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Plico Refractories

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Technical Data Sheet

Plico Castable A-T 80 C KK

Product # 03176

Date 12/27/2017

Product Description

A coarse grain, bauxite based, non-wetting 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	32.5
	max	6.0	36.1
Casting	min	6.0	36.1
	max	7.0	42.1
Pumping	min		
	max		

Service Limit Al Contact Limit Bulk Density: In Service To Place

3100 °F	1700 °F	pcf	170	170
1700 °C	930 °C	kg/m ³	2723	2723

Standard Packaging

1250 # / 568 kg Super Sack

Min. Time Before Firing: 16 hr

Chemistry (calcined) - %

Al ₂ O ₃	80.9	Alk	0.2	MgO	0.3
SiO ₂	12.1	TiO ₂	2.4	ZrO ₂	
CaO	2.8	P ₂ O ₅		Other	
Fe ₂ O ₃	1.2	SiC			

Abrasion Loss
 per ASTM C704
 cc after
 1500°F / 815°C
 5

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> % 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	10000	69	2400	17		
1500	820	-0.2	10500	72	2500	17	3900	27
1800	980	-0.3			2400	17	3500	24

Other data

Heat Up Guide: Schedule AT AS or AT AS

ASTM Class C 401 Class F

Low Cement Castable

Note:

All data averaged from ASTM tests (where applicable) on specimens cut from oversized laboratory cast samples. 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.