

**Plico Castable A-S SiC 50 KK**

Product Number 14919

Date 2/10/2014

**Product Description**

A high hot strength, 50% silicon carbide, aluminum resistant, refractory castable for aluminum contact application.

**Typical Aluminum Applications**

Aluminum melting & holding furnaces: lower sidewalls, hearths, and ramps. Transfer ladles and troughs.

**Service limit -** 2800°F 1537 °C

**Std. package** 55 # / 25 kg Bag

**Al contact limit -** 2000 °F 1093°C

**Water range per std. package:**

**Density to place** 158 pcf 2,531 kg/m<sup>3</sup>

**Casting** 1.4 to 1.8 qts 1.3 to 1.6 l

**Density in service** 158 pcf 2,531 kg/m<sup>3</sup>

**Pumping** 1.6 to 1.9 qts 1.6 to 1.8 l

**Min time before firing** 16 hr

**Chemistry % (calcined)**

Al <sub>2</sub> O <sub>3</sub>	26.8	P <sub>2</sub> O <sub>5</sub>	
SiO <sub>2</sub>	13.6	Alk.	0.1
Fe <sub>2</sub> O <sub>3</sub>	0.4	MgO	
CaO	1.5	SiC	48.7
TiO <sub>2</sub>	0.6	ZrO <sub>2</sub>	
		Other	8.1

**Thermal Conductivity**

	btu*in/hr*ft <sup>2</sup> *F	w/m°C
<b>500F / 260C</b>	37.1	5.34
<b>1000F / 540C</b>	36.6	5.27
<b>1500F / 815C</b>	36.5	5.25
<b>2000F / 1090C</b>		0

**Abrasion Loss**

per ASTM C 704  
after 1500 F

8 cc

**Coefficient of Thermal Expansion**

(reversible)

3.1 x 10<sup>-6</sup> in/in F

5.5 x 10<sup>-6</sup> m/m C

Temperature per <u>ASTM C113 / C865</u>	Linear Change per <u>ASTM C113 / C179</u>	Cold MOR		CCS		Hot MOR	
		per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C583 <u>psi</u>	<u>MPa</u>
230 F / 110 C	0.0%	1800	12.4	7000	48		
1500 F / 815 C	-0.2%	2000	13.8	7500	52	3200	22.1
1800 F / 980 C			0.0		0	3600	24.8
2000 F / 1090 C			0.0		0	2600	17.9
			0.0		0		0.0

**Other Data**

**Heat Up Guide**

Schedule AT AS or AT AS Linear

**ASTM Class**

Low Cement Castable

**Note:**

All data are averaged results of ASTM tests (where applicable) on laboratory cast 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 / testing changes. Please consult your Plico representative to make sure you have the most current data.

*Plico Refractories are manufactured by Plibrico Company LLC, USA.*