Wires: instructions for use

Intended use
Removable dentures.

Product description
The wires in precious metal alloys are used as holding elements (clasps) in removable dentures.

Expected clinical benefit
Restoration of chewing function and improved aesthetics.

Qualification
Professional dentist and dental technician know-how is required. The instructions for use must be available and understood before the first application. The manufacturing work must be carried out by qualified specialists. For information and additional details, please contact your Cendres+Métaux representative.

Side effects
With patients having an existing allergy to one or several elements contained in an alloy, this particular alloy must not be used. With patients suspected of having an allergy to one or several elements contained in an alloy, this alloy can only be used after preliminary allergological testing and proof of a non-existing allergy.

Traceability of lots numbers
If different lots of a wire are being used for the realisation of a restoration, all relevant lot numbers have to be recorded to ensure that they can be traced.

Cold-forming
Bending wires supplied in a soft state (cold-forming) deforms their structure and is accompanied by hardening. If the wire reaches the stage where it is difficult to bend, it must be intermediate-annealed (soft-annealed).

Bending technique
When bending the wire with tools such as pliers, make sure that the wire is not damaged, e.g. notches, which could cause the wire to fracture at these points.

Soft-annealing
Soft-annealing is carried out in a porcelain furnace – Elasticor at 700 °C for 10 mins. followed by quenching in water.

Hardening
This is achieved by glowing the wire in a porcelain furnace at 400 °C for 15 mins. followed by bench cooling to room temperature.

Processing
Once the clasps have been completed and soft annealed, they have to be hardened to give them their optimum mechanical properties.

Processing instructions
When trimming alloys, wear safety glasses and a face mask and use a dust extractor.

With the publication of these instructions for use all previous editions are no longer valid.

The manufacturer refuses any liability for damages due to disregard of the instructions for use below.
Pickling
After heat treatment (soldering, soft annealing or hardening), the wire should be pickled in warm, clean 10 % (by volume) sulphuric acid (H₂SO₄).
Please note: When using other pickling agents, follow their manufacturers’ instructions.

Polishing
After finishing and hardening the wire, any areas of exposed metal must be polished to a high lustre to remove the oxide layer completely.
## Physical and mechanical properties

<table>
<thead>
<tr>
<th>Alloys</th>
<th>Colour</th>
<th>Composition in weight %</th>
<th>Melting range</th>
<th>Hardness HV 5</th>
<th>Young's Modulus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Au + Pt-Met.</td>
<td>Au</td>
<td>Pt</td>
<td>Pd</td>
</tr>
<tr>
<td>Elasticor</td>
<td>Yellow</td>
<td>74.5</td>
<td>61.0</td>
<td>13.5</td>
<td>16.5</td>
</tr>
</tbody>
</table>

## Round wires, delivery forms

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elasticor</td>
<td>01000365</td>
<td>1.15</td>
</tr>
</tbody>
</table>

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