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Technical Data Sheet Pligun Al-Tuff 3100 Special

Product # 16517

Available Internationally As:

Plico Gun Mix A-T 3100

Product Description:

A 60% alumina, mullite based, non-wetting, low cement refractory castable designed for gunning application.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 3100 °F 1700 °C

Contact Limit: 1700 °F 927 °C

Bulk Density - In Service: 130 pcf 2083 kg/m³

Bulk Density - To Place: 130 pcf 2083 kg/m³

Minimum Time To Firing: 16 hr

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

N/A cc

Chemistry (calcined) %					
Al ₂ O ₃	57.7	Alk	0.2	MgO	0.2
SiO ₂	35.4	TiO ₂	1.8	ZrO ₂	
CaO	3.8	P ₂ O ₅		Other	
Fe ₂ O ₃	1.0	SiC			

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

Coefficient of Thermal Expansion (reversible):

3.4 x 10⁻⁶ in/in/°F / 6.1 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	7.2	1.0
1000°F / 540°C	7.3	1.1
1500°F / 815°C	7.5	1.1
2000°F / 1090°C	7.8	1.1

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	2500	17.0	650	4.5		
1000	540	-0.2			700	4.8	800	5.5
1500	820	-0.3	3500	24.1	800	5.5	1000	6.9
2000	1090	-0.3			750	5.2	1100	7.6

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule B

ASTM Class: C 401 Class F 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.