

Plico Castable 31

Product Number 14006

Date 2/10/2014

Product Description

A high duty, low iron, high strength castable refractory.

Service limit - 2800°F 1,537 °C

Std. package 55 # / 25 kg Bag

Density to place 125 pcf 2,002 kg/m³

Water range per std. package:

Density in service 125 pcf 2,003 kg/m³

Casting 3.1 to 3.5 qts 2.9 to 3.3 l

Min time before firing 24 hr

Pumping to qts 0.0 to 0.0 l

Chemistry % (calcined)

Al ₂ O ₃	46.0	P ₂ O ₅	
SiO ₂	44.3	Alk.	0.6
Fe ₂ O ₃	1.1	MgO	0.1
CaO	5.7	SiC	
TiO ₂	2.2	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	6.7	0.96
1000F / 540C	6.8	0.97
1500F / 815C	6.9	0.99
2000F / 1090C	7.1	1.02

Abrasion Loss

per ASTM C 704
after 1500 F

cc

Coefficient of Thermal Expansion

(reversible)

3 x 10⁻⁶ in/in F

5.4 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%	675	4.7	2000	14		
1500 F / 815 C	-0.3%	400	2.8	2000	14	600	4.1
2000 F / 1090C	-0.3%	400	2.8		0	400	2.8
2500 F / 1370 C	0.2%	1100	7.6		0	200	1.4
2800 F / 1540 C	0.9%	2000	13.8		0		0.0

Other Data

Heat Up Guide

Schedule B

ASTM Class

C 401 Class D

Regular 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 Plico representative to make sure you have the most current data.

Plico Refractories are manufactured by Plibrico Company LLC, USA.