

Plico Castable Si-Bond M

Product Number 14781

Date 2/10/2014

Product Description

A 60% alumina, mullite based, low porosity, cement free castable.

Service limit - 3100°F 1,704 °C

Std. package 55 # / 25 kg Bag

Density to place 152 pcf 2,435 kg/m³

Water range per std. package:

Density in service 152 pcf 2,435 kg/m³

Casting 1.6 to 1.8 qts 1.5 to 1.6 l

Min time before firing 24 hr

Pumping 1.7 to 1.9 qts 1.6 to 1.8 l

Chemistry % (calcined)

Al ₂ O ₃	59.3	P ₂ O ₅	
SiO ₂	37.7	Alk.	0.1
Fe ₂ O ₃	0.9	MgO	0.1
CaO	0.1	SiC	
TiO ₂	1.8	ZrO ₂	
		Other	

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	9.5	1.36
1000F / 540C	9.8	1.41
1500F / 815C	10.0	1.44
2000F / 1090C	10.1	1.45

Abrasion Loss

per ASTM C 704
after 1500 F

10 cc

Coefficient of Thermal Expansion

(reversible)

3.5 x 10⁻⁶ in/in F

6.3 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	2500	17		
1500 F / 815 C	-0.1%	1000	6.9	4500	31	1500	10.3
1800 F / 980 C	-0.2%	1500	10.3		0	3500	24.1
2000 F / 1090 C	-0.2%	2500	17.2		0	4500	31.0
2500 F / 1370 C	0.2%	3000	20.7		0	1200	8.3

Other Data

Heat Up Guide

Schedule E

ASTM Class

C 401 Class F

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.