



Plibrico Company, LLC

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Technical Data Sheet Plicast Al-Shield GHC 7 KK

Product # 14911

Available Internationally As: Plico Castable A-S GHC 7 KK

Product Description:

Plicast® Al-Shield™ GHC 7 KK is a 70% alumina, low cement castable, with a mullite aggregate and high mullite matrix. This product possess excellent aluminum resistance and improved thermal cycling performance due to the incorporation of a high temperature aluminum resistant additive system. Originally developed as a greater crack resistant material for division walls in demanding recycling furnace applications, it has proven to be a great cost effective upgrade for many

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 3000 °F 1650 °C

Contact Limit: 2000 °F 1093 °C

Bulk Density - In Service: 165 pcf 2643 kg/m³

Bulk Density - To Place: 165 pcf 2643 kg/m³

Minimum Time To Firing: 16 hr

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

8 cc

Chemistry (calcined) %

Al ₂ O ₃	69.7	Alk	0.1	MgO	0.1
SiO ₂	17.2	TiO ₂	1.4	ZrO ₂	
CaO	2.1	P ₂ O ₅		Other	8.1
Fe ₂ O ₃	1.2	SiC			

Coefficient of Thermal Expansion (reversible):

4.0 x 10⁻⁶ in/in/°F / 7.2 x 10⁻⁶ mm/mm/°C

Thermal Conductivity

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m ² *°C
500°F / 260°C	11.1	1.6
1000°F / 540°C	10.6	1.5
1500°F / 815°C	10.5	1.5
2000°F / 1090°C	10.6	1.5

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	5.6	1.5	1.4
	max	6.2	1.6	1.6
Casting	min	6.2	1.6	1.6
	max	6.8	1.8	1.7
Pumping	min	6.6	1.7	1.7
	max	7.3	1.9	1.8

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	2000	13.8		
1000	540	-0.1			1300	9.0	2100	14.5
1500	820	-0.2	10000	69.0	1500	10.3	2900	20.0
1800	980	-0.2			1700	11.7	3000	20.7
2000	1090	-0.3			2000	13.8	2100	14.5

Other Data:

Date: 5 Oct 2026

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.

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