



# Plibrico Company, LLC

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# Technical Data Sheet

## Pli-Shot HyMOR 3100 Special KK

Product # 15250

Available Internationally As: Plico Shotcrete LC 3100 Special KK

### Product Description:

A versatile high strength, mullite based, 60% alumina low cement castable designed for shotcrete application.

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

**Shelf Life:** 6 months

**Service Limit:** 3100 °F 1700 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 149 pcf 2387 kg/m<sup>3</sup>

**Bulk Density - To Place:** 149 pcf 2387 kg/m<sup>3</sup>

**Minimum Time To Firing:** 16 hr

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

9 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	59.3	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	35.6	TiO <sub>2</sub>	1.6	ZrO <sub>2</sub>	
CaO	2.3	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	0.9	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min			
	max			
Pumping	min	6.6	1.7	1.7
	max	7.6	2.0	1.9

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

3.6 x 10<sup>-6</sup> in/in/°F / 6.5 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	10.7	1.54
1000°F / 540°C	11.3	1.63
1500°F / 815°C	12.0	1.73
2000°F / 1090°C	12.6	1.81

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	11500	79.0	1700	11.7		
1500	820	-0.3	8000	55.0	2000	13.8	2900	20.0
2000	1090	-0.4			2200	15.2	2700	18.6
2500	1370	0.5			2600	17.9		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule C or C-Linear

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.