WEAR RESISTANT TECHNOLOGIES

DURASTRIKE™ ZTA
ABRASION RESISTANT CERAMIC
FOR SEVERE IMPACT
APPLICATIONS

DESIGNED TO PERFORM & OUTLAST

Durastrike™ ZTA, Dense Zirconia Toughened Alumina was designed & developed after extensive field trials and R&D collaboration to overcome abrasion challenges in severe impact applications where traditional materials under perform.

BENEFITS

- Improve productivity, profitability & safety
- Reduce downtime & maintenance
- Cost effective upgrade to traditional wear materials

SAINT-GOBAIN
Durastrike™ ZTA is in a special class of ceramics where zirconia impregnation controls the micro crack propagation within the tile under impact, delivering significant resistance to abrasion and fracture. It significantly outperforms traditional dense aluminium oxide ceramics when considering both impact and erosion.

**Common failures - Examples of traditional wear materials**

| Standard ceramic fracture & joint erosion | Temporary metal patches |

**Durastrike™ ZTA - High performance ceramic material**

No fractures or joint erosion

Durastrike™ ZTA delivers increased impact wear against traditional ceramics by 3 – 6 times in applications where the impingement angle is >30° with the conveyed material density between 110 - 165 lb/cu ft (1.76 - 2.64 g/cm³).

<table>
<thead>
<tr>
<th>Property</th>
<th>Durastrike™ ZTA</th>
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</thead>
<tbody>
<tr>
<td>Density, g/cm³</td>
<td>&gt; 4.17</td>
</tr>
<tr>
<td>Hardness, HV</td>
<td>1900</td>
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<tr>
<td>Fracture Toughness, $K_{IC}$</td>
<td>6.8</td>
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<tr>
<td>Flexural strength of MOR, MPa</td>
<td>450</td>
</tr>
</tbody>
</table>

**Typical Markets & Applications**

- Mining (all types)
- Port facilities
- DRI charging
- Sinter plant
- Material transfer points
- Piping components
- Slurry pump components

**Leverage Our Expertise.**

Saint-Gobain Performance Ceramics & Refractories engineers and researchers collaborate with you, our customers, to solve operational challenges with abrasion resistant ceramic lining systems.

For more information: Ceramics.refractories@saint-gobain.com

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