



# Plibrico Company, LLC

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# Technical Data Sheet Plicast AI-Rezist EC KK

Product # 3296

Available Internationally As:

Plico Castable AI-Rezist EC KK

### Product Description:

An aluminum resistant, premium low cement castable. Utilizing an advanced ceramic matrix, this material has been engineered for high temperature applications and offers excellent physical properties for extreme service conditions.

**Standard Packaging:** 55 # / 25 kg Bag

**Shelf Life:** 6 months

**Service Limit:** 3100 °F 1700 °C

**Contact Limit:** 2000 °F 1093 °C

**Bulk Density - In Service:** 174 pcf 2787 kg/m<sup>3</sup>

**Bulk Density - To Place:** 174 pcf 2787 kg/m<sup>3</sup>

**Minimum Time To Firing:** 16 hr

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

6 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	57.4	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	11.9	TiO <sub>2</sub>	0.1	ZrO <sub>2</sub>	18.6
CaO	2.1	P <sub>2</sub> O <sub>5</sub>		Other	9.4
Fe <sub>2</sub> O <sub>3</sub>	0.2	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	6.2	1.6	1.6
	max	6.7	1.8	1.7
Pumping	min			
	max			

**Coefficient of Thermal Expansion (reversible):**

6.1 x 10<sup>-6</sup> in/in/°F / 11.0 x 10<sup>-6</sup> mm/mm/°C

Thermal Conductivity	btu*in/hr*ft <sup>2</sup> *°F	W/m°C
500°F / 260°C	10.7	1.54
1000°F / 540°C	11.3	1.63
1500°F / 815°C	12.0	1.73
2000°F / 1090°C	12.6	1.81

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	9000	62.0	1750	12.1		
1500	820	-0.2	8000	55.0	2800	19.3	2800	19.3
1800	980						2400	16.6
2000	1090						2150	14.8

Other Data:

Release Date: 1 Nov 2021

Heat Up Guide: Schedule AT AS or AT AS Linear

ASTM Class: C 401 Class D

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.