



# Plibrico Company, LLC

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# Technical Data Sheet

## Plibrico SR-85

Product # 10085

Available Internationally As:

Plico SR-85

### Product Description:

An 85% alumina, bauxite based, soft, fine grained phosphate bonded plastic designed for thin applications and to patch and repair existing linings. Non wetting to aluminum alloys.

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

**Shelf Life:** 4 months

**Service Limit:** 3300 °F 1820 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 165 pcf 2643 kg/m<sup>3</sup>

**Bulk Density - To Place:** 180 pcf 2884 kg/m<sup>3</sup>

**Minimum Time To Firing:** 0 hr

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

5 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	82.7	Alk	0.1	MgO	0.1
SiO <sub>2</sub>	11.7	TiO <sub>2</sub>	1.2	ZrO <sub>2</sub>	
CaO	0.1	P <sub>2</sub> O <sub>5</sub>	2.8	Other	
Fe <sub>2</sub> O <sub>3</sub>	1.3	SiC			

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

### Coefficient of Thermal Expansion (reversible):

4.5 x 10<sup>-6</sup> in/in/°F / 8.1 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	11.5	1.7
1000°F / 540°C	10.6	1.5
1500°F / 815°C	10.7	1.5
2000°F / 1090°C	11.9	1.7

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	-0.8	2500	17.0	1250	8.6		
1500	820	-0.6	6000	41.0	1500	10.3	1900	13.1
2000	1090	-0.7			2400	16.6	900	6.2
2500	1370	0.5			2500	17.2	500	3.4
3000	1650	-20.0			2800	19.3		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule A

ASTM Class: C 673 85% Alumina

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.