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Technical Data Sheet Plicast Al-Shield SiC A KK

Product # 14918

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

Product Description:

A high hot strength, 70% 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: 160 pcf 2563 kg/m³

Bulk Density - To Place: 160 pcf 2563 kg/m³

Minimum Time To Firing: 16 hr

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

5 cc

Chemistry (calcined) %					
Al ₂ O ₃	14.6	Alk	0.1	MgO	
SiO ₂	6.9	TiO ₂	0.1	ZrO ₂	
CaO	1.5	P ₂ O ₅		Other	8.1
Fe ₂ O ₃	0.2	SiC	68.2		

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	4.8	1.3	1.2
	max	6.4	1.7	1.6
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

3.2 x 10⁻⁶ in/in/°F / 5.8 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	50.0	7.2
1000°F / 540°C	45.0	6.5
1500°F / 815°C	42.0	6.0
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	10000	69.0	2200	15.2		
1500	820	-0.2	9500	66.0	2000	13.8	4000	27.6
1800	980						4100	28.3
2000	1090						3200	22.1

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.