



# Plibrico Company, LLC

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# Technical Data Sheet

## Plibrico 55 S

Product # 10011

Available Internationally As:

Plico 55 S

### Product Description:

A super duty, phosphate bonded plastic refractory.

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

**Shelf Life:** 4 months

**Service Limit:** 3000 °F 1650 °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:** 154 pcf 2467 kg/m<sup>3</sup>

**Minimum Time To Firing:** 0 hr

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

12 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	53.3	Alk	0.6	MgO	0.2
SiO <sub>2</sub>	40.6	TiO <sub>2</sub>	1.7	ZrO <sub>2</sub>	
CaO	0.2	P <sub>2</sub> O <sub>5</sub>	2.7	Other	
Fe <sub>2</sub> O <sub>3</sub>	0.7	SiC			

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

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

3.2 x 10<sup>-6</sup> in/in/°F / 5.8 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	7.3	1.1
1000°F / 540°C	7.5	1.1
1500°F / 815°C	8.1	1.2
2000°F / 1090°C	9.1	1.3

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	-0.5	1350	9.0	900	6.2		
1500	820	-0.6	3000	21.0	1200	8.3	1800	12.4
2000	1090	-0.7			1500	10.3	1000	6.9
2500	1370	-0.2			1900	13.1	600	4.1
3000	1650	-0.8			3200	22.1		

Other Data: Material ordered in either Stiff (SF), Standard (SD), or Export (EX) workability.

Release Date: 30 Nov 2016

Heat Up Guide: Schedule A

ASTM Class: C 673 Super Duty  
 Plastic Refractory

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.