

Plico Shotcrete LC SiC 80 KK

Product Number 15458

Date 2/10/2014

Product Description

An 80% silicon carbide based, low cement castable designed for shotcrete application.

Service limit - 2800°F 1,537 °C

Std. package 55 # / 25 kg Bag

Density to place 156 pcf 2,499 kg/m³

Water range per std. package:

Density in service 156 pcf 2,499 kg/m³

Casting to qts 0.0 to 0.0 l

Min time before firing 16 hr

Pumping 1.6 to 1.9 qts 1.6 to 1.8 l

Chemistry % (calcined)

Al ₂ O ₃	12.1	P ₂ O ₅	
SiO ₂	7.1	Alk.	0.2
Fe ₂ O ₃	0.2	MgO	0.1
CaO	2.1	SiC	77.9
TiO ₂	0.2	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	50.9	7.32
1000F / 540C	50.4	7.25
1500F / 815C	50.3	7.24
2000F / 1090C	50.4	7.25

Abrasion Loss

per ASTM C 704
after 1500 F

10 cc

Coefficient of Thermal Expansion

(reversible)

3.3 x 10⁻⁶ in/in F

5.9 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%	1400	9.7	6000	41		
1500 F / 815 C	-0.2%	1800	12.4	7500	52	2400	16.6
1800 F / 980 C	-0.3%	2200	15.2		0	3000	20.7
2000 F / 1090 C	-0.5%	2700	18.6		0		0.0
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule C or C-Linear

ASTM Class

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.