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**Plico Refractories**

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**Technical Data Sheet**

**Plico Castable Fast Track 75-31**

Product Number 14287

Date 3/13/2014

**Product Description**

A bauxite 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** 168 pcf 2,691 kg/m<sup>3</sup>

**Water range per std. package:**

**Density in service** 168 pcf 2,691 kg/m<sup>3</sup>

**Casting** 1.60 to 1.75 qts 1.51 to 1.65 l

**Min time before firing** 4 hr

**Pumping** 1.70 to 1.90 qts 1.60 to 1.79 l

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	75.9	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	19.3	Alk.	0.2
Fe <sub>2</sub> O <sub>3</sub>	1.5	MgO	0.1
CaO	1.0	SiC	
TiO <sub>2</sub>	1.8	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> * F <sup>0</sup>	w/m <sup>2</sup> C
500F / 260C	14.1	2.03
1000F / 540C	13.6	1.95
1500F / 815C	13.6	1.95
2000F / 1090C	14.1	2.03

**Abrasion Loss**

per ASTM C 704  
after 1500 F

9 cc

**Coefficient of Thermal Expansion**  
(reversible)

4.4 x 10<sup>-6</sup> in/in F

7.9 x 10<sup>-6</sup> 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	0.0%	1100	7.6	4600	32		
1500 F / 815 C	-0.2%	1400	9.7	5500	38	1900	13.1
2000 F / 1090C	-0.5%	1800	12.4		0	4000	27.6
2500 F / 1370 C	-0.2%	2400	16.6		0	1100	7.6
3000 F / 1650 C	0.6%	2900	20.0		0		0.0

**Other Data**

8 hr Cure Data: 230F Cold MOR 850 psi, 1500F Cold MOR 1100 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.