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Technical Data Sheet Plicast Al-Tuff Airlite 25

Product # 3316

Available Internationally As:

Plico Castable A-T Airlite 25

Product Description:

A lightweight, insulating castable. Low thermal conductivity makes the material a suitable alternative to insulation blocks, allowing it to be poured into place to conform to complex geometries. Non-wetting to aluminum.

Standard Packaging: 40 # / 18 kg Bag

Shelf Life: 6 months

Service Limit: 2500 °F 1370 °C

Contact Limit: 1500 °F 816 °C

Bulk Density - In Service: 25 pcf 401 kg/m³

Bulk Density - To Place: 25 pcf 401 kg/m³

Minimum Time To Firing: 24 hr

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

N/A cc

Chemistry (calcined) %					
Al ₂ O ₃	33.5	Alk	2.8	MgO	1.0
SiO ₂	37.0	TiO ₂	1.1	ZrO ₂	
CaO	20.0	P ₂ O ₅		Other	
Fe ₂ O ₃	4.6	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	140.0	26.9	25.5
	max	150.0	28.8	27.3
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

1.8 x 10⁻⁶ in/in/°F / 3.2 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m ² °C
500°F / 260°C	0.8	0.12
1000°F / 540°C	1.0	0.14
1500°F / 815°C	1.1	0.16
2000°F / 1090°C	1.3	0.19

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	-0.5	180	1.0				
1500	820	-3.5	180	1.0				
2500	1370	-4.4						

Other Data:

Release Date: 1 Aug 2023

Heat Up Guide: Schedule B

ASTM Class: C 401 Class N
 Insulating 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.