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# RHODUNA<sup>®</sup> 275 Black

## RHODIUM ELECTROLYTE



### Pen rhodium plating for black bright coatings

With RHODUNA<sup>®</sup> 275 Black, selective rhodium plating is possible with a pen plating unit. Small surface elements of components are rhodium-plated using direct current and by wiping contact with the tip of the pen. The process is mainly used to apply decorative patterns to jewelry.

RHODUNA<sup>®</sup> 275 Black deposits bright and anthracite to black coatings. Depending on the voltage, values in the L\*a\*b\* color space of 61.0 / 1.1 / 4.0 (at 10 V) are possible, while providing typical coating thicknesses of around 0.1 µm. RHODUNA<sup>®</sup> 275 Black is formulated to deliver fast coverage speed and high deposition efficiency.

The electrolyte can also be used for rack operation.



### Advantages

- Bright anthracite to black rhodium coatings
- Uniform coating thickness
- Crack-free up to 0.1 µm
- Easy handling
- Fast coverage speed
- High deposition rate

### Applications

- Jewelry
- Watches
- Writing implements
- Spectacle frames
- Fittings

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## RHODIUM ELECTROLYTE

### TECHNICAL SPECIFICATIONS

#### Electrolyte characteristics pen plating

Electrolyte type	Strongly acidic
Metal content	2 g Rh / 100 ml
pH value	< 1
Operating temperature	Room temperature (20 - 40 °C)
Voltage	8 - 10 volts (max. 12 volts)
Deposition speed	Up to 0.1 µm/min

#### Electrolyte characteristics rack operation

Electrolyte type	Strongly acidic
Metal content	2 g Rh / 100 ml
pH value	< 1
Operating temperature	Room temperature (20 - 30 °C)
Current density	1.5 (0.5 - 3.0) A/dm <sup>2</sup>
Deposition speed	approx. 0.05 µm at 2.0 A/dm <sup>2</sup>
Anodes	Platinized titanium, e.g. PLATINODE <sup>®</sup> coated with 2.5 µm of Platinum

#### Coating characteristics

Coating	Rhodium
Purity	99.9 wt.% Rh
Colour of deposit	anthracite to black L* <sup>a</sup> b* color range: 61.0 / 1.1 / 4.0 (at 10 V)
Brightness	Bright, brilliant
Max. coating thickness	approx. 0.1 µm
Hardness of deposit HV 0.015 (Vickers) approx. values	approx. 600 HV
Density of the coating	approx. 12 g/cm <sup>3</sup>

### 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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