



Plibrico Company, LLC

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

Technical Data Sheet Plicast Al-Shield SiC 50 KK

Product # 14919

Available Internationally As: Plico Castable A-S SiC 50 KK

Product Description:

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

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: 158 pcf 2531 kg/m³

Bulk Density - To Place: 158 pcf 2531 kg/m³

Minimum Time To Firing: 16 hr

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

8 cc

Chemistry (calcined) %					
Al ₂ O ₃	26.8	Alk	0.1	MgO	
SiO ₂	13.6	TiO ₂	0.6	ZrO ₂	
CaO	1.5	P ₂ O ₅		Other	8.1
Fe ₂ O ₃	0.4	SiC	48.7		

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	5.2	1.4	1.3
	max	6.4	1.7	1.6
Pumping	min	6.4	1.7	1.6
	max	7.2	1.9	1.8

Coefficient of Thermal Expansion (reversible):

3.1 x 10⁻⁶ in/in/°F / 5.6 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	37.1	5.3
1000°F / 540°C	36.6	5.3
1500°F / 815°C	36.5	5.3
2000°F / 1090°C		

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	7000	48.0	1800	12.4		
1500	820	-0.2	7500	52.0	2000	13.8	3200	22.1
1800	980						3600	24.8
2000	1090						2600	17.9

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.