Rh

Version: 31 March 2025

umicore

RHODUNA® J1

RHODIUM ELECTROLYTE

Brilliant white rhodium electrolyte for decorative applications

RHODUNA® J1 deposits brilliant white, very light and bright surface finishes. This makes the electrolyte ideal for use in decorative applications, such as jewelry, watches or spectacle frames. Special features are its high deposition rate and excellent throwing power. Furthermore, RHODUNA® J1 deposits layers 0.1 - 0.3 µm thick without cracking.

Rhodium is deposited directly onto silver, gold, copper and copper alloys, nickel and nickel alloys. The electrolyte is suitable for rack and barrel plating.

Advantages

- Extremely light and bright coatings
- Good deposition rate
- Low porosity
- Excellent throwing power
- Layers 0.1 - 0.3 µm thick without cracking
- Suitable for rack and barrel plating

Applications

- Jewelry
- Watches
- Spectacle frames
- Writing utensils

RHODUNA® J1

RHODIUM ELECTROLYTE

TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Strongly acidic
Metal content	2 (1.6 - 2.4) g/l Rh
pH value	< 1
Operating temperature	35 (20 - 40) °C
Current density range	1 A/dm²
Deposition rate	0.025 µm/min at 1 A/dm²
Anode material	Pt-Ti (type PLATINODE® Pt/Ti) or MMO (Typ PLATINODE® 187)

Coating characteristics	
Coating	Rhodium
Purity	99.99 wt.% Rh
Color of deposit	brillant white
Brightness	bright
Hardness of deposit HV 0.015 (Vickers) approx. values	approx. 800 - 900 HV
Max. coating thickness	approx. 0.3 µm

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

umicore