



# Plibrico Company, LLC

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# Technical Data Sheet Pligun Fast Track 31 LCZ

Product # 3324

Available Internationally As: Plico Gun Mix Fast Track 31 LCZ

### Product Description:

A mullite based, high strength, low cement, refractory gun mix with 3% zirconia for improved slag resistance. May be dried out / heated on an accelerated schedule and minimum cure time. Note: Cure times less than 8 hours will result in lower strengths.

**Standard Packaging:** 55 # / 25 kg Bag

**Shelf Life:** 9 months

**Service Limit:** 3100 °F 1700 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 140 pcf 2243 kg/m<sup>3</sup>

**Bulk Density - To Place:** 140 pcf 2243 kg/m<sup>3</sup>

**Minimum Time To Firing:** 4 hr

**Abrasion Loss after 1500°F / 815°C**  
 per ASTM C704

12 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	56.5	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	34.5	TiO <sub>2</sub>	1.7	ZrO <sub>2</sub>	3.30
CaO	2.6	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	1.0	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min			
	max			
Pumping	min			
	max			

**Coefficient of Thermal Expansion (reversible):**

3.5 x 10<sup>-6</sup> in/in/°F / 6.3 x 10<sup>-6</sup> mm/mm/°C

Thermal Conductivity	btu*in/hr*ft <sup>2</sup> *°F	W/m°C
500°F / 260°C	7.5	1.08
1000°F / 540°C	7.6	1.09
1500°F / 815°C	7.8	1.12
2000°F / 1090°C	8.1	1.17

Temperature		Linear Change% per ASTM C113	CCS per ASTM C133		Cold MOR per ASTM C133		Hot MOR per ASTM C583	
°F	°C		psi	MPa	psi	MPa	psi	MPa
230	110	-0.1	5500	38.0	1500	10.3		
1500	820	-0.3	6000	41.0	1300	9.0	1900	13.1
2000	1090	-0.4			1100	7.6	1800	12.4
2500	1370	0.7			1800	12.4	350	2.4
3000	1650	0.1			2200	15.2		

Other Data:

Release Date: 17 Jun 2024

Heat Up Guide: Schedule FT

ASTM Class: C 401 Class F

Low Cement Castable

Refractory material should be stored in a cool, dry environment.

**Note:** All data are averaged results of ASTM tests (where applicable) on laboratory 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 and/or testing changes. Please consult your Plibrico representative to make sure you have the most current data.