



PLIBRICO COMPANY LLC

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REFRACTORY PRODUCT DATA SHEET

Data date: 1/16/2008

Product # 2994

Plicast Al-Shield GHC 8 KK

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: 2000 F / 1090 C

Packaging: 50 lb / 22.7 kg Bag

Required Water: 1.5 qt. / 1.4 l per bag

Density: To Place

172 pcf

2755 kg/m³

In Service

172 pcf

2755 kg/m³

Min. Time Before Firing:

Chemistry - % (calined)

| | | |
|-------------------------------------|-----------------------------------|------------------|
| Al ₂ O ₃ 77.2 | CaO 1.7 | SiC |
| SiO ₂ 12.1 | MgO 0 | ZrO ₂ |
| Fe ₂ O ₃ 1.2 | Alk. 0.1 | Other 8.2 |
| TiO ₂ 1.2 | P ₂ O ₅ 0.1 | |

Abrasion Loss

(ASTM C704)
 1500 F / 815 C

7 cc

Thermal Conductivity

| | btu*in/hr*ft ² *F | w / m ² 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 / 1095 C | 15.5 | 2.2 |

| 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 | 2100 | 14.5 | | | 12500 | 86 |
| 1000 F / 540 C | -0.2 | 1500 | 10.3 | 2000 | 13.8 | | 0 |
| 1500 F / 815 C | -0.2 | 1650 | 11.4 | 2300 | 15.9 | 10000 | 69 |
| 1800 F / 980 C | -0.3 | 1500 | 10.3 | 2100 | 14.5 | | 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 AT-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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