



# Plibrico Company, LLC

1935 Techny Road - Unit 16  
 Northbrook, IL 60062  
 (312) 337-9000  
 www.plibrico.com

# Technical Data Sheet Pligun Super Tuff Mix

Product # 14150

Available Internationally As: Plico Gun Mix Super Tuff Mix

### Product Description:

An intermediate duty, high strength, low iron refractory gun mix.

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

**Shelf Life:** 12 months

**Service Limit:** 2600 °F 1430 °C

**Contact Limit:** N/A °F N/A °C

**Bulk Density - In Service:** 122 pcf 1954 kg/m<sup>3</sup>

**Bulk Density - To Place:** 122 pcf 1954 kg/m<sup>3</sup>

**Minimum Time To Firing:** 24 hr

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

N/A cc

Chemistry (calcined) %					
Al <sub>2</sub> O <sub>3</sub>	46.8	Alk	0.5	MgO	0.2
SiO <sub>2</sub>	39.3	TiO <sub>2</sub>	2.1	ZrO <sub>2</sub>	
CaO	9.9	P <sub>2</sub> O <sub>5</sub>		Other	
Fe <sub>2</sub> O <sub>3</sub>	1.2	SiC			

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

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

3.1 x 10<sup>-6</sup> in/in/°F / 5.6 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	6.0	0.9
1000°F / 540°C	6.1	0.9
1500°F / 815°C	6.3	0.9
2000°F / 1090°C	6.8	1.0

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	4000	28.0	850	5.9		
1500	820	-0.3	3800	26.0	600	4.1	500	3.4
2000	1090	-0.5			650	4.5	550	3.8
2500	1370	-1.0			1100	7.6		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule B

ASTM Class: C 401 Class C 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.