

Plico Castable A-T Y69B KK

Product Number 14217

Date 2/10/2014

Product Description

A 75% silicon carbide, aluminum non-wetting, high hot strength, low cement castable. May be vibration cast, cast or pumped.

Typical Aluminum Applications

Aluminum melting and holding furnace hearths, ramps and sills. troughs and tap out block.

Service limit - 2800°F 1537 °C

Std. package 55 # / 25 kg Bag

Al contact limit - 1700 °F 926°C

Water range per std. package:

Density to place 158 pcf 2,531 kg/m³

Casting 1.5 to 1.7 qts 1.4 to 1.6 l

Density in service 158 pcf 2,531 kg/m³

Pumping 1.6 to 1.9 qts 1.6 to 1.8 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	13.8	P ₂ O ₅	
SiO ₂	7.1	Alk.	0.2
Fe ₂ O ₃	0.2	MgO	
CaO	2.5	SiC	76.2
TiO ₂	0.1	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ft ² *F	w/m°C
500F / 260C	60.0	8.64
1000F / 540C	55.0	7.92
1500F / 815C	48.0	6.91
2000F / 1090C	46.0	6.62

Abrasion Loss

per ASTM C 704
after 1500 F

7 cc

Coefficient of Thermal Expansion

(reversible)

3.3 x 10⁻⁶ in/in F

5.9 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%	2000	13.8	8000	55		
1000 F / 540 C	-0.1%	3000	20.7		0	3400	23.4
1500 F / 815 C	-0.2%	3800	26.2	9000	62	5000	34.5
			0.0		0		0.0
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule AT AS or AT AS Linear

ASTM Class

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.