



# Plibrico Company, LLC

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# Technical Data Sheet Plicast Al-Tuff Y69B KK

Product # 14217

Available Internationally As: Plico Castable A-T Y69B KK

### Product Description:

A 75% silicon carbide, aluminum non-wetting, high hot strength, low cement castable. May be vibration cast, cast or pumped.

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

**Shelf Life:** 6 months

**Service Limit:** 2800 °F 1540 °C

**Contact Limit:** 1700 °F 927 °C

**Bulk Density - In Service:** 158 pcf 2531 kg/m<sup>3</sup>

**Bulk Density - To Place:** 158 pcf 2531 kg/m<sup>3</sup>

**Minimum Time To Firing:** 16 hr

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

7 cc

### Chemistry (calcined) %

Al <sub>2</sub> O <sub>3</sub>	13.8	Alk	0.2	MgO	
SiO <sub>2</sub>	7.1	TiO <sub>2</sub>	0.1	ZrO <sub>2</sub>	
CaO	2.5	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	0.2	SiC	76.2		

Water Range Per Standard Package		%	Quarts	Liters
<b>Vib Casting</b>	min			
	max			
<b>Casting</b>	min	5.6	1.5	1.4
	max	6.4	1.7	1.6
<b>Pumping</b>	min	6.4	1.7	1.6
	max	7.2	1.9	1.8

### Coefficient of Thermal Expansion (reversible):

3.3 x 10<sup>-6</sup> in/in/°F / 5.9 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	60.0	8.6
1000°F / 540°C	55.0	7.9
1500°F / 815°C	48.0	6.9
2000°F / 1090°C	46.0	6.6

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	8000	55.0	2000	13.8		
1000	540	-0.1			3000	20.7	3400	23.4
1500	820	-0.2	9000	62.1	3800	26.2	5000	34.5

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule AT AS or AT AS

ASTM Class: Low Cement 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.