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Plico Refractories

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Technical Data Sheet

Plico Castable A-T Floor Guard HT

Product Number 3247

Date 12/10/2018

Product Description

A spall resistant, fireclay castable designed for hot flooring and splash pads around furnaces. Develops full hydraulic strength after 48 hr cure but can be used in as little as 16 hr with reduced cured strength (see "Other data").

Service limit - 2000°F 1093 °C

Density to place 128 pcf 2,050 kg/m³

Density in service 128 pcf 2,051 kg/m³

Min time before firing 24 hr

Std. package 55 # / 25 kg Bag

Water range per std. package:

Casting 2.40 to 2.80 qts 2.27 to 2.64 l

Pumping 2.70 to 3.20 qts 2.55 to 3.02 l

Chemistry % (calcined)

Al ₂ O ₃	32.0	P ₂ O ₅	
SiO ₂	47.6	Alk.	0.6
Fe ₂ O ₃	1.4	MgO	0.8
CaO	16.2	SiC	
TiO ₂	1.6	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	6.5	0.93
1000F / 540C	6.6	0.95
1500F / 815C	6.8	0.97
2000F / 1090C		0

Abrasion Loss

per ASTM C 704
after 1500 F

cc

Coefficient of Thermal Expansion
(reversible)

3 x 10⁻⁶ in/in F
5.4 x 10⁻⁶ m/m C

Temperature per ASTM C113 / C865	Linear Change per ASTM C113 / C179	Cold MOR		CCS		Hot MOR	
		per ASTM C133 psi	MPa	per ASTM C133 psi	MPa	per ASTM C583 psi	MPa
230 F / 110 C	0.0%	1700	11.7	9000	62		
500 F / 260 C	-0.1%	1250	8.6	6500	45		0.0
1000 F / 540 C	-0.2%	1000	6.9	5500	38		0.0
1500 F / 815 C	-0.3%	500	3.4	3000	21		0.0
1800 F / 980 C	-0.4%	250	1.7	2000	14		0.0

Other Data

CCS: 16 hr cure - 3500psi 24 hr cure - 5000psi 48 hr cure - 7200psi
 ASTM C 704 Abrasion Loss - 6 cc dried 8 cc after 500F

Heat Up Guide

N/A

ASTM Class

C 401 Class C

Regular 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 / testing changes. Please consult your Plibrico representative to make sure you have the most current data.