



## **PTI Brick – 3000° Super Duty Firebrick and Tiles**

PTI 3000° Super Duty Firebrick and Tiles are made of an excellent structural insulation material made to withstand high temperatures, abrasion and chemical attack.

- Structural Integrity
- Excellent thermal shock resistance
- Excellent strength at room and high temperatures
- Excellent resistance to alkali and chemical attack
- Excellent service in applications involving special atmospheres

### **Specifications**

|   |   |  |
|---|---|--|
| <b>Composition</b>  | Alumina (Al <sub>2</sub> O <sub>3</sub> )<br>Silica (SiO <sub>2</sub> )<br>Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )<br>Trace Elements | ≥40%<br>≤55%<br>≤1.5%<br>≤1.0%                   |
| <b>Density</b>  |   | 135 lb/ft <sup>3</sup><br>2160 kg/m <sup>3</sup> |
| <b>Apparent Porosity</b>  |   | 24%  |
| <b>Maximum Operating Temperature</b>                              |   | 3000 °F<br>1700 °C                               |
| <b>Cold Crush Strength</b>  |   | >2900 psi<br>>20 MPa                             |
| <b>Modulus of Rupture</b>   |   | 1300 psi<br>9.0 MPa                              |
| <b>Thermal Conductivity Btu-in/ft<sup>2</sup>, hr, °F (W/m-k)</b> |   | 4.16 (0.60) at 660°F                             |
| <b>Permanent Linear Change</b>                                    |   | +0.2% -0.5% (at 2370°F for 2hrs)                 |

### **Application Examples**

Structural furnace components (walls, floors, roofs, etc.), furnace flues, furnace stacks, rotary kilns, graphitizing furnaces, charcoal furnaces, zinc galvanizing furnaces, carbon baking pit furnace flue walls and headwalls, air heaters, combustion chambers, blast furnace bottoms, glass tank lower checkers, boilers, and cyclones.