

Plico Castable Si-Bond SD

Product Number 14780

Date 2/10/2014

Product Description

A super duty, high hot strength, cement free castable with excellent alkali and acid resistance.

Service limit - 2900°F 1,593 °C

Std. package 55 # / 25 kg Bag

Density to place 145 pcf 2,322 kg/m³

Water range per std. package:

Density in service 145 pcf 2,323 kg/m³

Casting 1.4 to 1.7 qts 1.3 to 1.6 l

Min time before firing 24 hr

Pumping to qts 0.0 to 0.0 l

Chemistry % (calcined)

Al ₂ O ₃	49.2	P ₂ O ₅	
SiO ₂	47.5	Alk.	0.5
Fe ₂ O ₃	0.8	MgO	0.1
CaO	0.2	SiC	
TiO ₂	1.8	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	7.9	1.13
1000F / 540C	8.1	1.16
1500F / 815C	8.3	1.19
2000F / 1090C	8.6	1.23

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
	0.0%	475	3.3	2000	14		
	-0.1%	500	3.4	2500	17	900	6.2
	-0.2%	1000	6.9		0	1800	12.4
	-0.3%	2200	15.2		0	2500	17.2
	0.2%	2700	18.6		0	900	6.2

Other Data

Heat Up Guide

Schedule E

ASTM Class

C 401 Class E

No 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 / testing changes. Please consult your Plico representative to make sure you have the most current data.

Plico Refractories are manufactured by Plibrico Company LLC, USA.