

Plico Shotcrete LC CL 50-M KK

Product Number 15408

Date 2/10/2014

Product Description

A mullite based 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 151 pcf 2,419 kg/m³

Water range per std. package:

Density in service 151 pcf 2,419 kg/m³

Casting 1.6 to 1.9 qts 1.5 to 1.8 l

Min time before firing 16 hr

Pumping 1.8 to 2.0 qts 1.6 to 1.9 l

Chemistry % (calcined)

Al ₂ O ₃	29.3	P ₂ O ₅	
SiO ₂	17.2	Alk.	0.2
Fe ₂ O ₃	0.4	MgO	0.1
CaO	2.3	SiC	49.9
TiO ₂	0.6	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	29.2	4.2
1000F / 540C	29.8	4.29
1500F / 815C	30.5	4.39
2000F / 1090C	31.1	4.47

Abrasion Loss

per ASTM C 704
after 1500 F

9 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	0.0%	1800	12.4	7900	54		
1500 F / 815 C	-0.2%	2000	13.8	8000	55	2100	14.5
2000 F / 1090C	-0.3%	2800	19.3		0	2200	15.2
2300 F / 1260 C	0.1%	3000	20.7		0	900	6.2
2500 F / 1370 C	0.3%	3600	24.8		0		0.0

Other Data

Heat Up Guide

Schedule C or C-Linear

ASTM Class

C 401 Class D

Low Cement Castable

Note:

All data are averaged results of ASTM tests (where applicable) on laboratory shotcreted 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.