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Plico Refractories

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Technical Data Sheet

Plico Castable LC 80 C KK

Product # 3215

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Product Description

A coarse grain, bauxite based, low cement castable with excellent resistance to thermal cycling, impact and fracture.

Water Range per Std. Package

	<u>%</u>	<u>gts</u>	<u>liters</u>
Vib Cast			
min	5.4	33.8	31.9
max	6.2	38.8	36.7
Casting			
min	6.2	38.8	36.7
max	7.0	43.8	41.4
Pumping			
min			
max			

Service Limit Bulk Density: In Service To Place

3100 °F	pcf	168	168
1700 °C	kg/m ³	2691	2691

Standard Packaging

1300 # / 591 kg Super Sack

Min. Time Before Firing: 16 hr

Chemistry (calcined) - %

Al ₂ O ₃	81.1	Alk	0.2	MgO	0.3
SiO ₂	12.8	TiO ₂	2.4	ZrO ₂	
CaO	2.0	P ₂ O ₅		Other	
Fe ₂ O ₃	1.2	SiC			

Abrasion Loss
 per ASTM C704
 cc after
 1500°F / 815°C
 6

Thermal Conductivity

	<u>btu*in/hr*ft²*°F</u>	<u>w/m°C</u>
500°F / 260°C	14.1	2.0
1000°F / 540°C	13.6	2.0
1500°F / 815°C	13.6	2.0
2000°F / 1090°C	14.1	2.0

Coefficient of Thermal Expansion (reversible):

4.3 x 10⁻⁶ in/in/°F / 7.7 x 10⁻⁶ mm/mm/°C

<u>Temperature</u>		<u>Linear Change</u> <u>%</u> per ASTM C113	<u>CCS</u> per ASTM C133		<u>Cold MOR</u> per ASTM C133		<u>Hot MOR</u> per ASTM C583	
<u>°F</u>	<u>°C</u>		<u>psi</u>	<u>MPa</u>	<u>psi</u>	<u>MPa</u>	<u>psi</u>	<u>MPa</u>
230	110	0.0	6500	45.0	1750	12.1		
1500	820	-0.2	8500	59.0	2400	16.6	3000	20.7
1800	980	-0.3			2500	17.2	3300	22.8
2000	1090						3000	20.7
2500	1370						900	6.2

Other data

Heat Up Guide: Schedule AT AS or AT AS

ASTM Class C 401 Class F

Low Cement Castable

Note:

All data are averaged results of ASTM tests (where applicable) on laboratory cast 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.