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umicore Electroplating

ARGUNA® 621 EF

BRIGHT SILVER ELECTROLYTE FOR ELECTROFORMING

For Noble Silver Hollow Jewellery

ARGUNA® 621 EF is a silver electrolyte, especially to produce noble hollow jewellery. A layer with high thickness can be deposited on mandrels made conductive.

The electrolyte works with wax and metal cores. It can be used within a wide current density range and is suitable for relatively high temperature ranges (40 degrees Celsius). Its good throwing power results in a uniform layer thickness distribution. The surfaces are bright and brilliant white, without blue cast and have a fineness of 99.9 percent silver.

The layers can be easily reworked and soldered. Its hardness can be further increased with ARGUNA® 621 Brightener 3 up to approximately 185 HV.

Advantages

- Bright silver electrolyte for producing hollow jewellery on wax and metal cores
- Suitable for relatively high temperature ranges (40 degrees Celsius)
- Surfaces are brilliant white
- Wide current density range
- Very good throwing power, therefore, uniform thickness distribution

Applications

- Electroforming
- Hollow jewellery

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TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Alkaline-cyanide
Metal content	40 (35 - 45) g/l Ag
pH value	No control required
Operating temperature	40 to max. 45 °C
Current density range	1 - 2 A/dm^2
Plating speed	Approx. 0.6 µm/min at 1.0 A/dm^2; approx. 1.2 µm/min at 2.0 A/dm^2
Anode material	Fine silver

Coating characteristics	
Coating	Fine silver
Alloy composition	99.9 wt. % Ag
Colour of deposit	Brilliant white
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	85 - 185 HV
Max. coating thickness	Several 100 µm
Density of the coating	Approx. 10.5 g/cm^3

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