



Plico Refractories

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Technical Data Sheet

Plico Shotcrete A-S GHC 7 KK

Product Number 15257

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Product Description

A 70% alumina, mullite based, aluminum resistant shotcrete castable.

Typical Aluminum Applications

Aluminum melting and holding furnace repairs: lower & upper sidewalls, division walls. Transfer ladles.

Service limit - 3000°F 1648 °C

Std. package 55 # / 25 kg Bag

Al contact limit - 1800 °F 982 °C

Water range per std. package:

Density to place 160 pcf 2,563 kg/m³

Casting to qts 0.0 to 0.0 l

Density in service 160 pcf 2,563 kg/m³

Pumping 1.6 to 2.0 qts 1.6 to 1.9 l

Min time before firing 16 hr

Chemistry % (calcined)

Al ₂ O ₃	70.1	P ₂ O ₅	
SiO ₂	18.1	Alk.	0.2
Fe ₂ O ₃	1.3	MgO	0.1
CaO	3.2	SiC	
TiO ₂	1.4	ZrO ₂	
		Other	5.6

Thermal Conductivity

	btu*in/hr*ft ² *°F	w/m°C
500F / 260C	10.7	1.54
1000F / 540C	11.3	1.62
1500F / 815C	12.0	1.72
2000F / 1090C	12.6	1.81

Abrasion Loss

per ASTM C 704
after 1500 F

cc

Coefficient of Thermal Expansion

(reversible)

3.7 x 10⁻⁶ in/in F

6.6 x 10⁻⁶ m/m C

Temperature per ASTM C113 / C865	Linear Change per ASTM C113 / C179	Cold MOR per ASTM C133		CCS per ASTM C133		Hot MOR per ASTM C583	
		psi	MPa	psi	MPa	psi	MPa
230 F / 110 C	0.0%	1400	9.7	6500	45		
1500 F / 815 C	-0.2%	1600	11.0	5500	38	2000	13.8
1800 F / 980 C	-0.4%		0.0		0	2200	15.2
			0.0		0		0.0
			0.0		0		0.0

Other Data

Heat Up Guide

Schedule AT AS or AT AS Linear

ASTM Class

C 401 Class E

Regular 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 / 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.