



Plibrico Company, LLC
Plico Refractories

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Technical Data Sheet

Plico Castable Fast Track 50-30

Product Number 14289

Date 3/13/2014

Product Description

A super duty, ultra low cement refractory castable which may be dried out / heated on an accelerated schedule and minimum cure time.

Note: Cure times less than 8 hrs will result in lower strengths (see other data).

Service limit - 3000°F 1648 °C

Std. package 55 # / 25 kg Bag

Density to place 140 pcf 2,242 kg/m³

Water range per std. package:

Density in service 140 pcf 2,243 kg/m³

Casting 1.80 to 2.00 qts 1.7 to 1.89 l

Min time before firing 4 hr

Pumping 2.00 to 2.20 qts 1.89 to 2.08 l

Chemistry % (calcined)

| | | | |
|--------------------------------|------|-------------------------------|-----|
| Al ₂ O ₃ | 50.7 | P ₂ O ₅ | |
| SiO ₂ | 44.9 | Alk. | 0.6 |
| Fe ₂ O ₃ | 0.8 | MgO | 0.1 |
| CaO | 1.0 | SiC | |
| TiO ₂ | 1.7 | ZrO ₂ | |
| | | Other | |

Thermal Conductivity

| | btu*in/hr*ff ² * F ⁰ | w/m ² C |
|---------------|--|--------------------|
| 500F / 260C | 9.2 | 1.32 |
| 1000F / 540C | 9.8 | 1.41 |
| 1500F / 815C | 10.6 | 1.52 |
| 2000F / 1090C | 11.4 | 1.64 |

Abrasion Loss

per ASTM C 704
after 1500 F

12 cc

Coefficient of Thermal Expansion
(reversible)

3.2 x 10⁻⁶ in/in F

5.7 x 10⁻⁶ m/m C

| Temperature per ASTM C113 / C865 | Linear Change per ASTM C113 / C179 | Cold MOR | | CCS | | Hot MOR | |
|--|--|----------------------|------|----------------------|-----|----------------------|------|
| | | per ASTM C133 psi | MPa | per ASTM C133 psi | MPa | per ASTM C583 psi | MPa |
| 230 F / 110 C | -0.1% | 900 | 6.2 | 3000 | 21 | | |
| 1500 F / 815 C | -0.3% | 1100 | 7.6 | 5000 | 34 | 1700 | 11.7 |
| 2000 F / 1090C | -0.5% | 1600 | 11.0 | | 0 | 2000 | 13.8 |
| 2500 F / 1370 C | -0.2% | 1700 | 11.7 | | 0 | 650 | 4.5 |
| 2900 F / 1595 C | 0.5% | 2400 | 16.6 | | 0 | | 0.0 |

Other Data

8 hr Cure Data: 230F Cold MOR 600 psi, 1500F Cold MOR 1000 psi

Heat Up Guide

Schedule FT

ASTM Class

C 401 Class E

Low Cement Castable

Note:

All data are averaged results of ASTM tests (where applicable) on laboratory cast specimens. Reasonable variations in data can be expected. Data is not to be used for specification purposes. Product data is periodically updated to reflect product / raw material / process / testing changes. Please consult your Plibrico representative to make sure you have the most current data.