

# PRODUCT DATA

## SMITHFIELD UNBRANDED FIREBRICK

### ALSEY Smithfield Unbranded Medium Duty Firebrick

**Description:**

Medium duty dry press firebrick

**Sizes:**

Various

### TYPICAL TEST DATA -- PHYSICAL PROPERTIES

**ASTM C-24**

P.C.E. ....	29
Temperature Equivalent (melting), °F.....	3018
Service Temperature (max. recommended), °F.....	2700

**ASTM C-133**

Modulus of Rupture (MOR), psi .....	977
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**ASTM C-20**

Apparent Porosity, % .....	21.3
Apparent Specific Gravity, g/cc .....	2.66
Bulk Density, lb/ft <sup>3</sup> .....	130.2
Water Absorption, %.....	9.8

**ASTM C-16 Schedule 3 % deformation**

Load Test at 2640°F.....	-6.8
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**ASTM C-27**

Classification .....	Medium Duty
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**ASTM C-113 Schedule B % linear**

Reheat Change at 2550°F.....	-2.8
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**ASTM C-38, 2910°F preheat**

Panel Spalling Loss, % wt. ....	9.5
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### Thermal Conductivity (K-Factor)

At a mean temperature of		Btu/in ft <sup>2</sup> hr°F	W/m°C
400°F	(205°C)	8.2	1.18
800°F	(425°C)	8.5	1.23
1200°F	(650°C)	9.0	1.30
1600°F	(870°C)	9.2	1.33
2000°F	(1095°C)	9.5	1.37
2400°F	(1315°C)	9.8	1.41

### TYPICAL CHEMICAL ANALYSIS, Wt. % (calcined basis)

Silica (SiO <sub>2</sub> ).....	62.93
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) .....	30.78
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> ).....	2.14
Titanium Dioxide (TiO <sub>2</sub> ).....	1.68
Potassium Oxide (K <sub>2</sub> O) .....	1.48
Magnesium Oxide (MgO).....	0.45
Calcium Oxide (CaO) .....	0.22
Other Oxides .....	0.32
Total .....	100.00

Loss on Ignition, 1000°C .....	0.13
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We certify that SMITHFIELD (Unbranded) Dry Press Firebrick manufactured at our Aley, Illinois plant conforms to ASTM Specification C-27 - Class 4.1.4 and 4.1.5 for Medium Duty and Low Duty respectively and C-1261-98 (which includes C-24 and C-67), as well as, C-16, C-20, C-24, C-38, C-113, C-133.

MSDS available upon request.