

Plico Castable A-S SiC A KK

Product Number 14918

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Product Description
A high hot strength, 70% silicon carbide, aluminum resistant, refractory castable for aluminum contact application.

Typical Aluminum Applications
Aluminum melting & holding furnaces: lower sidewalls, hearths, and ramps. Transfer ladles and troughs.

| | |
|-----------------------------------------------------------|--------------------------------------------|
| Service limit - 2800°F 1537 °C | Std. package 55 # / 25 kg Bag |
| Al contact limit - 2000 °F 1093°C | Water range per std. package: |
| Density to place 160 pcf 2,563 kg/m ³ | Casting 1.3 to 1.6 qts 1.2 to 1.6 l |
| Density in service 160 pcf 2,563 kg/m ³ | Pumping to qts 0.0 to 0.0 l |
| Min time before firing 16 hr | |

Chemistry % (calcined)

| | | | |
|--------------------------------|------|-------------------------------|------|
| Al ₂ O ₃ | 14.6 | P ₂ O ₅ | |
| SiO ₂ | 6.9 | Alk. | 0.1 |
| Fe ₂ O ₃ | 0.2 | MgO | |
| CaO | 1.5 | SiC | 68.2 |
| TiO ₂ | 0.1 | ZrO ₂ | |
| | | Other | 8.1 |

Thermal Conductivity

| | | |
|----------------------|------------------------------|-------|
| | btu*in/hr*ft ² *F | w/m°C |
| 500F / 260C | 50.0 | 7.2 |
| 1000F / 540C | 45.0 | 6.48 |
| 1500F / 815C | 42.0 | 6.04 |
| 2000F / 1090C | | 0 |

Abrasion Loss
per ASTM C 704
after 1500 F

5 cc

Coefficient of Thermal Expansion
(reversible)
3.2 x 10⁻⁶ in/in F
5.7 x 10⁻⁶ m/m C

| Temperature per <u>ASTM C113 / C865</u> | Linear Change per <u>ASTM C113 / C179</u> | Cold MOR | | CCS | | Hot MOR | |
|-----------------------------------------------|-------------------------------------------------|-----------------------------|------------|-----------------------------|------------|-----------------------------|------------|
| | | per ASTM C133 <u>psi</u> | <u>MPa</u> | per ASTM C133 <u>psi</u> | <u>MPa</u> | per ASTM C583 <u>psi</u> | <u>MPa</u> |
| 230 F / 110 C | 0.0% | 2200 | 15.2 | 10000 | 69 | | |
| 1500 F / 815 C | -0.2% | 2000 | 13.8 | 9500 | 66 | 4000 | 27.6 |
| 1800 F / 980 C | | | 0.0 | | 0 | 4100 | 28.3 |
| 2000 F / 1090 C | | | 0.0 | | 0 | 3200 | 22.1 |
| | | | 0.0 | | 0 | | 0.0 |

Other Data

Heat Up Guide

Schedule AT AS or AT AS Linear

ASTM Class

Low Cement Castable

Note:

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