

**Plico Castable 27 C**

Product Number 14004

Date 2/10/2014

**Product Description**

An intermediate duty, high strength, coarse grain castable.

**Service limit -** 2500°F 1,371 °C

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

**Density to place** 130 pcf 2,082 kg/m<sup>3</sup>

**Water range per std. package:**

**Density in service** 130 pcf 2,083 kg/m<sup>3</sup>

**Casting** 3.0 to 3.4 qts 2.8 to 3.2 l

**Min time before firing** 24 hr

**Pumping** to qts 0.0 to 0.0 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	45.1	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	35.8	Alk.	0.5
Fe <sub>2</sub> O <sub>3</sub>	3.1	MgO	0.3
CaO	13.0	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	6.5	0.93
1000F / 540C	6.6	0.95
1500F / 815C	6.7	0.96
2000F / 1090C	6.9	0.99

**Abrasion Loss**

per ASTM C 704  
after 1500 F

cc

**Coefficient of Thermal Expansion**

(reversible)

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

5.4 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	-0.1%	850	5.9	4000	28		
1000 F / 540 C	-0.2%	350	2.4		0	350	2.4
1500 F / 815 C	-0.3%	450	3.1	3000	21	500	3.4
2000 F / 1090 C	-0.5%	350	2.4		0	350	2.4
2500 F / 1370 C	-0.3%	1400	9.7		0	150	1.0

**Other Data**

**Heat Up Guide**

Schedule B

**ASTM Class**

C 401 Class C

Regular 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.*