



Plibrico Company, LLC

1935 Techny Road - Unit 16
 Northbrook, IL 60062
 (312) 337-9000
 www.plibrico.com

Technical Data Sheet Plicast Al-Shield GHC 8 KK

Product # 14916

Available Internationally As: Plico Castable A-S GHC 8 KK

Product Description:

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

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 3000 °F 1650 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 170 pcf 2723 kg/m³

Bulk Density - To Place: 170 pcf 2723 kg/m³

Minimum Time To Firing: 16 hr

Abrasion Loss after 1500°F / 815°C
 per ASTM C704

5 cc

Chemistry (calcined) %					
Al ₂ O ₃	77.7	Alk	0.1	MgO	
SiO ₂	10.1	TiO ₂	1.1	ZrO ₂	
CaO	1.6	P ₂ O ₅		Other	7.7
Fe ₂ O ₃	1.1	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	5.3	1.4	1.3
	max	6.0	1.6	1.5
Casting	min	6.0	1.6	1.5
	max	6.7	1.8	1.7
Pumping	min	6.5	1.7	1.6
	max	7.2	1.9	1.8

Coefficient of Thermal Expansion (reversible):

4.4 x 10⁻⁶ in/in/°F / 7.9 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	15.7	2.3
1000°F / 540°C	15.3	2.2
1500°F / 815°C	14.8	2.1
2000°F / 1090°C	15.5	2.2

Temperature		Linear Change% per ASTM C113	CCS per ASTM C133		Cold MOR per ASTM C133		Hot MOR per ASTM C583	
°F	°C		psi	MPa	psi	MPa	psi	MPa
230	110	0.0	10000	69.0	2200	15.2		
1000	540	-0.1			1500	10.3	2400	16.6
1500	820	-0.2	11000	75.9	1700	11.7	3300	22.8
1800	980	-0.3			1800	12.4	3200	22.1
2000	1090	-0.4			2000	13.8	2400	16.6

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule AT AS or AT AS Linear

ASTM Class: C 401 Class E

Low Cement Castable

Refractory material should be stored in a cool, dry environment.

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