



# PLIBRICO COMPANY

1010 N. Hooker Street  
Chicago, IL 60622  
Ph. : (312) 337-9000 Fax : (312) 337-9003  
Web : www.plibrico-usa.com

# REFRACTORY PRODUCT DATA SHEET

Data date: 2/22/2005

## Plicast Al-Shield GHC 8 KK

Product # 2994

### Product Description:

A 80% alumina, bauxite based, aluminum resistant, refractory castable for aluminum contact application.

### Recommended Aluminum Applications

Aluminum melting & holding furnaces: lower sidewalls & division walls. Transfer ladles.

**Max. Service Limit::** 3000 F / 1650 C

**Aluminum Contact Limit:** 1800 F / 980 C

**Packaging:** 50 lb / 22.7 kg Bag

**Required Water:** 1.5qt. / 1.4 l per bag

**Density: To Place**

172 pcf

2755 kg/m<sup>3</sup>

**In Service**

172 pcf

2755 kg/m<sup>3</sup>

**Min. Time Before Firing:**

### Chemistry - % (calcined)

Al <sub>2</sub> O <sub>3</sub> 77.8	CaO 1.8	SiC
SiO <sub>2</sub> 11.3	MgO 0	ZrO <sub>2</sub>
Fe <sub>2</sub> O <sub>3</sub> 1.1	Alk. 0.2	Other 6.5
TiO <sub>2</sub> 1.1	P <sub>2</sub> O <sub>5</sub> 0.1	

### Abrasion Loss

(ASTM C704)  
1500 F / 815 C  
7 cc

### Thermal Conductivity

	btu*in/hr*ft <sup>2</sup> *F	w / m°C
500 F / 260 C	12.6	1.8
1000 F / 540 C	11.9	1.7
1500 F / 815 C	11.7	1.7
2000 F / 1095 C	12.2	1.8

Temperature	Linear Change - % ASTM C113	Cold MOR		Hot MOR		CCS	
		psi / MPa	ASTM C133	psi / MPa	ASTM C583	psi / MPa	ASTM C133
230 F / 110 C	0	2200	15.2			12500	86
1000 F / 540 C	-0.2	1500	10.3	1700	11.7		0
1500 F / 815 C	-0.2	1650	11.4	1950	13.4	10000	69
1800 F / 980 C	-0.3	1800	12.4	2300	15.9		0
2000 F / 1095 C	-0.3	2000	13.8	950	6.6		0
2500 F / 1370 C	-0.4	2100	14.5		0		0

Bake out: Schedule AS

ASTM classification:

F

Low-Cement Castable

Note: Data should not be used for specification purposes. Product data is periodically updated to reflect product / raw material / process changes. Please consult with your Plibrico representative to insure you have the most current data.

All data are averaged results of laboratory ASTM tests on laboratory cast specimens. Reasonable variations can be expected.

Thermal conductivity will vary depending upon measurement method, installed density, and thermal treatment.

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