

Product Data

10/05: 5283

Description: High Duty, Dry Press Fireclay Brick

EMPIRE S is an economical high duty fireclay brick meeting ASTM regular type classification. It is suitable for boilers, dense brick backup linings, air heaters, and other areas encountering moderate operating temperatures. Not suggested for abrasive conditions.

Chemical Analysis: Approximate (Calcined Basis)

Silica (SiO ₂)	58.1%
Alumina (Al ₂ O ₃)	36.0%
Iron Oxide (Fe ₂ O ₃)	1.7%
Titania (TiO ₂)	2.0%
Lime (CaO)	0.3%
Magnesia (MgO)	0.4%
Alkalies (Na ₂ O + K ₂ O)	1.5%

Physical Data (Typical)

Bulk Density	133 lb/ft ³ (2.13 g/cm ³)
Modulus of Rupture	1,100 lb/in. ² (7.6 MPa)
Cold Crushing Strength	3,500 lb/in. ² (24.1 MPa)
Permanent Linear Change At 2550°F (1400°C)	-0.3%
Apparent Porosity	19.0%
Hot Load Test Deformation at 2460°F (1350°C)	1.3%
Pyrometric Cone Equivalent Orton Standard Cones Temperature Equivalent	32 3123°F (1717°C)
Panel Spalling Test Preheat at 2910°F (1600°C) – Spalling Loss	2.0%

Note: This product is manufactured for HarbisonWalker International by a third party. The results reported herein have been supplied by the third party manufacture. The above data are reported as typical properties and should not be taken as establishing maximum or minimum specifications. The above data is not intended as a warranty of any kind.