Protection right from the start for high-quality final surfaces

By definition, precious metals are largely resistant to corrosion in a natural environment. In daily use, however, they are exposed to environmental influences which they cannot withstand. Optical flaws or technical malfunctions are the unwanted consequences.

INCREASED QUALITY THROUGH SUITABLE PROTECTIVE LAYER
Give your decorative and technical products specific protection and qualitative advantages without affecting the properties of your precious metal surface.

www.ep.umicore.com
Individual solutions for your specific requirements

A few nanometers thick, transparent layer of special nanopolymers protects your precious metal surface from corrosion, tarnishing, discoloration, dirt and abrasion or scratches.

In addition, product quality is increased by functional properties. Decorative products in particular benefit from the water-repellent effect and the pleasant feel of the protective layers. Technical products such as connectors achieve a significant reduction in insertion and withdrawal forces.

UNOBJECTIONABLE APPLICABILITY
None of our protective layers contains any environmentally harmful components such as solvents, CFCs, CHCs, hydrocarbons or chromium compounds, making them biologically harmless.

UNCHANGED MATERIAL CHARACTERISTICS
The layer characteristics remain almost unaffected compared to an untreated surface. Subsequent processing (grinding, polishing or soldering) is also possible without any concerns.
## Protective Layers

### Decorative Applications

<table>
<thead>
<tr>
<th>Antitarnish</th>
<th>Precious metal base</th>
<th>Protective effect</th>
<th>Usage</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ag</td>
<td>TAA1</td>
<td>Rack</td>
<td>Subsequent bonding possible (e.g. stones) / passes TAA test</td>
</tr>
<tr>
<td>613</td>
<td></td>
<td>AG</td>
<td></td>
<td>Especially for sterling silver or antique coloured silver</td>
</tr>
<tr>
<td>617</td>
<td></td>
<td>K25</td>
<td></td>
<td>Especially for plated Sterling Silver / Electrochemical</td>
</tr>
<tr>
<td>617 PLUS</td>
<td></td>
<td>Na25</td>
<td></td>
<td>Especially for silver-plated or gold-plated surfaces</td>
</tr>
<tr>
<td>618</td>
<td></td>
<td>Reality</td>
<td></td>
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### Technical Applications

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<th>Sealing</th>
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<td>Sealing</td>
<td>Au</td>
<td>NSS</td>
<td>Contact resistance2</td>
<td>Rack</td>
<td>Excellent suitable for reel-to-reel lines / Electrochemical</td>
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<tr>
<td></td>
<td></td>
<td>K25</td>
<td>Coefficient of friction7</td>
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<td>Simplified handling</td>
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<td>Soldering/bonding7</td>
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</tr>
<tr>
<td>Topseal 693</td>
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<td></td>
<td></td>
<td>Organic-free / Extremely temperature-resistant protection</td>
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### Legend

- **Optimized**
- **Useable**
- **Not useable**

### Protective effect and Layer characteristics

- TAA1: Thioacetamid test
- K25: Potassium sulphide test
- Na25: Ammonium sulphide test
- Reality: Sodium sulphide test

### Usage

- Rack
- Chain galvanization
- Barrel

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- Barrel
Right Composition.
Perfect Surface.

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