Dental stones classification

The international regulation EN ISO 6873/97 classifies dental stones in different types, based on their linear setting expansion and compressive strength. Higher type does not always mean higher quality for a stone. Type 5 stones, for example, are characterized by a high compressive strength but have also a high expansion, thus they are suitable for specific applications only.

Type 3 and 4 stones are instead the best for the dental use, because characterized by high compressive strength and low expansion that allow a higher dimensional stability over time and therefore precision in the reproduction of detail.

<table>
<thead>
<tr>
<th>Type</th>
<th>Linear setting expansion</th>
<th>Compressive strength</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 h</td>
<td>24 h</td>
</tr>
<tr>
<td>1</td>
<td>0.00</td>
<td>0.15</td>
</tr>
<tr>
<td>2 (Class 1)*</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td>2 (Class 2)**</td>
<td>0.06</td>
<td>0.30</td>
</tr>
<tr>
<td>3</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>4</td>
<td>0.00</td>
<td>0.15</td>
</tr>
<tr>
<td>5</td>
<td>0.16</td>
<td>0.30</td>
</tr>
</tbody>
</table>

* dental plaster for mounting
** dental plaster for models

Zhermack dental stones

Stone for bases | Elite Base
- Optimised to be used in combination with master model ➔ same expansion (type 4)
- Easy to cast ➔ fluid

Stone for master model | Elite Rock or Elite Master
- Accurate reproduction of details ➔ low expansion
- Chamfering without splintering ➔ resin particles
- Hard stone ➔ compressive strength

Stone for antagonist | Elite Model
- Cheaper than master model ➔ type 3
- Hard stone ➔ compressive strength

Stone for articulator | Elite Arti
- Maintain correct occlusion ➔ low expansion
- Simplifying positioning in the articulator ➔ thixotropic
- Perfect fixing with antagonist ➔ adhesion

For fixed prostheses

For removable prostheses

Stone for articulator | Elite Arti
- Maintain correct occlusion ➔ low expansion
- Simplifying positioning in the articulator ➔ thixotropic
- Perfect fixing with antagonist ➔ adhesion

Stone for master model | Elite Stone
- To be used at high temperature ➔ resistant to thermal shocks
- To be used with frameworks ➔ wear resistance