



Version: 17 October 2024



ARGUNA[®] C-100

SILVER-GRAPHITE DISPERSION ELECTROLYTE



New standard for plug contacts in high-voltage applications

Our silver-graphite dispersion electrolyte ARGUNA[®] C-100 is specially developed for connector contacts used in high-voltage applications (e.g. high-power charging / HPC). A stable layer system with maximum charging performance without restrictions over the entire lifetime of the charging connectors is the result - and thus the new standard for the industry.

Graphite particles perfectly embedded in the silver layer achieve extraordinary abrasion resistance and thus the high reliability and durability of the plug contact required by the industry. This is made possible by a optimized graphite component which, embedded in the silver matrix, serves as a solid lubricant. In this way, abrasion on the entire contact zone during the mating process can be reduced to a negligible level.

ARGUNA[®] C-100 thus offers a contact layer on your connectors that is clearly superior to conventional coatings: more than 50,000 mating cycles* without adverse wear and therefore the best possible charging performance at all times without restriction - the new standard in this field.



Advantages

- Excellent electrical conductivity and even lower resistance than pure-silver
- Outstanding tribological properties
- Significantly reduced friction coefficients compared to pure and hard silver coatings
- Consistent coating performance at elevated temperatures (>150°C)
- Stable layering properties under humidity and dust and other exposed environmental conditions
- Maintenance-free layer system over the entire service life the otherwise necessary lubrication is not required
- Cross-compatibility with existing infrastructure matching the existing connector types in the field
- Deposition of very thick layers possible

Applications

- EV-Charging Connector
- High voltage applications



* 50,000 mating cycles are the result of end-of-life tribometer tests under laboratory conditions

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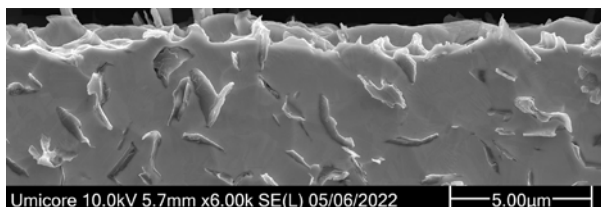
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TECHNICAL SPECIFICATIONS

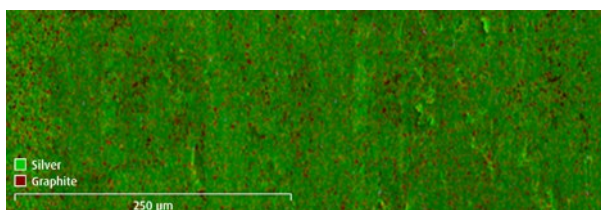
Electrolyte characteristics	
Electrolyte type	Alkaline-cyanide
Metal content	30 (25 - 35) g/l Ag
pH value	> 11
Operating temperature	18 - 25 °C
Current density range	1.5 (1.0 - 2.5) ASD
Plating speed	approx. 1 µm / 1.5 min at 1 ASD
Anode material	Silver

Coating characteristics	
Coating	Silver-graphite dispersion surface
Purity	approx. 98 wt.% Ag
Colour of deposit	light grey to anthracite
Brightness	matt
Hardness of deposit, HV 0.015 (Vickers) approx. values	approx. 70-80 HV
Typical coating thickness	8 - 30 µm
Density	approx. 9.8 g/cm³

Graphite embedded in perfection

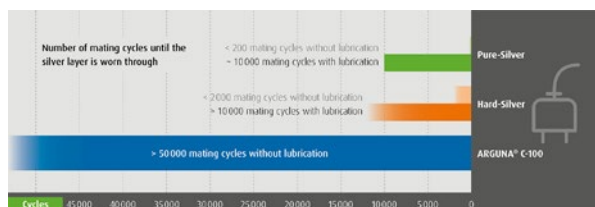


selectively etched back silver matrix / incorporated graphite lamellae remain in their position

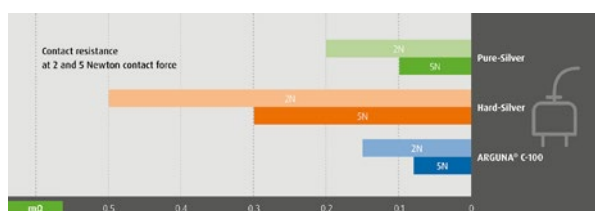


Uniform and excellent distribution of the graphite over the surface

Exceptional abrasion resistance at max. loading performance



Even after more than 50,000 mating cycles*, an intact silver graphite layer can be detected



ARGUNA® C-100 lasts many times longer and also has an even lower resistance

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

