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Plico Refractories

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Technical Data Sheet

Plico Castable Fast Track 65-31

Product Number 14288

Date 3/13/2014

Product Description

A mullite based, high strength, ultra low cement refractory castable 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 150 pcf 2,403 kg/m ³	Water range per std. package:
Density in service 150 pcf 2,403 kg/m ³	Casting 1.65 to 1.80 qts 1.56 to 1.7 l
Min time before firing 4 hr	Pumping 1.75 to 1.90 qts 1.65 to 1.79 l

Chemistry % (calcined)			
Al ₂ O ₃	63.6	P ₂ O ₅	
SiO ₂	32.6	Alk.	0.3
Fe ₂ O ₃	0.9	MgO	0.1
CaO	0.9	SiC	
TiO ₂	1.5	ZrO ₂	
		Other	

Thermal Conductivity		
	btu*in/hr*ff ² * F ⁰	w/m ² C
500F / 260C	10.5	1.51
1000F / 540C	11.1	1.59
1500F / 815C	11.8	1.69
2000F / 1090C	12.4	1.78

Abrasion Loss
per ASTM C 704 after 1500 F
9 cc
Coefficient of Thermal Expansion (reversible)
3.5 x 10 ⁻⁶ in/in F
6.3 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%	1100	7.6	4500	31		
1500 F / 815 C	-0.3%	1500	10.3	5500	38	2200	15.2
2000 F / 1090C	-0.5%	2000	13.8		0	3400	23.4
2500 F / 1370 C	0.6%	2500	17.2		0	1000	6.9
3000 F / 1650 C	1.0%	2800	19.3		0		0.0

Other Data

8 hr Cure Data: 230F Cold MOR 900 psi, 1500F Cold MOR 1200 psi

Heat Up Guide
 Schedule FT

ASTM Class
 C 401 Class F

Ultra 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.