

Plico Castable A-T TSR Plus KK

Product Number 14204

Date 2/10/2014

Product Description

A fused silica-mullite, thermal shock resistant, high strength, non-wetting low cement castable.

Typical Aluminum Applications

Troughs and launders (non-heated). Transfer ladles.

Service limit - 2500°F 1371 °C

Std. package 50 # / 22.7 kg Bag

Al contact limit - 1700 °F 926°C

Water range per std. package:

Density to place 127 pcf 2,034 kg/m³

Casting 1.7 to 1.9 qts 1.6 to 1.8 l

Density in service 127 pcf 2,035 kg/m³

Pumping 1.8 to 2.3 qts 1.7 to 2.2 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	31.1	P ₂ O ₅	
SiO ₂	65.5	Alk.	0.2
Fe ₂ O ₃	0.3	MgO	0.1
CaO	2.5	SiC	
TiO ₂	0.3	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	6.1	0.87
1000F / 540C	6.4	0.92
1500F / 815C	7.1	1.02
2000F / 1090C	8.1	1.16

Abrasion Loss

per ASTM C 704
after 1500 F

12 cc

Coefficient of Thermal Expansion

(reversible)

0.7 x 10⁻⁶ in/in F

1.2 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	8000	55		
1000 F / 540 C	-0.1%	1600	11.0		0	2000	13.8
1500 F / 815 C	-0.2%	1650	11.4	8500	59	2300	15.9
			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 C

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.