



# Plibrico Company, LLC

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# Technical Data Sheet Plicast Al-Shield BTR 6 KK

Product # 14926

Available Internationally As:

Plico Castable A-S BTR 6 KK

### Product Description:

An aluminum resistant, high hot strength, low cement, mullite based castable for aluminum furnace contact applications with excellent resistance to reactive and fluid aluminum alloys.

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

**Shelf Life:** 6 months

**Service Limit:** 2800 °F 1540 °C

**Contact Limit:** 2000 °F 1093 °C

**Bulk Density - In Service:** 157 pcf 2515 kg/m<sup>3</sup>

**Bulk Density - To Place:** 157 pcf 2515 kg/m<sup>3</sup>

**Minimum Time To Firing:** 16 hr

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

9 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	57.1	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	29.1	TiO <sub>2</sub>	1.4	ZrO <sub>2</sub>	
CaO	1.7	P <sub>2</sub> O <sub>5</sub>		Other	9.5
Fe <sub>2</sub> O <sub>3</sub>	0.8	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	5.6	1.5	1.4
	max	6.6	1.7	1.7
Pumping	min	6.4	1.7	1.6
	max	7.6	2.0	1.9

**Coefficient of Thermal Expansion (reversible):**

3.4 x 10<sup>-6</sup> in/in/°F / 6.1 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	10.7	1.5
1000°F / 540°C	11.4	1.6
1500°F / 815°C	12.0	1.7
2000°F / 1090°C	12.8	1.8

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	6000	41.0	1500	10.3		
1500	820	-0.2	6000	41.0	1700	11.7	3000	20.7
1800	980	-0.3			1950	13.4	4000	27.6
2000	1090	0.1			2200	15.2	2900	20.0

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule AT AS or AT AS Linear

ASTM Class: C 401 Class D

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.