



# Plibrico Company, LLC

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# Technical Data Sheet Pligun HyREZIST 3100 KK

Product # 3248

Available Internationally As: Plico Gun Mix HyREZIST 3100 KK

### Product Description:

A high alumina, high strength, abrasion resistant gun mix.

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

**Shelf Life:** 9 months

**Service Limit:** 3100 °F 1700 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 132 pcf 2115 kg/m<sup>3</sup>

**Bulk Density - To Place:** 132 pcf 2115 kg/m<sup>3</sup>

**Minimum Time To Firing:** 24

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

10 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	79.3	Alk	0.2	MgO	0.1
SiO <sub>2</sub>	12.5	TiO <sub>2</sub>	1.5	ZrO <sub>2</sub>	
CaO	4.8	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	1.4	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min			
	max			
Pumping	min			
	max			

### Coefficient of Thermal Expansion (reversible):

4.5 x 10<sup>-6</sup> in/in/°F / 8.1 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	11.5	1.66
1000°F / 540°C	10.5	1.51
1500°F / 815°C	11.6	1.67
2000°F / 1090°C	12.1	1.74

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	8500	59.0	1900	13.1		
1500	820	-0.3	7500	52.0	1650	11.4	1800	12.4
2000	1090	-0.4			1900	13.1	1200	8.3
2500	1370	-0.3			2500	17.2	250	1.7
3000	1650	-1.0			3100	21.4		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule C or C-Linear

ASTM Class: C 401 Class E  
 Regular 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.