

Plico SR 90

Product Number 12011

Date 2/10/2014

Product Description

A 90% alumina, soft, fine grained phosphate bonded plastic designed for thin applications and to patch and repair existing linings. Non wetting to aluminum alloys.

Service limit - 3400°F 1,871 °C

Std. package 55 # / 25 kg Carton

Density to place 187 pcf 2,995 kg/m³

Water range per std. package:

Density in service 172 pcf 2,755 kg/m³

Casting to qts 0.0 to 0.0 l

Min time before firing none

Pumping to qts 0.0 to 0.0 l

Chemistry % (calcined)

Al ₂ O ₃	87.6	P ₂ O ₅	2.7
SiO ₂	7.8	Alk.	0.2
Fe ₂ O ₃	0.7	MgO	0.1
CaO	0.1	SiC	
TiO ₂	0.7	ZrO ₂	
Other			

Thermal Conductivity

	btu*in/hr*ff ² *°F	w/m°C
500F / 260C	17.1	2.46
1000F / 540C	15.4	2.21
1500F / 815C	14.4	2.07
2000F / 1090C	14.5	2.08

Abrasion Loss

per ASTM C 704
after 1500 F

5 cc

Coefficient of Thermal Expansion

(reversible)

4.9 x 10⁻⁶ in/in F

8.8 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	-0.9%	1200	8.3	2800	19		
1500 F / 815 C	-1.1%	1800	12.4	7000	48	2800	19.3
2000 F / 1090C	-1.2%	2200	15.2		0	1200	8.3
2500 F / 1370 C	-0.7%	2500	17.2		0	400	2.8
3000 F / 1650 C	-1.3%	3000	20.7		0		0.0

Other Data

Heat Up Guide

Schedule A

ASTM Class

C 673 90% Alumina

Plastic Refractory

Note:

All data are averaged results of ASTM tests (where applicable) on laboratory pressed 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.