

**Plico Castable A-T 27 C**

Product Number 16510

Date 2/10/2014

**Product Description**

An intermediate duty, high strength, non wetting coarse grain castable.

**Typical Aluminum Applications**

Aluminum Melting and Holding Furnaces: sub-hearths, floor splash pads

**Service limit -** 2500°F 1371 °C

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

**Al contact limit -** 1700 °F 926 °C

**Water range per std. package:**

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

**Casting** 2.9 to 3.3 qts 2.7 to 3.1 l

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

**Pumping** to qts 0.0 to 0.0 l

**Min time before firing** 24 hr

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	44.6	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	35.5	Alk.	0.9
Fe <sub>2</sub> O <sub>3</sub>	3.0	MgO	0.3
CaO	13.8	SiC	
TiO <sub>2</sub>	2.2	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ft <sup>2</sup> *°F	w/m°C
<b>500F / 260C</b>	6.5	0.93
<b>1000F / 540C</b>	6.6	0.95
<b>1500F / 815C</b>	6.7	0.96
<b>2000F / 1090C</b>	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 <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	-0.1%	800	5.5	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
			0.0		0		0.0
			0.0		0		0.0

**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.*