Mixing of different alloys or alloys of similar types is not allowed! Wear darkened eye protection and protective gloves when melting.
Protect eyes, hands and breathing when pickling.
Protect eyes and breathing during processing with rotating instruments with an aspirator device.

With the publication of these instructions for use all previous editions are no longer valid.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

**Instructions for use**

**Precious Metal Alloys for Inlays, Crown and Bridgework**

**General instructions for use**

**Modelling**
Usual modelling technique for ceramic-fused-to-metal works. Minimal wall thickness 0.4 mm. With bridgework the connections must have a minimum section of 6–9 mm². Modelling of garlands or inlay shaped reinforcements in the palatinal region will give added stability. The application of air and cooling vents improves casting results.

**Investing**
The following investments are recommended for this type of alloys:
- **CM-10** (plaster based)
- **CM-20** (based on quartz and cristobalite without graphite for the rapid preheating technique)

**Re-use of alloy**
Only use perfectly cleaned (by sand-blasting with aluminium oxide) buttons and sprues and add at least 1/3 of new alloy.

**Traceability of lot numbers**
If different lots of an alloy are being used for the realisation of a restoration, all lot numbers concerned must be noted in order to assure traceability.

**Surface quality of cast objects**
In order to prevent corrosion the cast object must have a surface free of shrink holes and porosities after trimming and polishing.

**Cooling of castings**
Do not quench the casting cylinder after casting, but bench cool to room temperature.

**Pickling**
After casting or soldering pickle in a warm, freshly prepared (clean) solution of 10 vol. % sulphuric acid (H₂SO₄).

**Note:** When using other pickling agents follow the instructions for use of the respective manufacturer.

**Polishing**
Free metal surfaces must be polished to a high shine in order to completely remove the oxide layer.

**Disinfection**
Each prosthetic restoration must be cleaned and disinfected before try-in or definite insertion in the mouth of the patient.

**Further information**
on processing precious metal alloys, soldering and casting-on are included in the Dental documentation of Cendres+Métaux and in the website www.cmsa.ch/dental.

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

The products carry the CE sign.
See packaging for details.
# Physical and mechanical properties

<table>
<thead>
<tr>
<th>Alloys</th>
<th>Indications</th>
<th>Colour</th>
<th>Composition in weight %</th>
<th>First solder</th>
<th>Second solder</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
<tr>
<td>Modulor® 3</td>
<td>✓  ✓  ✓  ✓  ✓  ✓</td>
<td>Yellow</td>
<td>68.00 65.00 0.45 2.50 17.80 13.00</td>
<td>1.20</td>
<td>0.05</td>
</tr>
<tr>
<td>Dentalor® 60</td>
<td>✓  ✓  ✓  ✓  ✓  ✓</td>
<td>Yellow</td>
<td>63.50 60.00 0.45 3.00 22.50 12.50</td>
<td>1.50</td>
<td>0.05</td>
</tr>
<tr>
<td>Medior® 3</td>
<td>✓  ✓  ✓  ✓  ✓  ✓</td>
<td>Pale yellow</td>
<td>61.00 55.00 0.95 26.00 10.90 2.10</td>
<td>2.10</td>
<td>0.05</td>
</tr>
</tbody>
</table>

ISO 22674 / ISO 9693

<table>
<thead>
<tr>
<th>Alloys</th>
<th>Density</th>
<th>Melting range</th>
<th>Casting temp.</th>
<th>Crucible</th>
<th>Hardness as cast</th>
<th>Hardness annealed</th>
<th>Hardness hardened</th>
<th>Young’s Modulus</th>
<th>0.2 % proof stress, Rp 0.2 % as cast</th>
<th>0.2 % proof stress, Rp 0.2 % annealed</th>
<th>0.2 % proof stress, Rp 0.2 % hardened</th>
<th>Elongation A5 as cast</th>
<th>Elongation A5 annealed</th>
<th>Elongation A5 hardened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulor® 3</td>
<td>14.4</td>
<td>870–900</td>
<td>1000–1050</td>
<td>HVS*</td>
<td>255</td>
<td>150</td>
<td>255</td>
<td>100</td>
<td>695</td>
<td>350</td>
<td>690</td>
<td>9</td>
<td>43</td>
<td>13</td>
</tr>
<tr>
<td>Dentalor® 60</td>
<td>14.0</td>
<td>850–900</td>
<td>1000–1050</td>
<td>HVS*</td>
<td>260</td>
<td>160</td>
<td>265</td>
<td>90</td>
<td>770</td>
<td>360</td>
<td>730</td>
<td>10</td>
<td>46</td>
<td>9</td>
</tr>
<tr>
<td>Medior® 3</td>
<td>13.6</td>
<td>875–920</td>
<td>1020–1070</td>
<td>HVS*</td>
<td>295</td>
<td>170</td>
<td>280</td>
<td>105</td>
<td>865</td>
<td>435</td>
<td>815</td>
<td>4</td>
<td>35</td>
<td>5</td>
</tr>
</tbody>
</table>

* The values indicated result from measurements obtained under exactly defined conditions. Individual deviations of ± 10% are possible and to be considered as normal.

## Particular instructions for use

| Alloys       | Preheating temperature | Recommended casting systems (not compulsory) | Propylene-oxygen flame | Vacuum-pressure casting with electric resistance furnace | Centrifugal casting with electric resistance furnace | High frequency induction in atmosphere | High frequency induction in protective gas atmosphere | Annealing | Hardening in the ceramic furnace | Sandblasting with glass beads 50µm |
|--------------|------------------------|-----------------------------------------------|------------------------|----------------------------------------------------------|---------------------------------------------------|-----------------------------|-----------------------------------|-------------------------------|----------------------------------|
| Modulor® 3   | 650°C                  | ✓                               | ✓                     | ✓                                                | ✓                                                | 700°C/10 min / H₂O         | 400°C/15 min / air                 | ✓                               |                                  |
| Dentalor® 60 | 650°C                  | ✓                               | ✓                     | ✓                                                | ✓                                                | 700°C/10 min / H₂O         | 400°C/15 min / air                 | ✓                               |                                  |
| Medior® 3    | 650°C                  | ✓                               | ✓                     | ✓                                                | ✓                                                | 700°C/10 min / H₂O         | 400°C/15 min / air                 | ✓                               |                                  |

Indications

- a Inlays, onlays
- b Single crowns
- c Short-span bridgework
- d Long-span bridgework
- e Milled work
- f Clasps, lingual bars, palatinal plates

* The use of solders not mentioned in the table is subject to the user’s risk. In case of uncertainties, consult the instructions of the manufacturer involved.

- Graphite crucible
- Universal ceramic crucible
- Vitrified carbon crucible

* 100 % selfhardening after cooling in the cylinder or soldering block, otherwise particular instructions for use ⊗ and ⊙