

**Plico Castable A-S BTR 7 KK**

Product Number 14927

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**Product Description**

An aluminum resistant, high hot strength, low cement, bauxite based castable for aluminum furnace contact applications with excellent resistance to reactive and fluid aluminum alloys.

**Typical Aluminum Applications**

Furnace lower sidewalls, hearths, & ramps. Troughs & launders.

**Service limit -** 2800°F 1537 °C

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

**Al contact limit -** 2000 °F 1093°C

**Water range per std. package:**

**Density to place** 172 pcf 2,755 kg/m<sup>3</sup>

**Casting** 1.6 to 1.8 qts 1.5 to 1.7 l

**Density in service** 172 pcf 2,755 kg/m<sup>3</sup>

**Pumping** 71.5 to 1.9 qts 67.7 to 1.8 l

**Min time before firing** 16 hr

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	69.5	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	16.2	Alk.	0.2
Fe <sub>2</sub> O <sub>3</sub>	1.3	MgO	0.1
CaO	1.6	SiC	
TiO <sub>2</sub>	1.4	ZrO <sub>2</sub>	
		Other	9.5

**Thermal Conductivity**

	btu*in/hr*ft <sup>2</sup> *°F	w/m°C
<b>500F / 260C</b>	16.9	2.43
<b>1000F / 540C</b>	16.5	2.37
<b>1500F / 815C</b>	16.0	2.3
<b>2000F / 1090C</b>	16.7	2.4

**Abrasion Loss**

per ASTM C 704  
after 1500 F

9 cc

**Coefficient of Thermal Expansion**

(reversible)

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

7.5 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%	1500	10.3	6500	45		
1500 F / 815 C	-0.2%	1800	12.4	7000	48	3000	20.7
1800 F / 980 C	-0.3%	2000	13.8		0	4100	28.3
2000 F / 1090 C	0.2%	2200	15.2		0	2800	19.3
			0.0		0		0.0

**Other Data**

**Heat Up Guide**

Schedule AT AS or AT AS Linear

**ASTM Class**

C 401 Class D

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.*