



# Plibrico Company, LLC

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# Technical Data Sheet Plicast Floor Guard

Product # 14270

Available Internationally As: Plico Castable Floor Guard

### Product Description:

A spall resistant, fireclay castable designed for hot flooring and splash pads around furnaces. Develops full hydraulic strength after 48 hr cure but can be used in as little as 16 hr with reduced cured strength (see "Other data").

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

**Shelf Life:** 12 months

**Service Limit:** 2000 °F 1090 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 128 pcf 2051 kg/m<sup>3</sup>

**Bulk Density - To Place:** 128 pcf 2051 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>	32.0	Alk	0.6	MgO	0.8
SiO <sub>2</sub>	47.6	TiO <sub>2</sub>	1.6	ZrO <sub>2</sub>	
CaO	16.2	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	1.4	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	9.1	2.4	2.3
	max	10.6	2.8	2.7
Pumping	min	10.2	2.7	2.6
	max	12.1	3.2	3.0

**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	6.5	0.9
1000°F / 540°C	6.6	1.0
1500°F / 815°C	6.8	1.0
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	0.0	9000	62.0	1700	11.7		
500	260	-0.1	6500	45.0	1250	8.6		
1000	540	-0.2	5500	37.9	1000	6.9		
1500	820	-0.3	3000	20.7	500	3.4		
1800	980	-0.4	2000	13.8	250	1.7		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide:

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.