



# Plibrico Company, LLC

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# Technical Data Sheet

## Plibrico SiC 80

Product # 10075

Available Internationally As:

Plico SiC 80

### Product Description:

An 80% silicon carbide based phosphate bonded plastic refractory.

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

**Shelf Life:** 6 months

**Service Limit:** 2700 °F 1480 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 150 pcf 2403 kg/m<sup>3</sup>

**Bulk Density - To Place:** 164 pcf 2627 kg/m<sup>3</sup>

**Minimum Time To Firing:** 0 hr

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

22 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	7.0	Alk	0.1	MgO	0.2
SiO <sub>2</sub>	8.7	TiO <sub>2</sub>	0.1	ZrO <sub>2</sub>	
CaO	0.2	P <sub>2</sub> O <sub>5</sub>	3.0	Other	
Fe <sub>2</sub> O <sub>3</sub>	0.2	SiC	80.5		

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	62.3	8.97
1000°F / 540°C	54.3	7.82
1500°F / 815°C	48.9	7.04
2000°F / 1090°C	46.2	6.65

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	-0.4	1500	10.0	800	5.5		
1500	820	-0.7	3000	21.0	1100	7.6	1700	11.7
2000	1090	-0.4			1100	7.6	1300	9.0
2500	1370	-0.3			2000	13.8	900	6.2
2700	1480	-1.0			3200	22.1		

**Other Data:** Material ordered in either Stiff (SF), Standard (SD), or Export (EX) workability. PREVENT MATERIAL FROM FREEZING: During cold weather this material must be shipped and stored in a warm place to prevent freezing. In warm weather, store in a cool dry place to prevent drying out.

Release Date: 1 Aug 2019

Heat Up Guide: Schedule A

ASTM Class:

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.