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Technical Data Sheet Plicast Al-Shield H8SD KK

Product # 14280

Available Internationally As:

Plico Plibrico A-S H8SD KK

Product Description:

A high alumina, high strength aluminum resistant refractory castable. Preliminary Data.

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: 180 pcf 2884 kg/m³

Bulk Density - To Place: 180 pcf 2884 kg/m³

Minimum Time To Firing: 16 hr

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

6 cc

Chemistry (calcined) %					
Al ₂ O ₃	82.6	Alk	0.3	MgO	
SiO ₂	4.2	TiO ₂		ZrO ₂	
CaO	3.0	P ₂ O ₅		Other	9.7
Fe ₂ O ₃	0.1	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	5.2	1.4	1.3
	max	6.2	1.6	1.6
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

5.0 x 10⁻⁶ in/in/°F / 9.0 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	25.0	3.6
1000°F / 540°C	20.3	2.9
1500°F / 815°C	17.6	2.5
2000°F / 1090°C	17.8	2.6

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	11000	76.0	2100	14.5		
1500	820	-0.3	10000	69.0	2500	17.2	3000	20.7
1800	980	-0.4			2200	15.2	2000	13.8

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule AT AS or AT AS Linear

ASTM Class: C 401 Class E

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.