



Plibrico Company, LLC

1935 Techny Road - Unit 16
 Northbrook, IL 60062
 (312) 337-9000
 www.plibrico.com

Technical Data Sheet Plicast Al-Shield BC KK

Product # 14922

Available Internationally As:

Plico Castable A-S BC KK

Product Description:

A bauxite based, coarse aggregate, aluminum resistant, low cement castable with a mullite and silicon carbide fortified matrix. Maintains excellent hot strength through elevated temperatures.

Standard Packaging: 1250 # / 568 kg Bag

Shelf Life: 6 months

Service Limit: 3000 °F 1650 °C

Contact Limit: 2000 °F 1093 °C

Bulk Density - In Service: 172 pcf 2755 kg/m³

Bulk Density - To Place: 172 pcf 2755 kg/m³

Minimum Time To Firing: 16 hr

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

N/A cc

Chemistry (calcined) %					
Al ₂ O ₃	65.9	Alk	0.2	MgO	0.1
SiO ₂	17.2	TiO ₂	1.5	ZrO ₂	
CaO	1.6	P ₂ O ₅		Other	7.7
Fe ₂ O ₃	1.3	SiC	4.6		

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	6.0	36.1	34.1
	max	7.0	42.1	39.8
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

4.2 x 10⁻⁶ in/in/°F / 7.6 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	16.7	2.4
1000°F / 540°C	16.3	2.3
1500°F / 815°C	15.8	2.3
2000°F / 1090°C	16.5	2.4

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	8500	59.0	1800	12.4		
1500	820	-0.2	7500	52.0	1500	10.3	3000	20.7
1800	980	-0.3			1800	12.4	3200	22.1
2000	1090						3300	22.8

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule AT AS or AT AS Linear

ASTM Class: C 401 Class E

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.