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**Plico Refractories**

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**Technical Data Sheet**

**Plico Gun Mix Fast Track 80-31 Al**

Product Number 3255

Date 12/10/2018

**Product Description**

An 80% alumina, non wetting, low cement gun mix. Designed for typical aluminum melting and holding furnace applications including hot and cold maintenance of worn aluminum areas and upper sidewalls.

**Service limit -** 3100°F 1704 °C  
**Density to place** 158 pcf 2,531 kg/m<sup>3</sup>  
**Density in service** 158 pcf 2,531 kg/m<sup>3</sup>  
**Min time before firing** 16 hr

**Std. package** 55 # / 25 kg Bag

**Water range per std. package:**

**Casting** to qts 0 to 0 /  
**Pumping** to qts 0.00 to 0 /

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	81.7	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	12.7	Alk.	0.2
Fe <sub>2</sub> O <sub>3</sub>	1.5	MgO	0.1
CaO	2.0	SiC	
TiO <sub>2</sub>	1.6	ZrO <sub>2</sub>	
		Other	

**Thermal Conductivity**

	btu*in/hr*ff <sup>2</sup> *°F	w/m°C
<b>500F / 260C</b>	11.1	1.59
<b>1000F / 540C</b>	9.6	1.38
<b>1500F / 815C</b>	9.3	1.33
<b>2000F / 1090C</b>	10.2	1.46

**Abrasion Loss**

per ASTM C 704  
 after 1500 F

9 cc

**Coefficient of Thermal Expansion**  
 (reversible)

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

7 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	-0.1%	1800	12.4	7500	52		
1500 F / 815 C	-0.4%	1500	10.3	6500	45		

**Other Data**

**Heat Up Guide**

Schedule C or C-Linear

**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.