

Plico Castable A-S BTR 6 KK

Product Number 14926

Date 2/10/2014

Product Description

An aluminum resistant, high hot strength, low cement, mullite 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 157 pcf 2,515 kg/m³

Casting 1.6 to 1.9 qts 1.6 to 1.8 l

Density in service 157 pcf 2,515 kg/m³

Pumping 1.8 to 2.0 qts 1.6 to 1.9 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	57.1	P ₂ O ₅	
SiO ₂	29.1	Alk.	0.2
Fe ₂ O ₃	0.8	MgO	0.1
CaO	1.7	SiC	
TiO ₂	1.4	ZrO ₂	
		Other	9.5

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	10.7	1.54
1000F / 540C	11.4	1.64
1500F / 815C	12.0	1.72
2000F / 1090C	12.8	1.84

Abrasion Loss

per ASTM C 704
after 1500 F

9 cc

Coefficient of Thermal Expansion

(reversible)

3.4 x 10⁻⁶ in/in F

6.1 x 10⁻⁶ 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	6000	41		
1500 F / 815 C	-0.2%	1700	11.7	6000	41	3000	20.7
1800 F / 980 C	-0.3%	1950	13.4		0	4000	27.6
2000 F / 1090 C	0.1%	2200	15.2		0	2900	20.0
			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.