

**Plico Flow LC 90 KK**

Product Number 14801

Date 2/10/2014

**Product Description**

A 90% alumina, self leveling, low cement castable.

**Service limit -** 3100°F 1,704 °C

**Density to place** 185 pcf 2,963 kg/m<sup>3</sup>

**Density in service** 185 pcf 2,964 kg/m<sup>3</sup>

**Min time before firing** 24 hr

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

**Water range per std. package:**

**Casting** 1.5 to 1.8 qts 1.4 to 1.6 l

**Pumping** to qts 0.0 to 0.0 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	91.4	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	6.4	Alk.	0.5
Fe <sub>2</sub> O <sub>3</sub>	0.1	MgO	0.1
CaO	1.6	SiC	
TiO <sub>2</sub>		ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> *°F	w/m°C
500F / 260C	27.5	3.96
1000F / 540C	22.8	3.28
1500F / 815C	20.0	2.88
2000F / 1090C	20.3	2.92

**Abrasion Loss**

per ASTM C 704  
after 1500 F

4 cc

**Coefficient of Thermal Expansion**  
(reversible)

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

9.7 x 10<sup>-6</sup> 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%	2000	13.8	9500	66		
1500 F / 815 C	-0.3%	3000	20.7	10000	69	4000	27.6
2500 F / 1370 C	-0.6%	4000	27.6		0	1000	6.9
3000 F / 1650 C	-0.7%	4500	31.0		0		0.0
			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 self flow 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.*