

**Plico Castable Floor Guard HT**

Product Number 14290

Date 2/10/2014

**Product Description**

A high temperature spall resistant, fireclay castable designed for hot flooring and splash pads around furnaces. Develops full hydraulic strength after 48 hr cure but can be used in as little as 16 hr with reduced cured strength.

**Service limit -** 2500°F 1,371 °C

**Density to place** 135 pcf 2,162 kg/m<sup>3</sup>

**Density in service** 135 pcf 2,163 kg/m<sup>3</sup>

**Min time before firing** 16 hr

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

**Water range per std. package:**

**Casting** 2.5 to 2.8 qts 2.4 to 2.6 l

**Pumping** 2.7 to 3.0 qts 2.5 to 2.8 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	44.5	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	40.9	Alk.	0.5
Fe <sub>2</sub> O <sub>3</sub>	2.4	MgO	0.2
CaO	9.3	SiC	
TiO <sub>2</sub>	2.1	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> *°F	w/m°C
500F / 260C	7.0	1
1000F / 540C	6.8	0.97
1500F / 815C	6.8	0.97
2000F / 1090C	7.5	1.08

**Abrasion Loss**

per ASTM C 704  
after 1500 F

13 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
16 hr Cure	0.0%	0.0		2100	14		
24 hr Cure	0.0%	0.0		6500	45		0.0
230 F / 110 C	0.0%	0.0		8500	59		0.0
1500 F / 815 C	-0.3%	0.0		6000	41	2100	14.5
2000 F / 1090 C	-0.5%	0.0			0	1650	11.4

**Other Data**

ASTM C 704 Abrasion Loss 9 cc dried 11 cc after 500F 13 cc after 1000F

**Heat Up Guide**

**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.*