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Technical Data Sheet Plicast HyMOR 3100 KK

Product # 14137

Available Internationally As: Plico Castable LC 3100 KK

Product Description:

An 80% alumina, bauxite, low cement castable.

Standard Packaging: 55 # / 25 kg Bag

Shelf Life: 6 months

Service Limit: 3100 °F 1700 °C

Contact Limit: N/A °F N/A °C

Bulk Density - In Service: 170 pcf 2723 kg/m³

Bulk Density - To Place: 170 pcf 2723 kg/m³

Minimum Time To Firing: 16 hr

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

6 cc

Chemistry (calcined) %					
Al ₂ O ₃	77.9	Alk	0.2	MgO	0.1
SiO ₂	17.3	TiO ₂	1.5	ZrO ₂	
CaO	1.6	P ₂ O ₅		Other	
Fe ₂ O ₃	1.4	SiC			

Water Range Per Standard Package		%	Quarts	Liters
Vib Casting	min	5.0	1.3	1.3
	max	6.0	1.6	1.5
Casting	min	6.0	1.6	1.5
	max	6.8	1.8	1.7
Pumping	min	6.4	1.7	1.6
	max	7.2	1.9	1.8

Coefficient of Thermal Expansion (reversible):

4.3 x 10⁻⁶ in/in/°F / 7.7 x 10⁻⁶ mm/mm/°C

Thermal Conductivity	btu*in/hr*ft ² *°F	W/m°C
500°F / 260°C	14.1	2.0
1000°F / 540°C	13.6	2.0
1500°F / 815°C	13.6	2.0
2000°F / 1090°C	14.1	2.0

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	0.0	10000	69.0	2200	15.2		
1500	820	-0.3	10000	69.0	2500	17.2	3500	24.1
2000	1090	-0.4			2700	18.6	4000	27.6
2500	1370	0.9			2500	17.2	1000	6.9
3000	1650	0.5			3000	20.7		

Other Data:

Release Date: 1 Aug 2019

Heat Up Guide: Schedule C or C-Linear

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.