

Plico Castable A-S GHC 8 KK

Product Number 14916

Date 2/10/2014

Product Description

An 80% alumina, bauxite based, low cement castable with excellent aluminum resistance at elevated temperatures.

Typical Aluminum Applications

Furnace lower sidewalls and belly bands. Transfer ladles.

Service limit - 3000°F 1648 °C

Std. package 55 # / 25 kg Bag

Al contact limit - 2000 °F 1093°C

Water range per std. package:

Density to place 170 pcf 2,723 kg/m³

Casting 1.6 to 1.8 qts 1.5 to 1.6 l

Density in service 170 pcf 2,723 kg/m³

Pumping 1.7 to 1.9 qts 1.6 to 1.8 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	77.7	P ₂ O ₅	
SiO ₂	10.1	Alk.	0.1
Fe ₂ O ₃	1.1	MgO	
CaO	1.6	SiC	
TiO ₂	1.1	ZrO ₂	
		Other	7.7

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	15.7	2.26
1000F / 540C	15.3	2.2
1500F / 815C	14.8	2.13
2000F / 1090C	15.5	2.23

Abrasion Loss

per ASTM C 704
after 1500 F

8 cc

Coefficient of Thermal Expansion

(reversible)

4.4 x 10⁻⁶ in/in F

7.9 x 10⁻⁶ m/m C

Temperature per <u>ASTM C113 / C865</u>	Linear Change per <u>ASTM C113 / C179</u>	Cold MOR		CCS		Hot MOR	
		per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C133 <u>psi</u>	<u>MPa</u>	per ASTM C583 <u>psi</u>	<u>MPa</u>
230 F / 110 C	0.0%	2200	15.2	9000	62		
1000 F / 540 C	-0.2%	1400	9.7		0	2100	14.5
1500 F / 815 C	-0.2%	1600	11.0	9000	62	2800	19.3
1800 F / 980 C	-0.3%	1600	11.0		0	2300	15.9
2000 F / 1090 C	-0.4%	1300	9.0		0	2000	13.8

Other Data

Heat Up Guide

Schedule AT AS or AT AS Linear

ASTM Class

C 401 Class E

Low 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.