



Plibrico Company, LLC
Plico Refractories

1935 Techny Road - Unit 16
 Northbrook, IL 60062
 Phone: 312-337-9000 Fax: 312-337-9003
 www.plico-refractories.com.com

Technical Data Sheet

Plico Shotcrete Si-Bond B

Product # 3178

21 Nov 2016

Product Description

Aa 80% alumina, bauxite based, low porosity, cement free castable formulated shotcrete application.

Water Range per Std. Package

	<u>%</u>	<u>gts</u>	<u>liters</u>
Vib Cast			
min			
max			
Casting			
min			
max			
Pumping			
min	6.2	1.6	1.6
max	7.1	1.9	1.8

Service Limit Bulk Density: In Service To Place

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

Standard Packaging

55 # / 25 kg Bag

Min. Time Before Firing: 4 hr

Chemistry (calcined) - %

Al ₂ O ₃	78.1	Alk	0.2	MgO	0.1
SiO ₂	18.2	TiO ₂	1.9	ZrO ₂	
CaO	0.1	P ₂ O ₅		Other	
Fe ₂ O ₃	1.4	SiC			

Abrasion Loss

per ASTM C704
 cc after
 1500°F / 815°C
 9

Thermal Conductivity

	<u>btu*in/hr*ft²*°F</u>	<u>w/m°C</u>
500°F / 260°C	9.5	1.4
1000°F / 540°C	9.8	1.4
1500°F / 815°C	10.0	1.4
2000°F / 1090°C	10.1	1.5

Coefficient of Thermal Expansion (reversible):

4.1 x 10⁻⁶ in/in/°F / 7.4 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	3500	24.0	825	5.7		
1500	820	-0.1	4500	31.0	1000	6.9	1400	9.7
1800	980	-0.2			1600	11.0	2800	19.3
2000	1090	-0.3			2500	17.2	3200	22.1
2500	1370	0.4			2900	20.0	950	6.6

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 shotcreted 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.