

Plico Shotcrete LC CL 5Z-F KK

Product Number 15410

Date 2/10/2014

Product Description

A super duty low cement castable for casting or shotcrete application. Formulated for resistance to alkali attack in cement kiln preheater applications.

Service limit - 2800°F 1,537 °C

Std. package 55 # / 25 kg Bag

Density to place 135 pcf 2,162 kg/m³

Water range per std. package:

Density in service 135 pcf 2,163 kg/m³

Casting 1.8 to 2.1 qts 1.7 to 2.0 l

Min time before firing 16 hr

Pumping 1.9 to 2.3 qts 1.8 to 2.2 l

Chemistry % (calcined)

Al ₂ O ₃	46.4	P ₂ O ₅	
SiO ₂	44.5	Alk.	0.6
Fe ₂ O ₃	0.8	MgO	0.1
CaO	2.5	SiC	
TiO ₂	1.7	ZrO ₂	3.3
Other			

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	10.5	1.51
1000F / 540C	11.2	1.61
1500F / 815C	11.9	1.71
2000F / 1090C	12.7	1.82

Abrasion Loss

per ASTM C 704
after 1500 F

12 cc

Coefficient of Thermal Expansion

(reversible)

2.9 x 10⁻⁶ in/in F

5.2 x 10⁻⁶ m/m C

Temperature per <u>ASTM C113 / C865</u>	Linear Change per <u>ASTM C113 / C179</u>	Cold MOR		CCS		Hot MOR	
		per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C583 <u>psi</u>	<u>MPa</u>
230 F / 110 C	0.0%	1300	9.0	5800	40		
1500 F / 815 C	-0.2%	1200	8.3	5700	39	1800	12.4
2000 F / 1090C	-0.3%	1400	9.7		0	1900	13.1
2500 F / 1370 C	-0.1%	1800	12.4		0		0.0
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule C or C-Linear

ASTM Class

C 401 Class D

Low Cement Castable

Note:

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.