

PORRATH

High Temperature Insulating Firebrick

PORRATH high temperature insulating firebricks are available in ASTM Group 26 through 34 classifications and are manufactured with the highest quality raw materials and high firing temperatures. **PORRATH** IFB feature low thermal conductivity, excellent thermal shock resistance, high purity, low iron oxide content and good mechanical properties. **PORRATH** IFB exhibit excellent resistance to corrosive and/or reducing atmospheres. **PORRATH** is available in standard brick sizes (straights, arches and wedges) as well as custom shapes.



| Properties | Units | FL 26-08 | FL 28-10 | FL 30-11 | FL 32-12 | FL 33-13/2 | FL 33-16/2 | FL 34-15 | |
|----------------------------------|--------------------------------------|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|
| Classification Temp | °F | 2600 | 2800 | 3000 | 3200 | 3270 | 3270 | 3340 | |
| | °C | 1430 | 1540 | 1650 | 1760 | 1800 | 1800 | 1840 | |
| Density | lbs/ft ³ | 50 | 62 | 69 | 75 | 81 | 100 | 93 | |
| | (kg/m ³) | (800) | (1000) | (1100) | (1200) | (1300) | (1600) | (1500) | |
| Cold Crush Strength | Psi | 580 | 725 | 725 | 870 | 1740 | 2175 | 1740 | |
| | MPa | 4 | 5 | 5 | 6 | 12 | 15 | 12 | |
| Permanent Linear Change - 12 hrs | % | -0.3 @ 2570°F | -0.5 @ 2750°F | -1.1 @ 2950°F | +0.7 @ 3150°F | +0.4 @ 3272°F | +0.4 @ 3272°F | -0.3 @ 3272°F | |
| Thermal Conductivity | BTUin/hrft ² °F (W/mK) | 1112°F(600°C) | 2.4 | 2.6 | 3.0 | 4.6 | 7.9 (1.13) | 8.1 (1.16) | 9.7 (1.40) |
| | | 1472°F(800°C) | (0.34) | (0.38) | (0.44) | (0.66) | 8.1 (1.16) | 8.2 (1.17) | 9.2 (1.32) |
| | | 1832°F(1000°C) | 2.5 | 2.8 | 3.2 | 4.7 | 8.3 (1.19) | 8.3 (1.19) | 9.2 (1.32) |
| | | 2192°F(1200°C) | (0.36) | (0.40) | (0.46) | (0.67) | 8.6 (1.22) | 8.6 (1.22) | 11.0 (1.59) |
| | | 2552°F(1400°C) | 2.7 | 2.9 | 3.5 (0.51) | 4.9 | | | |
| | | | (0.39) | (0.42) | 4.0 | (0.71) | | | |
| Chemical Analysis | % | Al ₂ O ₃ | 45 | 62 | 75 | 78 | 91 | 91 | > 99.5 |
| | | SiO ₂ | 50 | 35 | 22 | 21 | 8.1 | 8.1 | < 0.20 |
| | | Fe ₂ O ₃ | 1.1 | 0.8 | 0.8 | 0.2 | 0.2 | 0.2 | 0.04 |
| | | MgO + CaO | 0.6 | 0.6 | 0.6 | 0.1 | - | - | 0.08 |
| | | Alk. Oxides (Na, K) | | | | | | | |

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. The test data cannot be taken as minimum or maximum values for specification purposes. ASTM test procedures used when applicable.