



# Plibrico Company, LLC

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# Technical Data Sheet Pligun HyREZIST 3000

Product # 13615

Available Internationally As: Plico Gun HyREZIST 3000

### Product Description:

A 50% alumina, low iron, high strength, abrasion resistant refractory gun mix.

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

**Shelf Life:** 9 months

**Service Limit:** 3000 °F 1650 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 130 pcf 2083 kg/m<sup>3</sup>

**Bulk Density - To Place:** 130 pcf 2083 kg/m<sup>3</sup>

**Minimum Time To Firing:** 24 hr

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

11 cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	54.2	Alk	0.6	MgO	0.1
SiO <sub>2</sub>	36.5	TiO <sub>2</sub>	1.8	ZrO <sub>2</sub>	
CaO	6.0	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	0.8	SiC			

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

### Coefficient of Thermal Expansion (reversible):

3.2 x 10<sup>-6</sup> in/in/°F / 5.8 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	7.4	1.1
1000°F / 540°C	7.7	1.1
1500°F / 815°C	8.2	1.2
2000°F / 1090°C	8.9	1.3

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	-0.1	9500	66.0	1800	12.4		
1500	820	-0.2	6500	45.0	1300	9.0	1600	11.0
2000	1090	-0.4			1100	7.6	1100	7.6
2500	1370	-0.1			1800	12.4	250	1.7
3000	1650	-1.4			2400	16.6		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule B

ASTM Class: C 401 Class D 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.