VULCASIL Z

Vulcasil Z are a range of Zirconia and Zircon based materials, for applications from metal powder manufacture to kiln linings for glost tunnel kilns. The Vulcasil Z range has many specialist applications.

Zirconia is a white crystalline oxide of zirconium. As a refractory, it has unrivalled properties such as resistance to molten metals and slags and the ability to operate at very high temperatures.

<table>
<thead>
<tr>
<th>Property</th>
<th>Typical</th>
<th>Units</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vulcasil Z947</td>
<td>Vulcasil Z96N</td>
<td>Vulcasil Z96S</td>
</tr>
<tr>
<td>Bulk density</td>
<td>3.35</td>
<td>4.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Apparent porosity</td>
<td>18</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Thermal conductivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at 1200°C</td>
<td>1.3</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Maximum Service Temperature</td>
<td>1450</td>
<td>2200</td>
<td>2200</td>
</tr>
</tbody>
</table>

Composition

<table>
<thead>
<tr>
<th></th>
<th>Vulcasil Z947</th>
<th>Vulcasil Z96N</th>
<th>Vulcasil Z96S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconia</td>
<td>49</td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>Silica</td>
<td>33</td>
<td>0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>3.5</td>
<td>3.5</td>
</tr>
</tbody>
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Vulcasil ZS47
Silicate bonded Zircon with excellent resistance to vapour attack by alkalis and glaze volatiles. Vulcasil ZS47 is the ideal material for glost kiln preheat and early cool zones.

Vulcasil Z96N
A calcium stabilised zirconia, which combines good thermal shock resistance with resistance to erosion by molten alloys. Vulcasil Z is designed for use at extremely high temperatures for applications such as the manufacture of nozzles for the metal powder atomisation and casting industry.

Vulcasil Z96S is ideal for the manufacture of bricks and special shapes for extreme metal melting applications, specifically the nuclear industry where high quality and attention to detail is paramount.

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