



Plibrico Company, LLC
Plico Refractories

1935 Techny Road - Unit 16
 Northbrook, IL 60062
 Phone: 312-337-9000 Fax: 312-337-9003
 www.plico-refractories.com.com

Technical Data Sheet

Plico Castable A-T 3000 KK

Product Number 14193

Date 2/10/2014

Product Description

A non-wetting, super duty, low cement castable that may be vib cast, cast or pumped.

Typical Aluminum Applications

Aluminum melting and holding furnaces: lower sidewalls, hearths and sills. Transfer ladles

Service limit - 3000°F 1648 °C

Std. package 55 # / 25 kg Bag

Al contact limit - 1700 °F 926°C

Water range per std. package:

Density to place 139 pcf 2,226 kg/m³

Casting 1.9 to 2.0 qts 1.8 to 1.9 l

Density in service 139 pcf 2,227 kg/m³

Pumping 2.1 to 2.3 qts 2.0 to 2.2 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	48.8	P ₂ O ₅	
SiO ₂	44.8	Alk.	0.6
Fe ₂ O ₃	0.8	MgO	0.1
CaO	3.6	SiC	
TiO ₂	1.8	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² * F	w/m°C
500F / 260C	9.3	1.33
1000F / 540C	10.0	1.44
1500F / 815C	10.7	1.54
2000F / 1090C	11.5	1.65

Abrasion Loss

per ASTM C 704
after 1500 F

10 cc

Coefficient of Thermal Expansion

(reversible)

3.1 x 10⁻⁶ in/in F

5.5 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%	1650	11.4	7000	48		
1000 F / 540 C	-0.2%	1400	9.7		0	1500	10.3
1500 F / 815 C	-0.3%	1800	12.4	6500	45	2200	15.2
			0.0		0		0.0
			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 Plibrico representative to make sure you have the most current data.