# COMPOSITION 2004

## DESCRIPTION AND TYPICAL PROPERTIES

**Description**  
Coarse grain pressed body 72% zirconia, 27% silica

**Application**  
Containment vessels for induction melting of precious metals and some superalloys.

<table>
<thead>
<tr>
<th>Chemistry</th>
<th>Oxide</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>27.0</td>
<td></td>
</tr>
<tr>
<td>CaO</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>MgO</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>TiO₂</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>ZrO₂</td>
<td>Balance</td>
<td></td>
</tr>
</tbody>
</table>

**Density**  
3.6 g/cc (224.8 Lbs./Ft³)

**Porosity**  
16%

**Monoclinic**  
Not Applicable

**MOR at R.T.**  
4300 psi

**Thermal Expansion**

- CTE R.T. to 600°C  
  4 x 10⁻⁶ in/in/°C
- CTE R.T. to 1000°C  
  4 x 10⁻⁶ in/in/°C
- CTE R.T. to 1300°C  
  4 x 10⁻⁶ in/in/°C

**Thermal Conductivity at 800°C-Calc.**  
2.00 W/m °K

Rev. 05/05

---

NOTICE: Recommendations, property values, and application information we publish are based on various sources including measurements by us and others, and estimates of experience. We intend this to be a reliable guide, but we do not guarantee the applicability, completeness, or accuracy of the information. Users should make their own test to determine the suitability of any product for their applications.