

# umicore

## ARGUNA® 4500 FINE SILVER ELECTROLYTE

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#### The New Bright Silver High-speed Electrolyte

ARGUNA<sup>®</sup> 4500 is a fine silver electrolyte for the fast deposition of ultra-bright coatings with excellent bonding, soldering and adhesive properties.

ARGUNA® 4500 is used for the selective deposition of bright silver layers in reel-to-reel plating using flow and spray technologies such as jet or spot plating modules. Applicable current density and plating speed mainly depend on the electrolyte agitation at the parts, i.e. on the flow velocity in the plant. Under optimum conditions, layers with extreme brightness and reflectance can be produced.

The electrolyte works with insoluble anodes and can be operated with very low concentrations of free cyanide.



#### Advantages

- High-speed electrolyte for the selective deposition of fine silver
- For reel-to-reel plating using flow or spray technologies
- Bright coatings with very good soldering and bonding properties
- $\cdot\,$  Insoluble anodes
- With little free cyanide

#### Applications

- Contact surface for semiconductors and electrical components
- Leadframe packaging for soldering, bonding and adhesive applications

# ARGUNA® 4500 FINE SILVER ELECTROLYTE

### **TECHNICAL SPECIFICATIONS**

Electrolyte characteristics		
Electrolyte type	Weakly alkaline, low amount of free cyanide	
Metal content	90 (60 - 120) g/l Ag	
pH value	9 (8.5 - 11)	
Operating temperature	60 (50 - 70) °C	
Current density range	50 - 250 A/dm²	
Plating speed	up to 2.6 µm/s	
Anode material	Pt-Ti (type PLATINODE® Pt/Ti)	
Electrical conductivity	>50 m*(Ω*mm²)-1	



#### Coating characteristics

Coating	Fine silver
Purity	99.9 wt.% Ag
Colour of deposit	White
Brightness	Bright
Hardness of deposit HV 0.015 (Vickers) approx. values	100 - 130 HV as plated

### **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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The information and statements contained herein are based on our experience in the fields of research and applied technology and are believed to be accurate at the time of publication, but - unless agreed in writing - we make no warranty with respect thereto, including but not limited to any results to be obtained. This product information sheet in the English language prevails any translation.

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