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Plico Refractories

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Technical Data Sheet

Plico Gun Mix Fast Track 31 LC

Product Number 13608

Date 2/10/2014

Product Description

A mullite based, high strength, low cement, refractory gun mix which may be dried out / heated on an accelerated schedule and minimum cure time.
 Note: Cure times less than 8 hrs will result in lower strengths (see other data)

Service limit - 3100°F 1704 °C

Std. package 55 # / 25 kg Bag

Density to place 138 pcf 2,210 kg/m³

Water range per std. package:

Density in service 138 pcf 2,211 kg/m³

Casting to qts 0 to 0 l

Min time before firing 4 hr

Pumping to qts 0.00 to 0 l

Chemistry % (calcined)

Al ₂ O ₃	60.9	P ₂ O ₅	
SiO ₂	33.4	Alk.	0.2
Fe ₂ O ₃	0.9	MgO	0.1
CaO	2.4	SiC	
TiO ₂	1.9	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	7.5	1.08
1000F / 540C	7.6	1.09
1500F / 815C	7.8	1.12
2000F / 1090C	8.1	1.16

Abrasion Loss

per ASTM C 704
after 1500 F

14 cc

Coefficient of Thermal Expansion
(reversible)

3.5 x 10⁻⁶ in/in F

6.3 x 10⁻⁶ m/m C

Temperature per ASTM C113 / C865	Linear Change per ASTM C113 / C179	Cold MOR		CCS		Hot MOR	
		per ASTM C133 psi	MPa	per ASTM C133 psi	MPa	per ASTM C583 psi	MPa
230 F / 110 C	-0.1%	1500	10.3	5500	38		
1500 F / 815 C	-0.3%	1300	9.0	6000	41	1900	13.1
2000 F / 1090C	-0.4%	1100	7.6		0	1800	12.4
2500 F / 1370 C	0.7%	1800	12.4		0	350	2.4
3000 F / 1650 C	0.1%	2200	15.2		0		0.0

Other Data

8 hr Cure Data: 230F Cold MOR 900 psi, 1500F Cold MOR 850 psi

Heat Up Guide

Schedule FT

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 Plibrico representative to make sure you have the most current data.