



# Plibrico Company, LLC

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# Technical Data Sheet Plicast Firehearth

Product # 14034

Available Internationally As: Plico Castable Firehearth

### Product Description:

A low duty, fireclay castable formulated for application in fireplaces and wood burning stoves. Suitable for both poured in place linings and precast lining components.

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

**Shelf Life:** 12 months

**Service Limit:** 1800 °F 980 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 118 pcf 1890 kg/m<sup>3</sup>

**Bulk Density - To Place:** 118 pcf 1890 kg/m<sup>3</sup>

**Minimum Time To Firing:** 24 hr

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

N/A cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	33.5	Alk	0.7	MgO	0.8
SiO <sub>2</sub>	45.8	TiO <sub>2</sub>	1.8	ZrO <sub>2</sub>	
CaO	16.2	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	1.5	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	12.5	3.3	3.1
	max	14.4	3.8	3.6
Pumping	min			
	max			

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

3.0 x 10<sup>-6</sup> in/in/°F / 5.4 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	5.2	0.7
1000°F / 540°C	5.3	0.8
1500°F / 815°C	5.5	0.8
2000°F / 1090°C		

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	4000	28.0	950	6.6		
1000	540	-0.2			500	3.4	800	5.5
1500	820	-0.3	1000	6.9	175	1.2	200	1.4
1800	980	-0.5			150	1.0	150	1.0

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule B

ASTM Class: Regular 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.