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Technical Data Sheet Plicast Al-Rezist 80 C KK

Product # 3304

Available Internationally As: Plico Castable Al-Rezist 80 C KK

Product Description:

An 80% alumina, bauxite based, low cement castable. With an advanced multi-component additive system, Plicast Al-Rezist 80 C KK offers excellent aluminum resistance at elevated temperatures.

Standard Packaging: 50 # / 23 kg Bag

Shelf Life: 6 months

Service Limit: 3000 °F 1650 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 170 pcf 2723 kg/m³

Bulk Density - To Place: 170 pcf 2723 kg/m³

Minimum Time To Firing: 16 hr

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

3 cc

Chemistry (calcined) %					
Al ₂ O ₃	77.4	Alk	0.1	MgO	
SiO ₂	8.6	TiO ₂	1.9	ZrO ₂	
CaO	2.1	P ₂ O ₅		Other	7.3
Fe ₂ O ₃	0.7	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	5.3	1.4	1.3
	max	6.0	1.6	1.5
Casting	min	6.0	1.6	1.5
	max	6.7	1.8	1.7
Pumping	min	6.5	1.7	1.6
	max	7.2	1.9	1.8

Coefficient of Thermal Expansion (reversible):

4.4 x 10⁻⁶ in/in/°F / 7.9 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	15.7	2.26
1000°F / 540°C	15.3	2.20
1500°F / 815°C	14.8	2.13
2000°F / 1090°C	15.5	2.23

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		
1000	540	-0.1			1500	10.3		
1500	820	-0.2	11000	75.9	1700	11.7	1800	12.4
1800	980	-0.3			1800	12.4	1500	10.3
2000	1090	-0.4			2000	13.8	1000	6.9

Other Data: Course aggregate mixing instructions if required: Per 50 lb package: mix one 44 lb bag with 6 lb of aggregate, per 500 lb package, mix one 440 lb bag with one 60 lb bag of aggregate. Any package larger than 500 lb will have the coarse aggregate inside of the bulk bag.

Release Date: 1 Jun 2022

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.