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Technical Data Sheet Plicast Steel Mix

Product # 14018

Available Internationally As:

Plico Castable Steel Mix

Product Description:

A high duty, low iron, high strength refractory castable.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 12 months

Service Limit: 2700 °F 1480 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 128 pcf 2051 kg/m³

Bulk Density - To Place: 128 pcf 2051 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	47.3	Alk	0.5	MgO	0.2
SiO ₂	39.2	TiO ₂	2.1	ZrO ₂	
CaO	9.6	P ₂ O ₅		Other	
Fe ₂ O ₃	1.2	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min			
	max			
Casting	min	11.0	2.9	2.8
	max	12.5	3.3	3.1
Pumping	min			
	max			

Coefficient of Thermal Expansion (reversible):

3.1 x 10⁻⁶ in/in/°F / 5.6 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	6.5	0.9
1000°F / 540°C	6.6	1.0
1500°F / 815°C	6.8	1.0
2000°F / 1090°C	7.2	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	4400	30.0	1000	6.9		
1500	820	-0.3	3500	24.0	500	3.4	500	3.4
2000	1090	-0.4			500	3.4	400	2.8
2500	1370	0.9			1200	8.3	100	0.7
2700	1480	1.1			2400	16.6		

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.