



Version: 14 August 2019

UMICORE SEALING 692



Insertion and withdrawal forces are significantly reduced

Umicore Sealing 692 is a post-treatment process to reliably protect technical precious metal surfaces. By a simple dipping process a thin, transparent layer is applied, which prevents the tarnishing of e.g. a silver surface and protects against corrosive environmental influences. The solderability is not affected and the contact resistance against an untreated surface is hardly affected.

The tarnish protection process is particularly suitable for sliding and plug contacts, as the mating and pulling forces during the mating process are significantly reduced. Umicore Sealing 692 also impresses with a significant reduction in the coefficient of friction. It contains no environmentally harmful components such as solvents, CFCs, CHCs, hydrocarbons or chromium compounds.



Advantages

- Reduces insertion and withdrawal forces
- Very short treatment times, therefore suitable for reel-to-reel plating
- Protects against tarnishing, discoloration and corrosion
- Easy to use
- Free of components such as solvents, CFCs, CHCs, HCFCs and chromium
- No influence on colour or gloss of the final layer

Applications

- Connectors
(also in the automotive sector)
- Lead frames
- Smartcards

UMICORE SEALING 692

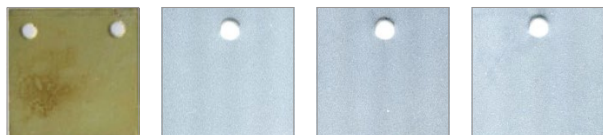
TECHNICAL SPECIFICATIONS

Electrolyte characteristics	
Electrolyte type	Aqueous, metalfree passivation
pH value	Weakly acidic to neutral
Operating temperature	55 (53 - 57) °C
Immersion time	
Rack/barrel	30 (10 - 120) s
Reel-to-reel	5 (2 - 10) s

Coating characteristics	
Colour	transparent
Brightness	No influence
Coefficient of friction	significantly reduced
Sliding properties	Improved
Solderability	No influence
Contact resistance	< 10 mΩ
Bondability	Protected parts remain bondable

Excellent Silver Passivation (K₂S-Test 2%)

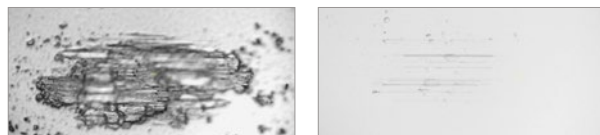
Sealing 692 Concentrate 10 ml/l, 55°C applied to silver



Reference without Sealing 3 Minutes with Sealing 5 Minutes with Sealing 7 Minutes with Sealing

Umicore Sealing 692 reduces friction forces

Friction marks after 500 friction cycles

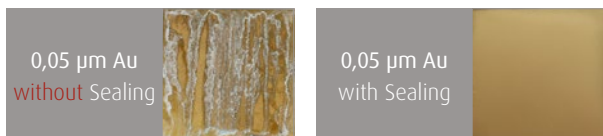


COF*: 0,76 Pure silver without Sealing COF*: 0,04 Pure silver with Sealing

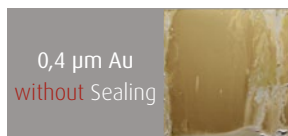
* COF = Coefficient of Friction

Excellent Resistance in Salt Spray Test

72h NSS Test (Ni/Au plated)



0,05 µm Au without Sealing 0,05 µm Au with Sealing



0,4 µm Au without Sealing 0,4 µm Au with Sealing

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



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.

www.ep.umicore.com