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Technical Data Sheet Plicast Al-Shield 75B KK

Product # 14925

Available Internationally As:

Plico Castable A-S 75B KK

Product Description:

An aluminum resistant, high strength, low cement, bauxite based castable for both aluminum furnace contact and non-contact applications. Maintains hot strength at elevated temperature and has good thermal shock resistance.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 3000 °F 1650 °C

Contact Limit: 2000 °F 1093 °C

Bulk Density - In Service: 175 pcf 2804 kg/m³

Bulk Density - To Place: 175 pcf 2804 kg/m³

Minimum Time To Firing: 16 hr

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

9 cc

Chemistry (calcined) %					
Al ₂ O ₃	73.9	Alk	0.2	MgO	0.1
SiO ₂	14.1	TiO ₂	1.3	ZrO ₂	
CaO	1.6	P ₂ O ₅	0.1	Other	7.5
Fe ₂ O ₃	1.3	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	5.9	1.6	1.5
	max	6.9	1.8	1.7
Pumping	min	6.4	1.7	1.6
	max	7.6	2.0	1.9

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	5000	34.0	1100	7.6		
1500	820	-0.2	5500	38.0	1050	7.2	2800	19.3
1800	980	-0.3			1700	11.7	3200	22.1
2000	1090	-0.4			1700	11.7	2700	18.6
2300	1260	-0.3			2400	16.6	1500	10.3

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.