

**Plico Shotcrete LC 31BX KK**

Product Number 15412

Date 2/10/2014

**Product Description**

A slag resistant, 70% alumina low cement castable for shotcrete application. Advance data.

**Service limit -** 3100°F 1,704 °C

**Std. package** 55 # / 25 kg Bag

**Density to place** 160 pcf 2,563 kg/m<sup>3</sup>

**Water range per std. package:**

**Density in service** 160 pcf 2,563 kg/m<sup>3</sup>

**Casting** to qts 0.0 to 0.0 l

**Min time before firing** 16 hr

**Pumping** 1.7 to 2.0 qts 1.6 to 1.8 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	67.6	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	26.1	Alk.	0.3
Fe <sub>2</sub> O <sub>3</sub>	1.0	MgO	0.2
CaO	2.5	SiC	
TiO <sub>2</sub>	2.2	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> *°F	w/m°C
500F / 260C	11.4	1.64
1000F / 540C	11.1	1.59
1500F / 815C	11.3	1.62
2000F / 1090C	11.8	1.69

**Abrasion Loss**

per ASTM C 704  
after 1500 F

10 cc

**Coefficient of Thermal Expansion**

(reversible)

4.1 x 10<sup>-6</sup> in/in F

7.3 x 10<sup>-6</sup> 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	8500	59		
1500 F / 815 C	-0.2%	2200	15.2	6500	45	3000	20.7
2000 F / 1090C	-0.4%	2400	16.6		0	3200	22.1
2500 F / 1370 C	0.2%	2800	19.3		0	650	4.5
			0.0		0		0.0

**Other Data**

**Heat Up Guide**

Schedule C or C-Linear

**ASTM Class**

C 401 Class F

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

*Plico Refractories are manufactured by Plibrico Company LLC, USA.*