

Plico Castable Si-Bond B

Product Number 14778

Date 2/10/2014

Product Description

An 80% alumina, bauxite based, low porosity, cement free castable.

Service limit - 3200°F 1,760 °C

Density to place 172 pcf 2,755 kg/m³

Density in service 172 pcf 2,755 kg/m³

Min time before firing 24 hr

Std. package 55 # / 25 kg Bag

Water range per std. package:

Casting 1.4 to 1.7 qts 1.3 to 1.6 l

Pumping to qts 0.0 to 0.0 l

Chemistry % (calcined)

Al ₂ O ₃	78.2	P ₂ O ₅	
SiO ₂	18.1	Alk.	0.2
Fe ₂ O ₃	1.4	MgO	0.1
CaO	0.1	SiC	
TiO ₂	1.9	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	11.7	1.68
1000F / 540C	12.2	1.75
1500F / 815C	12.6	1.81
2000F / 1090C	12.8	1.84

Abrasion Loss

per ASTM C 704
after 1500 F

9 cc

Coefficient of Thermal Expansion
(reversible)

4.1 x 10⁻⁶ in/in F

7.3 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%	650	4.5	2000	14		
1500 F / 815 C	-0.1%	1100	7.6	4500	31	1400	9.7
1800 F / 980 C	-0.1%	1800	12.4		0	3100	21.4
2000 F / 1090 C	-0.2%	2900	20.0		0	4400	30.3
2500 F / 1370 C	0.3%	3600	24.8		0	1100	7.6

Other Data

Heat Up Guide

Schedule E

ASTM Class

C 401 Class G

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.