

Plico Castable A-S B C KK

Product Number 14922

Date 2/10/2014

Product Description

A bauxite based, coarse aggregate, aluminum resistant, low cement castable with a mullite and silicon carbide fortified matrix. Maintains excellent hot strength through elevated temperatures.

Typical Aluminum Applications

Precast and field cast jambs, sills, dry hearths, hearths, ramps and lower sidewalls for aluminum melting furnaces.

Service limit - 3000°F 1648 °C

Std. package 1250 # / 568 kg Bag

Al contact limit - 2000 °F 1093°C

Water range per std. package:

Density to place 172 pcf 2,755 kg/m³

Casting 37.0 to 41.0 qts 35.0 to 38.8 l

Density in service 172 pcf 2,755 kg/m³

Pumping to qts 0.0 to 0.0 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	65.9	P ₂ O ₅	
SiO ₂	17.2	Alk.	0.2
Fe ₂ O ₃	1.3	MgO	0.1
CaO	1.6	SiC	4.6
TiO ₂	1.5	ZrO ₂	
		Other	7.7

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	16.7	2.4
1000F / 540C	16.3	2.34
1500F / 815C	15.8	2.27
2000F / 1090C	16.5	2.37

Abrasion Loss

per ASTM C 704
after 1500 F

CC

Coefficient of Thermal Expansion

(reversible)

4.2 x 10⁻⁶ in/in F

7.5 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%	1800	12.4	8500	59		
1500 F / 815 C	-0.2%	1500	10.3	7500	52	3000	20.7
1800 F / 980 C	-0.3%	1800	12.4		0	3200	22.1
2000 F / 1090 C			0.0		0	3300	22.8
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule AT AS or AT AS Linear

ASTM Class

C 401 Class E

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.