Academy Gold™

High-gold alloy for esthetic gold restorations

Advantages
- Palladium-free
- Esthetic, yellow-golden color
- Extended range of indications
- Optimum adaptation properties even after oven hardening
- Excellent casting and processing properties
- Certified biocompatibility

Indication
Inlays, onlays, ¾ crowns, crowns, short-span bridges

Technical Data

<table>
<thead>
<tr>
<th>Color</th>
<th>rich yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>2</td>
</tr>
<tr>
<td>Density (g/cm³)</td>
<td>15.9</td>
</tr>
<tr>
<td>Melting range (°C)</td>
<td>900 – 940</td>
</tr>
<tr>
<td>Casting temperature (°C)</td>
<td>1035 – 1095</td>
</tr>
<tr>
<td>Elongation (%)</td>
<td>55</td>
</tr>
<tr>
<td>Modulus of elasticity (MPa)</td>
<td>75,200</td>
</tr>
<tr>
<td>Vickers hardness</td>
<td>125</td>
</tr>
<tr>
<td>0.2 % Proof stress (MPa)</td>
<td>240</td>
</tr>
</tbody>
</table>
Biocompatibility testing

Certificate

Test material: High Gold C&B alloys

<table>
<thead>
<tr>
<th>Composition in % weight</th>
<th>Au</th>
<th>Pt</th>
<th>Ag</th>
<th>Cu</th>
<th>In</th>
<th>Ir</th>
<th>Sn</th>
<th>Zn</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Gold™</td>
<td>77.2</td>
<td>1.0</td>
<td>12.7</td>
<td>8.5</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>Ta &lt;1.0</td>
</tr>
<tr>
<td>Academy Gold™ XH</td>
<td>70.7</td>
<td>3.6</td>
<td>13.7</td>
<td>10.0</td>
<td>–</td>
<td>&lt;1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>–</td>
</tr>
</tbody>
</table>

Manufacturer

Ivoclar Vivadent Inc., 175 Pineview Drive, Amherst, NY 14228, USA

Corrosion resistance

The test was conducted according to the international regulations of ISO 1562 and ISO 6871–1: static immersion test through analytical determination of the metal ion release after a 7-day immersion.

Test results: The metal ion release after 7 days of immersion was not significant.

Testing facility: Louisiana State University, Dr. Sakar

Cytotoxicity

The Agar Diffusion test determines the biological reactivity of cell culture on test material.

Test results: The test material is considered non-cytotoxic and meets the requirements of the Agar Diffusion test according to ISO 10993–5.

Testing facility: Louisiana State University, Dr. Sakar

Mutagenicity

An Ames assay was conducted to determine any possible cancer potential.

Test results: No mutagenicity potential was found to exist in these alloys.

Kligman Maximization

This test evaluated the allergenic potential and/or sensitizing capacity of these alloys.

Test results: Based on the standards set by the study protocol, these alloys exhibited no reaction to the challenge (0 % sensitization).

Sensitivity of oral mucosa

Test to determine the contact sensitivity of these alloys at the buccal oral mucosa.

Test results: No reactions were noted in conjunction with these alloys.

Testing facility: Toxikon Corporation, 15 Wiggins Avenue, Bedford, Massachusetts

Amherst, May 2010

Dr. George Tysowsky, D. D. S., M. P. H.
Vice President-Technology