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Zr
Zirconium
91.224
Introduction

Zircon Minerals Malaysia is based near to Port Klang, focused on the development and production of Zircon opacifiers for the ceramic sectors throughout Asia and the Middle East.

A partnership between Sukaso India, Vitis Vietnam and a management team having extensive experience within the sector. Utilising the latest production technology to efficiently produce high quality market leading opacifiers for use in both traditional ceramics and specialty sectors.

With an installed capacity in excess of 24,000MT per annum we are large enough to satisfy the needs of the tile industry having the flexibility and experience to manufacture dedicated products for Sanitaryware, Tableware, Investment casting, foundry, friction and other specialty applications.
Factory

Zircon Minerals Malaysia is strategically placed close to the deep-water port of Klang, minimizing both incoming and outgoing logistic costs for our export focused business. Taking mineral sands from the established mines in Australia and delivering finished product throughout SE Asia, North Asia and the Middle East our facility is ideally placed to effect on time delivery to our wider customer base.

Our bespoke facility has been designed and constructed using the most advanced equipment, allowing the production of both standard grade and superfine opacifier and mineral combinations at the lowest unit cost within the sector.
Team Zircon MM

A partnership between Sukaso India, Vitis Vietnam and a management team having a combined experience of more than 100 years within the Zircon milling sector, Zircon MM is a force to behold.
**Tile Production**

Zircon Minerals Malaysia supply a variety of pure Zircon and mineral combination opacifiers developed specifically by application. This insures the most efficient use of the Zircon mineral and thus reduces the overall cost of producing ceramic and porcelain tiles.

**Sanitaryware**

Superfine and mineral combination opacifiers are increasingly being used in Sanitaryware glaze systems due to the various advantages that they bring to the finish product characteristic. These include enhanced whiteness and a smoother glaze surface on the microscopic level, which in turn gives an "easy clean" surface less prone to staining during the product life cycle.

**Tableware**

Similar to Sanitaryware our range of superfine and mineral combination opacifiers are being increasingly used in Tableware glazes. The most significant advantage along with the potential for smoother glaze surface is the reduction in metal marking during use.
## Products

Our range of pure and mineral combination opacifiers have been developed specifically by application, ensuring the most efficient use of the mineral sands.

<table>
<thead>
<tr>
<th>Typical Values</th>
<th>Zirc 1</th>
<th>Zirc 5</th>
<th>Zirc 1K</th>
<th>Zirc 3K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconia + Hafnia (ZrO₂ + HfO₂)</td>
<td>64.0%</td>
<td>64.2%</td>
<td>62.57%</td>
<td>62.57%</td>
</tr>
<tr>
<td>Silica (SiO₂)</td>
<td>34.0%</td>
<td>33.8%</td>
<td>32.25%</td>
<td>32.16%</td>
</tr>
<tr>
<td>Alumina (Al₂O₃)</td>
<td>1.0%</td>
<td>0.90%</td>
<td>4.47%</td>
<td>4.47%</td>
</tr>
<tr>
<td>Titania (TiO₂)</td>
<td>0.12%</td>
<td>0.14%</td>
<td>0.15%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Iron (Fe₂O₃)</td>
<td>0.08%</td>
<td>0.06%</td>
<td>0.08%</td>
<td>0.08%</td>
</tr>
<tr>
<td>D50 (μm)</td>
<td>1.0</td>
<td>1.5</td>
<td>1.0</td>
<td>1.35</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>4.6</td>
<td>4.5</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Packaging</td>
<td>25 kg Paper Bags and 1 mt Bulk Bags</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Other Applications

Brake Lining & Friction applications

Zircon Minerals Malaysia offer a range of tailor made milled Zircon powders for use in the brake lining sector. Control of the sand source and the particle size distribution are critical and vary for each specific brake lining formulation. The complexity of these and the difficulty understanding the various material interactions mean that our product consistency is crucial to avoid failure in use.

Investment Casting

ZMM supply a range of milled Zircon flours for use as primary dip slurry's and graded Zircon sands for Primary stucco coatings. An ability to secure stable sand supply from a variety of sources makes us an ideal partner for this demanding sector where purity and consistency are paramount.

Foundry, Refractory and other applications

As with other applications we place a high regard on our raw material source and finished product consistency when developing new products for the foundry, refractory and glass industries. Our vision is to act as a strategic partner in the various fields when developing new products. Our extensive laboratories allow us to understand and control the various characteristics of our finished products and their performance in use.