaces even in thicker layers. On a substrate, it is advisable to pre-coat with either gold or rhodium.

To achieve very dark results and perfect abrasion resistance, it is necessary to post-treat the coated parts with RHODUNA[®] 471 Black.



Advantages

- Perfect electrolyte for dark to black decorative layers
- High abrasion resistance
- Layers up to 0.7 μm possible
- Suitable for rack plating

Applications

- Jewelry
- Watches
- Spectacle frames
- Writing implements
- Accessories

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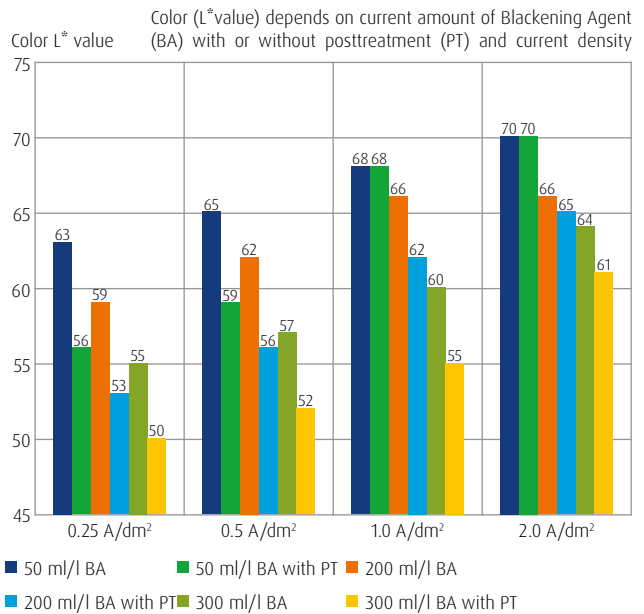


TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	acidic
Metal content	2 (1.8 - 2.2) g/l Rh
pH value	1.7 (1.0 - 2.0)
Operating temperature	60 (55 - 65) °C
Current density range	0.5 (0.25 - 2) A/dm ²
Deposition rate	0.04 µm/min at 1,0 A/dm ²
Anode material	Pt-Ti (type PLATINODE® Pt/Ti)

Coating characteristics	
Coating	Rhodium
Color of deposit	Grey to anthracit (black)
Hardness of deposit	Depending on degree of blackening excellent to sufficient
HV 0.015 (Vickers) approx. values	
Max. coating thickness	approx. 0.7 µm

Blackening Agent - Effect on the Degree of Blackening (L* value)



YOUR CONTACT

Do you have a specific question or would you like a no-obligation quote calculation? Our specialist will be happy to help you with any technical questions you might have.



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