



Version: 16 April 2019

RHODUNA[®] DIAMOND BRIGHT

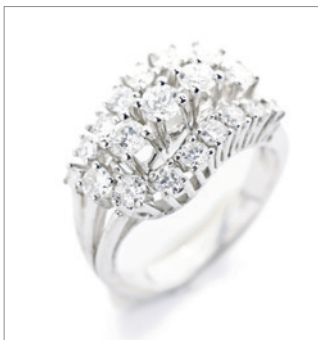
RHODIUM ELECTROLYTE



Brilliant-White and Ultra-Bright Rhodium Coatings

RHODUNA[®] Diamond Bright deposits brilliant-white, ultra-bright coatings of previously unattained lightness and brilliance. It is additionally characterized by high covering speed and excellent throwing power. Furthermore the RHODUNA[®] Diamond Bright layer thicknesses of up to 5 μm can be deposited crack-free.

Rhodium can be directly deposited on silver, gold, copper and copper alloys, nickel and nickel alloys. The layers are extremely low-porous and therefore very corrosion resistant.



Advantages

- Ultra-bright coatings with previously unattained lightness and brilliance
- Good covering speed
- Minor porosity
- Excellent throwing power
- Layer thicknesses of up to 5 μm can be deposited
- For rack and barrel plating
- High abrasion resistance

Applications

- Jewellery
- Watches
- Spectacle frames
- Writing implements
- Technical applications (reed contact)

RHODUNA® DIAMOND BRIGHT

RHODIUM ELECTROLYTE



TECHNICAL SPECIFICATIONS

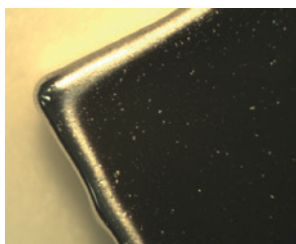
Electrolyte characteristics

Electrolyte type	Strongly acidic
Metal content	2 (1.6 - 3.0) g/l Rh
pH value	< 1
Operating temperature	40 (RT - 65) °C
Current density range	1 - 2 (0.5 - 10) A/dm ²
Plating speed	0.08 µm/min at 1 A/dm ² 0.10 µm/min at 2 A/dm ²
Anode material	Pt-Ti (type PLATINODE® Pt/Ti) or MMO (type PLATINODE® 187)

Thick Layers

Commercially available technical rhodium electrolytes

RHODUNA® Diamond Bright



Layer thickness: ca. 4 µm
Edge: ca. 6 µm
Many pores.

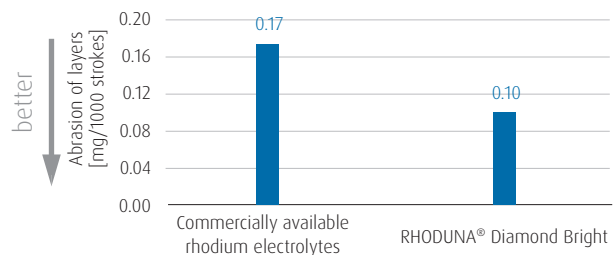


Layer thickness: ca. 4 µm
Edge: ca. 6 µm
Almost no pores.

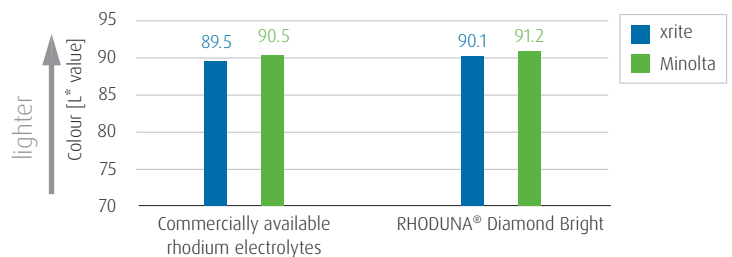
Coating characteristics

Coating	Rhodium
Purity	99.99 wt. % Rh
Colour of deposit	Brilliant-white
Brightness	Ultra-bright
Hardness of deposit HV 0.015 (Vickers) approx. values	Approx. 800 - 900 HV
Max. coating thickness	Approx. 3 - 5 µm
Density of the coating	Approx. 12.4 g/cm ³

Abrasion According to Bosch-Weinmann



Colour Measurement (CIE-L*a*b*) Rhodium Electrolytes



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.



Markus Legeler
Manager Sales International

Mail: markus.legeler@eu.umicore.com
Phone: +49 (0) 7171 607 - 204

