

Plico Gun Mix A-T 3100 Special

Product Number 16517

Date 2/10/2014

Product Description

A 60% alumina, mullite based, non-wetting, low cement refractory castable designed for gunning application.

Typical Aluminum Applications

Hot and cold maintenance of worn aluminum contact areas and upper sidewalls in aluminum melting and holding furnaces.

Service limit - 3100°F 1704 °C

Std. package 55 # / 25 kg Bag

Al contact limit - 1700 °F 926°C

Water range per std. package:

Density to place 130 pcf 2,082 kg/m³

Casting to qts 0.0 to 0.0 l

Density in service 130 pcf 2,083 kg/m³

Pumping to qts 0.0 to 0.0 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	57.7	P ₂ O ₅	
SiO ₂	35.4	Alk.	0.2
Fe ₂ O ₃	1.0	MgO	0.2
CaO	3.8	SiC	
TiO ₂	1.8	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	7.2	1.03
1000F / 540C	7.3	1.05
1500F / 815C	7.5	1.08
2000F / 1090C	7.8	1.12

Abrasion Loss

per ASTM C 704
after 1500 F

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	-0.1%	650	4.5	2500	17		
1000 F / 540 C	-0.2%	700	4.8		0	800	5.5
1500 F / 815 C	-0.3%	800	5.5	3500	24	1000	6.9
2000 F / 1090 C	-0.3%	750	5.2		0	1100	7.6
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule B

ASTM Class

C 401 Class F

Low Cement Castable

Note:

All data are averaged results of ASTM tests (where applicable) on laboratory gunned 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.